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Implementation business-to-business electronic commercial website using ColdFusion 4.5

Teerapong Euawatana

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IMPLEMENTATION BUSINESS-TO-BUSINESS ELECTRONIC COMMERCIAL WEBSITE USING COLDFUSION 4.5

A Project
Presented to the
Faculty of
California State University,
San Bernardino

In Partial Fulfillment
of the Requirements for the Degree
Master of Business Administration

by
Teerapong Euawatana
June 2001
IMPLEMENTATION BUSINESS-TO-BUSINESS ELECTRONIC COMMERCIAL
WEBSITE USING COLDFUSION 4.5

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Approved by:

Frank M. Lin, Committee Chair

Harold Dyck, Second Faculty Reader

Walter T. Stewart, Department Chair

Date 6/10/01
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ABSTRACT

This project was created to simulate the real electronic commercial toys-wholesaler business. The project tried to present all aspects of the simulation beginning with introduction to Electronic Commerce. After that we will focus on toys on the Web with an industrial analysis of toy wholesaler and the simulated Web site - Macrotoys. ColdFusion will be introduced next, and followed with the implementation of the simulation. The Conclusion will be the last chapter for this project. By using information from Internet websites and other media, the project has included references to articles that provide strategic management ideas for this business and ensuring future trend.

To present a real picture of this simulation, the simulated toys-wholesaler website, Macrotoys.com was generated by using ColdFusion 4.5 for implementation. This project is more interesting because the competition in this market raises more concern of how to succeed in getting high market shares.

Moreover, this simulated website included many graphic tools to make it more interesting, such as Java Script Language, Adobe PhotoShop 5.5, Crystal 3D Impact Pro 1.25, Macromedia DreamWeaver 3.0 and so forth.
ACKNOWLEDGEMENTS

I am grateful to Professor Frank M. Lin, Ph.D., the committee chair. Without his recommendation, help, and care, this project would not be done. Also, thanks to my second faculty reader, Professor Harold Dyck, and my department chair, Professor Walter T. Stewart, Jr., who gave me generous support for additional modified ideas.

Furthermore, I would like to thank Mr. Sumuscha Teesri and Miss Suwanna Visavapatamawon, who always took care of my project and me during my difficult time.

I cannot finish this part without a big thanks to my parents, sisters and brothers in Thailand, who always support me not only with this project but also with all the things I did. They are always the wonderful wind beneath my weak wings.

Teerapong Euawatana
To Mom and Dad
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A suitable technology is an unavoidable factor that we have to be concerned about to get more market share in each business. The suitable technology will not only reduce your difficulties but also increase your potential to compete with other competitors as well as enhance more time to think and manage your business.

To do business while you are asleep is not any surprise after the success of the new technological revolution called electronic commerce. So far, Internet shopping has been rather like catalogue shopping, which is one reason that many catalogue retailers have proved good at it. Some observers predict that it will never amount too much more than this. Yet there are good arguments for expecting the net to make much greater inroads into retailing than catalogues have done. For a start, it is faster and far more convenient: the shop front can change from minute to minute, and orders can be placed instantly. Technological change will continue to make it even easier: faster connections from the home will vastly improve website access, as will the use of mobile telephones and
other handheld devices to go online. The recent trend of mixing online and offline retailing could also benefit consumers. For example, call centers could be used to help them navigate around the retailer's website, and new warehouses and distribution centers are beginning to remedy one of the Internet's biggest weaknesses: order fulfillment and delivery.

Meanwhile, a welter of new techniques that the Internet has made possible, ranging from auctions to instant price comparisons, and from customer aggregation to one-to-one marketing, will help to make online shopping cheaper, and often more entertaining, than real-world shopping. And it would be wrong to place too much weight on consumers' innate conservatism.

It is true that shopping fulfils a social function that the web cannot easily replicate, but that did not stop the momentous shifts from corner shops to supermarkets, and then from supermarkets to giant out-of-town discount retailers, that have taken place within the past 50 years. Generational change also seems certain to boost the use of the web for e-commerce: kids who grow up with computers are likely to find that doing their shopping on them comes naturally.
1.2 Purpose of the Project

This project was created to present a real picture of Electronic Commerce by applying all knowledge learning in the Management Information System major of the MBA program at California State University, San Bernardino.

To help us understand the real picture of this project, a simulation of a toy wholesaler Electronic Commerce Web site, Macrotoys.com, will be applied. Furthermore, the knowledge of Information Management, Information Base System, Information Networking System, World Wide Web Strategies, and Electronic Commerce, which are the concentration courses in the MIS major, will be included to cover the real problems that may occur in this simulation.

In this project, we will see how to use ColdFusion 4.5 to build and implement a commercial Web site. Moreover, the requirements and benefits of this tool will be presented. Finally, to make this Web site more attractive, the following tools will be applied including:

- Microsoft Access 2000
- Microsoft FrontPage 2000
- Microsoft PhotoDraw 2000
- Macromedia DreamWeaver 3.0
- Adobe PhotoShop 5.5
Cry£tal 3D Impact! Pro 1.25
- GIF Animation 4.0
- Java Script
- JAnimation Editor
- Microsoft Windows NT Server and Workstation.

Hopefully, this project provides enough information for other students who are looking for a guideline for further study and to improve their skills in business, especially from an information management aspect.

1.3 Inside the Project

This project composes of seven chapters, which will provide the readers with an idea to analyze the business industry, and build up their own electronic commerce website by using ColdFusion as a tool to achieve their goal. In the next chapter, we will talk about electronic commerce, which covers the meaning, scope, and market of this term. In chapter three, toys industry is the main topic. Also, using five forces position will show the analysis of toys wholesaler industry. The new toy wholesaler - Macrotoys, will be presented including its business scope, and strategic move. Chapter four provides information about ColdFusion, which includes: the components of ColdFusion, How Cold Fusion works, and the
requirement of ColdFusion. In chapter five, the design of this project is the key topic. This chapter presents data flow diagram, database design, network design, and also Web design. Chapter six introduces Macrotoys website, which include all the main pages and how they function. In the last chapter, the alternatives and the next step to implement database, scripts, and so on, to make the website realistically work.
"By the year 2001, there will be only two kind of businesses. Those on the Web and those no longer in business" - Bill Gates

2.1 What Electronic Commerce Is

One possible definition of Electronic Commerce would be: "any form of business transaction in which the parties interact electronically rather than by physical exchanges or direct physical contact." However, while accurate, such a definition hardly captures the spirit of electronic commerce, which in practice is far better viewed as one of those rare cases where changing needs and new technologies come together to revolutionize the way in which business is conducted.

Modern business is characterized by ever-increasing supply capabilities, ever-increasing global competition, and ever-increasing customer expectations. In response, businesses throughout the world are changing both their organizations and their operations. They are flattening old hierarchical structures and eradicating the barriers between company divisions. They are lowering the barriers between the company and its customers and suppliers.
Business processes are being re-designed so that they cross the old boundaries. We now see many examples of processes that span the entire company and even processes that are jointly owned and operated by the company and its customers or suppliers.

Electronic commerce is a means of enabling and supporting such changes on a global scale. It enables companies to be more efficient and flexible in their internal operations, to work more closely with their suppliers, and to be more responsive to the needs and expectations of their customers. It allows companies to select the best suppliers regardless of their geographical location and to sell to a global market.

One special case of electronic commerce is electronic trading in which a supplier provides goods or services to a customer in return for payment. A special case of electronic trading is electronic retailing where the customer is an ordinary consumer rather than another company. However, while these special cases are of considerable economic importance, they are just particular examples of the more general case of any form of business operation or transaction conducted via electronic media. Other equally valid examples include internal transactions.
within a single company or provision of information to an external organization without charge.

Electronic Commerce is technology for change. Companies that choose to regard it only as an "add on" to their existing ways of doing business will gain only limited benefit. The major benefits will accrue to those companies that are willing to change their organizations and business processes to fully exploit the opportunities offered by electronic commerce.

2.2 The Scope of Electronic Commerce

Electronic Commerce as a general concept covers any form of business transaction that is conducted electronically, using telecommunications networks. Such transactions occur between companies, between companies and their customers or between companies and public administrations.

Electronic Commerce encompasses a broad range of activities. The core component is addressing the commercial transaction cycle. Electronic Commerce includes electronic trading of physical goods and services and of electronic material. Upstream and downstream of the transactions includes the advertising and promotion of products and services, the facilitation of contacts between traders, the
provision of market intelligence, pre- and post-sales support, electronic procurement and support for shared business processes.

There are some electronic commerce impacts upon a large number of business activities such as:

- Marketing, sales, and sales promotion
- Pre-sales, subcontracts, and supply
- Financing and insurance
- Commercial transactions: ordering, delivery, and payment
- Product service and maintenance
- Co-operative product development
- Distributed co-operative working
- Use of public and private services
- Business-to-administrations (concessions, permissions, tax, customs, etc.)
- Transport and logistics
- Public procurement
- Automatic trading of digital goods
- Accounting
- Dispute resolution

The whole of the commercial transaction, including ordering, transport and delivery, the invoicing and payment cycle can be supported electronically. Dealing with public authorities electronically for customs and tax affairs, and in statistics is already well developed. However, a number of issues such as security, IPR protection, legal questions and procedures still have to be addressed as part of the electronic commerce business environment.

A distinction should be made between electronic trading of physical goods and services and electronic trading of information-based contents that can be delivered directly through the network (images, voice, text, software, and so on).

The electronic trading of physical goods and services represents an evolution of present ways of trading, capitalizing on new possibilities offered by technology to improve efficiency in terms of lower costs, effectiveness in terms of widening market potential and better meeting customers' needs as well as providing a means for enhanced product and service innovation, notably through customer-supplier interaction. This form of electronic commerce is
expected to have a great impact on competitiveness and a limited impact on employment.

The trading of electronic material: software, video, music, images, multimedia works, games, and etc. represents a revolutionary new way of trading, for which the full commercial transaction cycle can be conducted simultaneously via the same network including delivery, implying specific requirements regarding the proper integration of payment, IPR control, etc. Depending on the solutions that will be successful in the market place, traded "electronic goods" could create totally new markets and revolutionize some industries such as publishing. This highly innovative form of electronic commerce is expected to have an important impact on competitiveness and create employment. Some examples of specific business benefits of Electronic Commerce are:

- Solve problems easily for customers, vendors, suppliers, and salespeople

- Reduce advertising cost

- Reduced delivery cost, notably for goods that can also be delivered electronically

- Reduced design and manufacturing cost
- Improved market intelligence and strategic planning
- More opportunity for niche marketing
- Equal access to markets
- Access to new markets
- Customer involvement in product and service innovation
- Coordinate projects among many people, either within or outside of organization
- Create on-line manuals or specs for those who own or use your products and services
- Receive customer feedback through surveys and information request forms and
- Use E-mail, which is fast, inexpensive and convenient

Market intelligence such as information on specific markets and countries (market opportunities, business framework, applicable regulations to specific products and services), market surveys and automatic generation of marketing statistics can all be provided electronically and improve the commercial environment, though a number of issues such as privacy need to be addressed.
Contacts between companies can be facilitated by on-line business directories and improved national and regional information relay centers. Contact between companies and consumers can be supported by various means, including on-line advertising and shopping malls. Companies can provide detailed information on their products and services, including technical specification, guidance on use and answers to common questions, supported by comprehensive navigation and search facilities.

Over recent years, efforts to improve business efficiency and responsiveness have increasingly resulted in a "blurring" of the boundaries between interacting companies and customers. Business processes then cross company boundaries, with each company carrying out its own parts of those shared processes. An extreme example occurs with the "virtual enterprise", where each participating company playing its own role in a closely co-operating network of companies addressing a particular market opportunity.

Where companies can jointly form a single virtual enterprise, which addresses anything from production of goods and services to distribution and sales, it can be expected that major shifts will happen in the structure of
the industries involved. An example of this is the expected impact of tele shopping on the balance of power between consumer goods producers and the retail chain. In this case the traditional boundaries between manufacturing and distribution sectors are becoming less important. Another example of a structural change is observed in the health care industry where electronic commerce is a critical enabling factor for healthcare management companies (HMCs); to become major new intermediaries in the market between health care providers such as doctors, major health care purchasers, pharmaceutical industry, government agencies.

In this case electronic commerce means the electronic exchange of health care-related information between market players. These HMCs are now so important that recently a process of vertical integration in the pharmaceutical industry started by manufacturers acquiring healthcare companies in order to get access to their huge information databases.

Some examples of generic business strategies based on Electronic Commerce are:

- Electronic Marketplace Presence: sales promotion, interactive TV / Internet shopping
- Efficient Consumer Response Management
- Electronic Trading
- Supply Chain Management
- Vendor Managed Inventory
- Electronic commerce also enables sector specific strategies such as Value-Added Banking

Potentially, electronic commerce can provide comprehensive support for shared business processes, regardless of their nature and regardless of the participants being separated by geography and time (zone).

The reasoning and examples above reinforce the argument that electronic commerce is a phenomenon that should be considered from the point of view of several policies and several market sectors.

2.3 The Electronic Commerce Market

Electronic Commerce is already a reality, and it is happening now and is expanding fast (see Figure 1). To date, many electronic transactions have been conducted within closed communities. However, the growth of the Internet has led to a huge level of participation of
businesses and consumers in E-Commerce outside the boundaries of these communities.

The supply side consists of technologies (including hardware and software infrastructure, generic services, specific applications), the legal and regulatory framework, and standards. To this value-added services are provided for integrating electronic commerce solutions into business as well as training and consultancy services, such as business processes adaptation, new marketing approaches and staff retraining.

The phenomenal growth of the Internet, as a major means of business-to-consumer and business-to-business electronic commerce is illustrated in the diagram above. Statistics show that WEB traffic now dominates Internet activity. Demographic statistics of Internet users are gradually becoming available. It is notable that access at work is an important factor in Internet usage (and other on-line services) and that even now total Internet usage exceeds that of other on-line services.

Business is clearly at the heart of electronic commerce, however, there are different characteristics of the various types of interactions: business-to-consumers; business-to-business; business-to-administrations.
# Worldwide E-Commerce Growth (Billions, in U.S. Dollars)

<table>
<thead>
<tr>
<th>Region</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
</tr>
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<tbody>
<tr>
<td>TOTAL</td>
<td>$1,233.6</td>
<td>$2,231.1</td>
<td>$3,979.7</td>
<td>$6,789.8</td>
</tr>
<tr>
<td>NORTH AMERICA</td>
<td>$908.6</td>
<td>$1,495.2</td>
<td>$2,339.0</td>
<td>$3,456.4</td>
</tr>
<tr>
<td>U.S.</td>
<td>$864.1</td>
<td>$1,411.3</td>
<td>$2,817.2</td>
<td>$3,189.0</td>
</tr>
<tr>
<td>Canada</td>
<td>$38.0</td>
<td>$68.0</td>
<td>$109.6</td>
<td>$160.3</td>
</tr>
<tr>
<td>Mexico</td>
<td>$6.6</td>
<td>$15.9</td>
<td>$42.3</td>
<td>$107.0</td>
</tr>
<tr>
<td>ASIA PACIFIC</td>
<td>$117.2</td>
<td>$286.6</td>
<td>$724.2</td>
<td>$1,649.8</td>
</tr>
<tr>
<td>Japan</td>
<td>$64.4</td>
<td>$146.8</td>
<td>$363.6</td>
<td>$880.3</td>
</tr>
<tr>
<td>Australia</td>
<td>$14.0</td>
<td>$36.9</td>
<td>$96.7</td>
<td>$207.6</td>
</tr>
<tr>
<td>Korea</td>
<td>$14.1</td>
<td>$39.3</td>
<td>$100.5</td>
<td>$205.7</td>
</tr>
<tr>
<td>Taiwan</td>
<td>$10.7</td>
<td>$30.0</td>
<td>$80.6</td>
<td>$175.8</td>
</tr>
<tr>
<td>All Other</td>
<td>$14.0</td>
<td>$60.6</td>
<td>$130.5</td>
<td>$197.1</td>
</tr>
<tr>
<td>WESTERN EUROPE</td>
<td>$194.8</td>
<td>$422.1</td>
<td>$853.3</td>
<td>$1,533.2</td>
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<td>Germany</td>
<td>$46.4</td>
<td>$102.0</td>
<td>$211.1</td>
<td>$386.5</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>$38.5</td>
<td>$83.2</td>
<td>$165.6</td>
<td>$288.8</td>
</tr>
<tr>
<td>France</td>
<td>$22.1</td>
<td>$49.1</td>
<td>$104.8</td>
<td>$206.4</td>
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<td>$71.4</td>
<td>$142.4</td>
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<td>Netherlands</td>
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<td>$30.7</td>
<td>$59.5</td>
<td>$98.3</td>
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<tr>
<td>All other</td>
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<td>$123.4</td>
<td>$240.8</td>
<td>$410.8</td>
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<tr>
<td>LATIN AMERICA</td>
<td>$6.8</td>
<td>$13.7</td>
<td>$31.8</td>
<td>$81.8</td>
</tr>
<tr>
<td>REST OF WORLD</td>
<td>$6.2</td>
<td>$13.5</td>
<td>$31.5</td>
<td>$68.6</td>
</tr>
</tbody>
</table>

Source: Forrester Research Inc, June 2000

Copyright 2000 American Chamber of Commerce of Mexico, A.C.
- Business-to-consumers:

A study by the Gartner Group predicts that consumers will use multiple "information highway channels" for their on-line shopping: interactive TV, Internet, and other on-line systems (such as Compuserve). The WWW users are the main targets for business applications as they are upscale, professional, and well educated.

- Business-to-business:

One of the major technologies, which support business-to-business interactions, is electronic data interchange (EDI). EDI involves the exchange of standardized, structured information between organizations, permitting direct communication between computer systems and reducing or eliminating the need for human involvement and the rekeying of information.

Like many other technologies, EDI has been accepted significantly more slowly than initially anticipated. EDI has been perceived as being too complicated. Companies did not know how to integrate EDI into their applications, and only insufficient standard messages were available and the number of potential partners was relatively low. However, this situation is rapidly changing and the number of companies using EDI has recently risen significantly, also
stimulated by public sector initiatives like Clinton's Commerce for Acquisition (ECAT), and the former European Commission's TEDIS program.

The introduction of electronic commerce also involves the introduction of new ways of doing business. Resistance to change can also be expected from small and large organizations alike. For example, in the banking sector the fear of the emergence of new and possibly competing business models could be a determining factor. Some sectors may undergo significant structural changes. These aspects of the emergence of electronic commerce (and their relationship with the Single Market) deserve further study.

- Business-to-administrations:

  Government is playing a major role in stimulating the electronic commerce market. In Europe, formidable progress has been made within the IDA program in a number of fields (notably customs and taxes, and statistics and public procurement) in order to establish trans-European telemetric networks and systems directly concerning the private sector.
2.4 Open Issues in Electronic Commerce

While electronic commerce is growing rapidly, there are several open issues that must be resolved if its full potential is to be realized. These include:

2.4.1 Globalization

Potentially, global networks could make it as easy to do business with a company on the other side of the world as with one on the next street. However, the communication medium alone, while necessary, is far from sufficient. How do companies in different continents become aware of each other's existence, and the products and services that are offered or required? How can a company gain an understanding of the business traditions and conventions of some countries on the opposite side of the globe, particularly when those conventions and traditions are often unwritten? And how can the linguistic and cultural diversity of a global user community best be respected and supported? These and related questions are all part of the broad issue of globalization - making truly global electronic commerce a practical reality.
2.4.2 Contractual and Financial Issues

Suppose that a company in Thailand browses the electronic catalogue of a Russian company and places an electronic order for products that will be delivered electronically and for which payment will also be made electronically. This simple scenario raises several fundamental questions that as yet are unresolved. At precisely what point is a binding contract established between the companies? What is the legal status of this contract? What body has legal jurisdiction over the contract? Given differences in financial regulations and practices, how is payment made and confirmed? What taxes and customs charges apply to the products? How are these taxes and charges "policed" and collected? Could the charges and taxes be avoided by the simple expedient of maintaining an electronic "manufacturing" facility in some third country?

2.4.3 Ownership

Particularly for goods that can be distributed electronically, and hence can readily be copied, the issue of protecting copyright and intellectual property rights represents a major challenge.
Year 2000 US. Average Fraud Online
Industry sources differ on stated fraud rates

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MasterCard</td>
<td>0.08%</td>
</tr>
<tr>
<td>Visa</td>
<td>0.09%</td>
</tr>
<tr>
<td>Gartner Group</td>
<td>1 %</td>
</tr>
<tr>
<td>Cyber Source</td>
<td>5 %</td>
</tr>
</tbody>
</table>

Figure 2. The Average Fraud Online inside the United States of America

2.4.4 Privacy and Security

Figure 2 shows the average fraud online in 2000 inside USA. Electronic commerce opens network demand and effective and trusted mechanisms for privacy and security. These mechanisms must provide for confidentiality, authentication. Since the recognized privacy and security mechanisms depend upon certification by a trusted third party such as a government body, global electronic commerce will require the establishment of a global certification system.

2.4.5 Interconnectivity and Interoperability

Realizing the full potential of electronic commerce requires universal access - every company and every consumer must be able to access all organizations offering products or services, regardless of geographical location.
or the specific networks to which those organizations are connected. This in turn demands universal standards for network interconnection and interoperation.

2.4.6 Deployment

One factor that could limit the emergence of electronic commerce is lack of awareness and skills. There is a danger that many companies could be left behind and placed at a disadvantage, simply through being unaware of the possibilities and opportunities. Hence, there is an urgent need to promote awareness, to publicize examples of best practice, and to provide education and training.
CHAPTER THREE

TOYS WHOLESALE INDUSTRY

AND MACROTOYS

With a wonderful profit, toys industry is in the intense competition for a long time. Whenever a new potential way proved to gain more market shares is found, it certainly attract those competitors to apply the new tool for fighting with their peers. With its most powerful tool for doing business today, Electronic Commerce has been used as no doubt in high competition especially in toy market.

3.1 Five-Force Analysis

The five forces determine industry profitability because they influence the prices, costs, and required investment of firms in an industry - the elements of return on investment. Five Forces Model is composed of: Supplier power; Buyer power; Treat of entry; Substitute products; and Rivalry of existing competitors. The strength of each of the five competitive forces is a function of industry structure, or the underlying economic and technical characteristics of an industry. In this analysis two main factors, licensed toys or proprietary, and non-licensed toys or open systems, were separated in some attributes. To
determine the state of competition in this business, Five Forces Position is applied under the assumption that the toy wholesale industry is an open system having 20% of licensed and 80% of non-licensed toy products.

3.1.1 Supplier Power

Supplier Power is the degree to which a supplier can determine the conditions of purchase including price, feature/functionality, service, and quality. The suppliers in this case are the toy manufacturers. The bargaining power of suppliers determines the costs of raw materials and other inputs. Supplier power is rather weak because of these concerns: (see Table 1)

- Concentration of Suppliers - the number and equality of suppliers, is high due to the large number of suppliers in this business. Moreover, the concentration of suppliers will increase during some special events such as Halloween, Christmas, and New Year. The baby boom is another concern, which makes the concentration of suppliers keep going high.
- Product differentiation - the degree of commodity or proprietresses of the product, is high commodity. Since toys are not a necessity, the product differentiation is rather important for suppliers to persuade their customers. Anyhow, if we look at toys in the market, we find that the product differentiation in toy industry is commodious. It
sounds like there are various designs and materials for example, if we search for a yo-yo in the market, we will find more than 300 different styles.

- Switching costs - the total costs incurred by the buyer to switch to a different product, is rather high due to the high investment in machines and factory.
- Substitute products - the existence of alternative products providing equal or better feature/ functionality at equal or better price/performance, is high due to many substitute products and services in the market.
- Customer by-pass - the degree to which the supplier can by-pass the customer - the toy retailer, and sell directly to the customer to the supplier, is quite easy depending on the business size of manufacturers.
- Customer importance - the importance of the customer to the supplier, is rather high due to customers having many alternatives.

3.1.2 Buyer Power

Buyer Power is the degree to which the buyer's ability to influence price, quality, and the terms of purchase give the buyer an advantageous bargaining position. The buyers in this analysis are the toy retailers. The buyer power determines the prices that firms can charge. The power of buyers can also influence cost and investment, because
powerful buyers demand costly service. Buyer power is rather strong because of these concerns: (see Table 2)
- Concentration of buyers - the number of buyers and size of purchase, is high because there are a large number of buyers in this business.
- Product is commodity - the degree of company of the product, is rather high commodity since there are so many different styles of toys in the market.
- Product as cost component of buyer's product - the influence of the product on the cost structure of the customers' product, is rather high because it is the main cost of toy retailers. However, since there are so many wholesalers they can do business with, this factor seems to be weak to concern.
- Buyers profitability - the current financial performance of the buyer, is high due to the high profit of toy product.
- Product's Importance to Buyer - the degree to which the product is important in adding values, is rather low. Although the buyers need the product for sale, they still have many wholesaler to deal with.
- Product viewed as an expense - the degree to which the product is viewed as a cost and only a cost, is high because toys are the pure expense of toy retailers.
Supplier by-pass - the degree to which the buyers can buy from the supplier or do it themselves, is easy and interesting to do so.

3.1.3 Threat of Entry

Threat of Entry is the degree to which there is a viable threat of new entrants joining the market place and increasing competition. The treat of entry places a limit on prices, and shapes the investment required to deter entrants. Threat of entry is rather strong because of these concerns: (see Table 3)

- Economies of scale - the costs associated with achieving the necessary economies of scale to achieve competitive pricing, is quite low. Mostly, some licensed toys have rather high economy of scale for high volume of sale such as advertising cost but that not for non-licensed toys.
- Product differentiation - the differentiation of incumbent products and their associated customer loyalty, is commodity.
- Switching costs - the total costs of switching products, is low because of no need for any machine or factory. Furthermore, the warehouse is easily to be changed for other products.
- Capital requirement - the amount of up-front investment policy and laws control market entry, is rather low due to
the low fixed cost of this business.
- Distribution channel access - the openness the
distribution channels to a new player, is quite open due to
the persuasive benefit. Anyhow, we saw some difficulty for
licensed toys.
- Government policy - the degree to which government policy
and laws control market entry, is a lot more open for the
wholesaler than the manufacturers.
- Incumbent retaliation - the degree to which incumbents
has demonstrated a willingness to protect their markets, is
intermediate due to the difficulty to control an open
market. However, some of the existing competitors cooperate
with each other to improve their potential competition such
as International Council of Toy Industries, Toy
Manufacturers of America, Inc., and so on.

3.1.4 Substitute Products

Substitute Products provide alternative for a customer
and, consequently, constrain a supplier's behavior. The
treat of substitute products or services influences the
prices that firms can charge. Substitute Products is strong
because of these concerns: (see Table 4)
- Strong substitute - the degree of equal or better
feature/functionally, is rather strong since there are many
types of other interesting entertainment.
- Substitute Price and Performance - the degree to which the substitute offers equal or better price/ performance, is rather higher price compare to long-term usage.
- Profitability of substitute industry - the degree to which the industry of the substitute product is profitable, is rather high as same as toys industry.
- Competitor rivalry - the degree to which the level of competition in the substitute industry encourages migration to new markets, is quite high because of its high profit.

3.1.5 Rivalry of Existing Competitors

Rivalry of Existing Competitors is the degree to which existing competitors' battle for market share. The intensity of rivalry influences prices as well as the costs of competing in areas such as: plant, product development, advertising, and sales force. Rivalry of existing competitors is rather strong because of these concerns: (see Table 5)
- Number and equality of competitors - the number of competitors and their equality, is many due to the weak threat of entry.
- Market growth - the market growth or decline, is quite high due to the baby boom effect.
- Switching costs - the total expense a customer incurs in
switching competitors, is low since it is easy and inexpensive for a wholesaler for changing to sale any other product.

- **Product differentiation** - the degree that competitor products can substitute for each other, is commodity with so many alternative products from various manufacturers. Anyhow, it depends on the connection of a wholesaler among the manufacturers.

- **Fixed costs** - the degree of fixed costs and/or perishability of the product, is low because the wholesaler need just a warehouse which can be a rental one.

- **Unit of capacity growth** - the amount of additional product produced per investment in unit capacity increase, is moderately large due to the more they buy the cheaper they get.

- **Exit barriers** - the degree to which all the competitors play by the established rules, is quite low due to the small fixed cost of investment.

- **Diversity of corporate personalities** - the degree, to which all the competitors play by the established rules, is rather similar to the others.

### 3.1.6 Conclusion

The five-force analysis of the toy wholesaler industry shows only one advantage from supplier power, and the other
four forces are the disadvantage. Although the threat of entry for this industry is rather weak and give disadvantage to the whole industry, on the other hand, it shows an advantage for a new wholesaler (see Table 6).

3.2 Macrotoys

To make this project more realistic and understandable, a simulated toy-wholesaler company, Macrotoys Limited Corporation was created with the following assumptions.

A newborn toys wholesaler, Macrotoys is located in Southern California, and managed by a group of MBA managers. With an approximately initial budget of $1 million, which does not include any financial support from other companies, the company's major products are non-licensed toys, about 80% of its sales. The other 20% of its sales comes from licensed toys. Macrotoys' main market is in United States of America and Canada. Also, with its commercial Web site, the company has a potential growth of its market to other oversea countries. Compared to other toy wholesalers, Macrotoys is just a toddler, who is running among those competitors. Anyhow, with its management team, Macrotoys' goal is to be a leader in this wholesaler industry.
3.3 Macrotoys' Business Scope

Business scope defines the nature and essential parameters of a business. Each attribute of Macrotoys' business scope is explained as the following:

- **Vision**: To be a leader in co-managing, shaping collaborative, and cross-functional relationship with partners and customers by using information technology and in turn accelerating the whole industry.

- **Mission**: Continue to modify the Internet and electronic commercial technology to reach as many potential customers as possible. Also strive to improve services and the quality of products and eventually attain a position of high loyalty as a national toys-wholesaler.

- **Value**: Correlate business communication with partners, toy manufactures, toy retailers, as well as respond to the delights of the customers.

- **Customer and Market**: Overall the major customers are toy retailers, and mini-distributors in United State and Canada. However, the Internet and electronic commerce would provide an opportunity to merge into other markets around the world.

- **Product and Service**: Our business includes selling a variety of both licensed and non-licensed toy products ranging from moderate to high quality, with a high level of
service.

- Strategic Intent: To maintain strong relationship with business partners and to preserve the superior image of Macrotoys, thus increasing market shares.

- Driving Force: Exploit information technology including Internet and electronic commerce to expertise and achieve a prominent position in the high competitive market of the world economy with satisfactory collaboration between of the business associates and us.

3.4 Strategy for Macrotoys

The Three Generic Strategies Model (see Table 7) would help to select a strategy for better chance in today's competitive market. By using the Three Generic Strategies, we will consider both competitive scope and competitive advantage. For the competitive advantage, since Macrotoys is a new toy wholesaler company, it is somewhat difficult to compete with other existing competitors by using a cost leadership strategy. We select competitive scope as a factor to determine the strategy. The great development of electronic commerce will open a big door for Macrotoys to enter in the broad market.

To survive, and achieve its goal, Macrotoys should also apply the strategy number 2, which is the
differentiation. Macrotoys should also take care of its customers with a high level of service to build up its loyalty. With the benefits of electronic commerce, Macrotoys will become more efficient and flexible in its internal operations, work more closely with their suppliers, and get more responsive to the needs and expectations of its customers. Moreover, the goodness of electronic commerce will not only allows the company to select the best suppliers regardless of their geographical location but also to sell to a global market.

Table 1. Supplier Power of the Toy Wholesale Industry

<table>
<thead>
<tr>
<th>Factor</th>
<th>Strong</th>
<th>Weak</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Concentration of Supplier</td>
<td>Few</td>
<td>Many</td>
</tr>
<tr>
<td>2. Product Differentiation</td>
<td>Proprietary</td>
<td>Commodity</td>
</tr>
<tr>
<td>3. Switching Costs</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>4. Substitute Products</td>
<td>Few</td>
<td>Many</td>
</tr>
<tr>
<td>5. Customer By-pass</td>
<td>Easily Done</td>
<td>Difficult</td>
</tr>
<tr>
<td>6. Customer Importance</td>
<td>Unimportant</td>
<td>Important</td>
</tr>
<tr>
<td>Conclusion</td>
<td>Strong</td>
<td>Weak</td>
</tr>
</tbody>
</table>
Table 2. Buyer Power of the Toy Wholesale Industry

<table>
<thead>
<tr>
<th>Factor</th>
<th>Strong</th>
<th>Weak</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Concentration of Buyers</td>
<td>Few</td>
<td>Many</td>
</tr>
<tr>
<td>2. Product is Commodity</td>
<td>Commodity</td>
<td>Proprietary</td>
</tr>
<tr>
<td>3. Product as Cost Component of Buyer’s Product</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>4. Buyer’s Profitability</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>5. Product Importance to Buyer</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>6. Product is Viewed as Expense</td>
<td>Pure Expense</td>
<td>Value-Added</td>
</tr>
<tr>
<td>7. Supplier By-pass</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Conclusion</td>
<td>Strong</td>
<td>Weak</td>
</tr>
</tbody>
</table>
Table 3. Threat of Entry of the Toy Wholesale Industry

<table>
<thead>
<tr>
<th>Factor</th>
<th>Weak</th>
<th>Strong</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Economy of Scale</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>2. Product Differentiation</td>
<td>Commodity</td>
<td>Proprietary</td>
</tr>
<tr>
<td>3. Switching Costs</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>4. Capital Requirements Access</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>5. Distribution Channel Access</td>
<td>Open</td>
<td>Closed</td>
</tr>
<tr>
<td>6. Government Policy Entry</td>
<td>Entry</td>
<td>Closed</td>
</tr>
<tr>
<td>7. Incumbent Retaliation Weak</td>
<td>Weak</td>
<td>Strong</td>
</tr>
<tr>
<td>Conclusion</td>
<td>Weak</td>
<td>Strong</td>
</tr>
</tbody>
</table>
Table 4. Substitute Products of the Toy Wholesale Industry

<table>
<thead>
<tr>
<th>Factor</th>
<th>Strong</th>
<th>Weak</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Strong Substitute</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>2. Substitute Price and</td>
<td>Lower</td>
<td>Higher</td>
</tr>
<tr>
<td>Performance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Profitability of</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Substitute Industry</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Competitor Rivalry</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Conclusion</td>
<td>Strong</td>
<td>Weak</td>
</tr>
</tbody>
</table>


Table 5. Rivalry of Existing Competitors of the Toy Wholesale Industry

<table>
<thead>
<tr>
<th>Factor</th>
<th>Strong</th>
<th>Weak</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Number/Equality of Competitors</td>
<td>Many/Equal</td>
<td>Few/Unequal</td>
</tr>
<tr>
<td>2. Market Growth</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>3. Switching Costs</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>4. Product Differentiation</td>
<td>Commodity</td>
<td>Proprietary</td>
</tr>
<tr>
<td>5. Fixed Costs</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>6. Unit of Capacity Growth</td>
<td>Large</td>
<td>Small</td>
</tr>
<tr>
<td>7. Exit Barriers</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>8. Diversity of Corporate Personalities</td>
<td>Diverse</td>
<td>Similar</td>
</tr>
<tr>
<td>Conclusion</td>
<td>Strong</td>
<td>Weak</td>
</tr>
</tbody>
</table>
### Table 6. The Five-Force Analysis Conclusion

<table>
<thead>
<tr>
<th>Factor</th>
<th>Disadvantage</th>
<th>Advantage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Supplier Power</td>
<td>Strong</td>
<td>Weak</td>
</tr>
<tr>
<td>2. Buyer Power</td>
<td>Strong</td>
<td>Weak</td>
</tr>
<tr>
<td>3. Threat of Entry</td>
<td>Weak</td>
<td>Strong</td>
</tr>
<tr>
<td>4. Substitute Products</td>
<td>Strong</td>
<td>Weak</td>
</tr>
<tr>
<td>5. Rivalry of Existing Competitors</td>
<td>Strong</td>
<td>Weak</td>
</tr>
</tbody>
</table>

**Conclusion**

<table>
<thead>
<tr>
<th>Disadvantage</th>
<th>Advantage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Table 7. Three Generic Strategies

<table>
<thead>
<tr>
<th>Competitive scope</th>
<th>Competitive Advantage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lower Cost</td>
</tr>
<tr>
<td>Broad Target</td>
<td>1. Cost Leadership</td>
</tr>
<tr>
<td>Narrow Target</td>
<td>3 A. Cost Focus</td>
</tr>
</tbody>
</table>
CHAPTER FOUR

COLDFUSION

4.1 Introduction to ColdFusion

ColdFusion, launched in 1995 by Allaire Corporation, was the first Web application server available for Windows NT-based Web servers. Cold Fusion is now at version 4.5 and it also has version 4.5.2 in French, German, and Japanese.

Today, ColdFusion is used by half of Fortune 500 companies by some counts. It has grown from its modest beginnings to this wide level of industry acceptance. Applications can be rapidly designed, prototyped, and deployed. ColdFusion is available for Windows NT and Solaris, and active work is happening on other versions including HPUX and Linux.

As compared to some other Web application server products, ColdFusion offers a simplicity that often belies its powerful capabilities. These capabilities include working with data in databases, interacting with the Internet through FTP, e-mail, and HTTP, and much more.

4.2 The Components of ColdFusion

ColdFusion consists of several components that, when put together, create the powerful development environment
for Web applications. These components are:
- ColdFusion Markup Language (CFML)
- ColdFusion Application Server
- ColdFusion Studio
- ColdFusion Administrator

4.2.1 ColdFusion Markup Language

Learning to develop applications in ColdFusion is centered on learning the ColdFusion Markup Language (CFML). The name of the languages offers insight as to its nature. In terms of style and use, CFML is close relative to the Hypertext Markup Language (HTML). Like HTML, it is tag based and does not require learning a programming language with a unique syntax in the way that JavaScript or VBScript do. However, the similarities end there: HTML is used to define the structure, and to some extent, the layout and design of a Web page. CFML is used to specify actions to take in the form of small server-based programs. As in most Web application environments, both HTML and CFML are used together in files that are processed by the ColdFusion server to generate complete Web pages to be displayed in users browsers.
4.2.2 ColdFusion Application Server

The process includes taking files containing CFML and HTML and converting them into completed Web pages for the ColdFusion Application Server and handles delivery to the user’s browser. The application server is an extension of the Web server that handles the processing of all files containing CFML tags and returns to the Web server pure HTML files for delivery to the user.

The ColdFusion Application Server offers numerous features that make developing and deploying reliable, robust, and high-performance Web applications and interactive Web sites possible. These include:

- Scalability features such as the capability to track client state, load balancing, and clustering.

- Open integration including support for the emerging Extensible Markup Language (XML) standard, built-in support for high-end database servers such as Oracle and Sybase, support for popular application development standards such as the Common Object Request Broker Architecture (CORBA), and the ability to extend the server’s capabilities by using standard programming languages such as Visual C++.

- Security features include a comprehensive authentication
system, remote development with security to allow secure control over Web site content from remote locations, and integration with Windows NT security and authentication systems.

4.2.3 ColdFusion Studio

ColdFusion Studio is an integrated development environment (IDE) for ColdFusion. IDEs generally offer a complete graphical environment in which to develop applications.

Studio is optimized for development of ColdFusion-based Web sites and applications (although it can be used to develop static HTML Web sites that don't use any of the interactive or dynamic features of ColdFusion). Among the features of Studio that make it a valuable tool for ColdFusion developments are:

- Access to the ColdFusion documentation and Help
- You can access complete reference information while you are developing.
- Tag Editors
- You can build complete tags by filling in simple-to-follow forms.
- Project management
- You can group files into sets of relate files known as projects. These projects can be managed as single
entities, which allows for global tasks such as search-and-replace across whole projects.

- Code snippets

- You can create a library of code blocks (called snippets) that you commonly use and then quickly include them in the files you are creating.

- Expression Builder

- ColdFusion allows the creation of some fairly complex expressions. This is simplified in Studio through a point-and-click expression-building applet.

- Visual Database tools

- One of the powers of ColdFusion is that it makes accessing data stored in relational databases quite easy. You can use visual tools to create database queries, making the creation of code for accessing databases a trivial matter.

- Validation tools

- You can ensure that the code you have developed is valid through link validation and CFML and HTML code validation capabilities.

- Code debugging

- ColdFusion application development is a form of programming, and like all forms of programming, it is impossible to write 100 percent accurate code all the
time. You can use debugging tools to help pinpoint bugs and errors in code, saving time and frustration.
- Design layout and page preview
- You can design your pages by using visual page design tools and can preview them inside an integrated browser.

4.2.4 ColdFusion Administrator

The ColdFusion Administrator is an application that enables you to manage your ColdFusion Application Server through a simple, forms-driven Web interface.

With the ColdFusion Administrator, you can configure all aspects of your server's operation, including setting performance-related options, managing security settings, creating database connections, indexing content, and much more.

4.3 How ColdFusion Works

ColdFusion integrates tightly with the Web server it is installed with. This allows for a quick and easy transfer of data between the Web server and the ColdFusion Application Server.

This tight integration is normally achieved through the Web server's application programming interface (API). The API provides a way for an external product such as ColdFusion to become an integral part of the operating
environment of the Web server. All major Web servers including Apache, Netscape Enterprise Server, and Microsoft Internet Information Server offer APIs, and ColdFusion is designed to work with all of these.

By using the API to connect with the Web server, several benefits are automatically achieved:

- The ColdFusion server essentially becomes part of the Web server.
- A separate program is not launched each time a dynamic page is required; instead, the pages are interpreted by the ColdFusion server and returned to the user while the ColdFusion server remains loaded and in memory as long as the Web server is running.
- Tight integration with the security and authentication model used by the web server is possible.

4.4 Requirements for ColdFusion

To use ColdFusion in your environment, you need to meet certain hardware and software requirements. Using ColdFusion effectively also requires previous experience in certain areas of Web development.
4.4.1 Hardware

According to Allaire, the ColdFusion application server for Windows has the following minimum hardware requirements:

- Windows 95/98 or Windows NT 4.0 (NT recommended)
- Intel 486 or higher (Pentium recommended)
- 64 MB RAM
- 50 MB free hard disk space
- CD-ROM drive

Of course, the real hardware requirement will depend largely on your individual needs. For example, if you are running ColdFusion on your own workstation for development purposes, you will need far less resources than running it on a heavily used production server.

Allaire has a different set of hardware requirements for ColdFusion Studio 4.5:

- Windows 95/98/ME, Windows NT 4.0, or Windows 2000
- Pentium-compatible processor
- 64 MB RAM (128 MB suggested)
- 35 MB hard disk space
- CD-ROM drive (for packaged version)
- 800x600 screen resolution
- ColdFusion Server (for debugging, database access, and deployment)
- The ColdFusion administrator has no special requirements; it is simply a ColdFusion application that runs on top of the ColdFusion application Server. If you have sufficient hardware resources to run the application server, then the administrator will operate with no difficulty.

4.4.2 Software

To run the ColdFusion Application server, you need to meet two software requirements:

- The TCP/IP networking protocol must be enabled on the system.

- A suitable Web server must be running. Suitable Web servers include:
  
  - Apache - [http://www.apache.org](http://www.apache.org); for Solaris or Windows NT; free
  
  - Microsoft Internet Information Server -
    [http://www.microsoft.com/iis](http://www.microsoft.com/iis); for Windows NT; free
  
  - Netscape Enterprise Server -
    [http://www.netscape.com](http://www.netscape.com); for Solaris or Windows NT.
  
  - O'Reilly Website Pro - [http://website.ora.com](http://website.ora.com); for Windows 95, 98, or NT
  
  - Microsoft Personal Web Server -
    [http://www.Microsoft.com](http://www.Microsoft.com); Windows95, 98, or NT Workstation; free.
CHAPTER FIVE
DEVELOPMENT PROCESS

5.1 Design Phase

Generally, in the designing phase, system analysis team will start by create many diagrams, such as system flow diagram, data flow diagram. These diagrams are used to show the overall picture of the system and are used as the major tools for developing the system. However, in this project, users will run the system through the Internet. This reduces the significance of developing the system flow diagram, since the diagram will look like network diagram, which will be discussed in the following part.

5.1.1 Data Flow Diagram

The first step of the design phase in this project is to create the data flow diagram, or DFD, which will show the flow of data inputs through the system. Usually a system analysis will create the first DFD, which will illustrate the whole picture of the process. This first DFD is called the conceptual level. Then, he or she will divide the conceptual level DFD into many sub diagrams, which demonstrate the sub system in more detail, until each individual sub systems cannot be divided further.

The Figure 3 illustrates the conceptual level of the
B2BECs system. First, customers acquire detailed information about the products via the Internet. After customers are satisfied, they will make the order online. The order transaction will be received by the e-commerce system. Then, it will pass the transaction to the inventory system, which in turn is connected to the supplier’s systems. The inventory system will check the stock and certify that the product is ready to be shipped before it sends a “confirm” transaction back to the e-commerce system. Once the e-commerce system collects the confirm transaction, it will send the product to customers by using the outside carriers, such as UPS or USPS. The process is completed when the customer receives the product from the carrier.

The Figure 4 shows the breakdown of the DFD. In this level, which is called level one, the conceptual level is broken into six sub systems, which are the search
information system, the registration system, the order system, the bill and receipt system, the packing system, and the shipping system. All of these systems have the same significance. Although they will deal with different job functions, they will work together to create the whole system. Without any of the subsystems, the application cannot operate.

The following part will discuss each job function of those subsystems. They will also be divided into many smaller subsystems as well.

The Figure 5 shows the order system in more detail. There are two sub-systems in the order system. The user interface is the system that contacts directly to customers. To make the website more attractive, the user interface generally will be designed by a professional
The fetch information system is a search engine used to provide information about the product to customers. The good search engine should allow customers to create any ad hoc query depending upon individual need. The speed of the search is also an important issue for the Internet application as well.

Figure 6 demonstrates the registration system. Before customers can place any order, first their necessary information, such as company name, address, phone number, and fax number, must be collected. Then the system ought to validate the integrity of this information. The integrity rule and the business rule, such as uniqueness of company name, and user name, will be verified before the information will be sent to the next process. When the
Figure 6. Data Flow Diagram Level 2.0: Registration information is confirmed, the record information system will add the information to the database, which will be used in the subsequent processes.

Figure 7 explains the process of order system. After customers register and create their accounts, they will be allowed to purchase the products. The process starts when customers select a product and put them in shopping carts.

Figure 7. Data Flow Diagram Level 3.0: Order
They will also provide essential information, such as quantity of the product, payment, and shipping information. The order transaction will be verified to make sure that customers provide the correct information. After the information is validated, the record information subsystem will write the information to the company's database. This information will also be used in the inventory system later.

The next system, as shown in Figure 8, is the bill and receipt system. The system will retrieve required information from the database. It will calculate the price of the order, and add tax and shipping cost before sending this information to the next system. The debit customer's account system will send the total amount of the order to the customer account and credit this amount to company's
account. These subsystems need to connect with outside companies, such as a credit card company, or a company’s bank. After the bank confirms the credit transaction, the system will print the receipt to customers, and to company’s accounting department. For the e-commerce website these processes will look a little bit different. However, the result will be similar.

The Figure 9 illustrates the packaging process of the system. This subsystem is, sometimes, included in the inventory system. After customers make the order and the order transaction is verified, an employee, usually from order department, will remove the sold products from the company’s warehouse, put them into a box and wrap up the package. The package, then, will be assigned a tracking number, and a label will be printed. In order to make the

![Figure 9. Data Flow Diagram Level 5.0: Packaging](image)
application run correctly, the employee must record this information to the database as well. Therefore, the employee’s user interface will be developed and added into the application, as well.

The last process, as demonstrated in figure 5.8, is the shipping system. Once the sold products are packed, the application will send the tracking number to customers, and the package will be shipped to the carrier.

For the E-commerce system, some processes, such as order and receipt processes, or packaging and shipping processes, will be combined together to increase the speed of the order. Sometimes, the subsystems are combined till the user feels like he or she is using a single unique system, not separated subsystems.

5.2 Database Design

The database is the main part of every business application. Without a database, it cannot track customer information, calculate sale revenue, and estimate profits. In this part, the entity-relationship, or E-R diagram will be developed. System analysts and developers must design a normalized database to avoid trouble in the subsequent steps. Then the data dictionary, which shows the detail, such as key fields, variable types, and length of each
field in each table, will be created. The E-R diagram and data dictionary will be used as a guideline during the subsequent processes.

5.2.1 Entity-Relationship Diagram

The E-R diagram of this project, as illustrated in Figure 10, provides the detail information of every important table with its fields. Using the underscore character states the key fields. The relationship functions, such as one-to-one and one-to-many relationships, are also provided.

There are five major tables and one many-to-many relationship, which will be converted to a table. The Customers table maintains the customers' information including company name, address, and contract information. The Employees table keeps employees' information, such as social security number, and hire date. However, because the

![Figure 10. Data Flow Diagram Level 6.0: Shipping](image)
system does not provide salary function; the employee wages will not be kept. The Orders table keeps each order transaction detail including type of the payment, date of the order, and order status. The Products table provides detail information of each individual product. This information includes stock quantity, and reorder point. The Suppliers table maintains all suppliers information. In the future, this table will be needed to implement the fully function business-to-business application. The last table is the Transact table, which is converted from many-to-many relationship between the orders table and the products table.

5.2.2 Data Dictionary

The data dictionary presents each table in the detail. In this project, there are two types of tables in the database. The first one is the basic table, which is shown in Figure 11. The basic table is the requirement of the application. Without any of this table, the system will not operate. The second one is the system table. The system tables are created to provide better performance of the application. There are many ways to implement the application without all of these tables. Therefore, the system tables will not be shown in the E-R diagram, since they are not necessary.
The subsequent tables show the data type of each field in the Microsoft T-SQL format, since the Microsoft SQL server will be used as the major database server for this project. The size, length, of each field will be presented when the data type is VARCHAR only. The primary, foreign and composite keys of each table are shown in the remark field. See Basic Tables (Table 9 - 14), and System Tables (Table 15 - 26).

Figure 11. Entity-Relationship Diagram
5.3 Network Design

Typically, there are two network architectures in every Internet application. The first one is inside a company network. The Local Area Network, or LAN, is used in today's business company. The LAN provides collaboration of employees and increase productivity of each individual. While the Wide Area Network, or WAN, links the company to its customers and partners.

The Figure 12 demonstrates both network architectures used in this project. Customers using their own computer connect to the company by using the Internet, which is a WAN connection. They can access information related to

![Network Design Diagram]

Figure 12. Network Design Diagram
making and tracking their order. Customers and outsiders will not be allowed to access critical information. They will be blocked from this access by a firewall. Employees, in contrast, connect to the system using the inside computer. They might be able to access information, such as employees' salaries, sales revenue, and order transactions. However, they must be authorized from the system before they log in to those critical data.

In a real E-business company, there are at least three servers. The first one is the logon server. The logon server will validate the user login name and password, and keep information of available resources. Each user, including both employees and customers, need to logon to this server first in order to access other resources. The second is the databases server. This server keeps the database of the company and might provide backend applications for data access. Normally these two servers will be suited to the company without using an e-commerce business solution. The web server is only needed when implementing an E-commerce solution.

The backup/recovery and fault-tolerant systems need to be implemented in a real business situation as well. There are many methods to implement the backup and recovery systems. Usually a company needs a tape backup system. The
tape backup device offers the ability to back up and recover data to and from tape medias. Experts also recommend keeping a copy of the important data outside the company as well. Another expensive backup method includes a redundant server. The redundant server will connect directly to the system server. It will keep the same data as in the system server. However, it will not be connected to other computers until the system server is down. In a critical system, a redundant server might be needed when the down time period of the server is unacceptable.

Fault-tolerant describes a computer system or component designed so that in the event that a component fails a backup component or procedure can immediately take its place with no loss of service. The well-known fault-tolerant system is Redundancy Array of Inexpensive Disks, or RAID. RAID can be provided with software, embedded in hardware, or provided by some combination. However, fault-tolerant is not regarded as a replacement of a backup and recovery system.

5.4 Web Design

There are two types of websites in this project. The first one is the main website, where customers and outsiders visit. This website is less secure, and will
permit everyone to visit. He or she can obtain product information, register in order to buy the products, purchase the products online, track the order they make, and send a comment or email to the company. The second website is the admin website. This site is protected from outsiders and customers because all users who can access this site will be able to modify the significant information. Therefore, only employees are allowed to access this site. Employees can change customer, order, supplier, and product information. They are also permitted to check email online from this website.

Basic Tables:

- Customers Table is used to keep employees' information (see Table 8).
- Employees Table is used to keep employees' information (see Table 9).
- Orders Table is used to keep order information (see Table 10).
- Transact Table is used to link products and orders table together (see Table 11).
- Products Table is used to keep all products information (see Table 12).
- Suppliers Table is used to keep suppliers' information (see Table 13).
System Tables:

- CustomersTypes Table is used to provide types of customers (see Table 14).
- OrderStatus Table is used to show detail of order status (see Table 15).
- PaymentTypes Table is used to keep detail of payment types (see Table 16).
- Carriers Table is used to provide carriers information, such as name (see Table 17).
- ShippingRates Table is used to provide basic shipping cost (see Table 18).
- WeightZoneID Table is used to provide maximum and minimum weight for zones (see Table 19).
- States Table is used to provide state name and two characters (see Table 20).
- StateZones Table is used to provide charge rate depended on zone (see Table 21).
- SizeZones Table is used to provide charge rate depended on size (see Table 22).
- Subcategories Table is used to provide subcategories detail (see Table 23).
- ProductCat Table is used to show which product belongs to what category (see Table 24).
- Categories Table is used to show categories detail
WebStats Table is used to keep website statistic.

Table 8. Customers Table

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Size/Length</th>
<th>Description</th>
<th>Key Field</th>
</tr>
</thead>
<tbody>
<tr>
<td>CusID</td>
<td>INT</td>
<td></td>
<td>Customer ID</td>
<td>Key Field</td>
</tr>
<tr>
<td>EmpID</td>
<td>INT</td>
<td></td>
<td>Employee ID</td>
<td>Foreign Key</td>
</tr>
<tr>
<td>CompanyName</td>
<td>VARCHAR</td>
<td>40</td>
<td>Customer's company name</td>
<td></td>
</tr>
<tr>
<td>Address</td>
<td>VARCHAR</td>
<td></td>
<td>Composite Field:</td>
<td></td>
</tr>
<tr>
<td>Address1</td>
<td>VARCHAR</td>
<td>30</td>
<td>- Street address</td>
<td></td>
</tr>
<tr>
<td>Address2</td>
<td>VARCHAR</td>
<td>30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>City</td>
<td>VARCHAR</td>
<td>20</td>
<td>- Region or State</td>
<td>- Null</td>
</tr>
<tr>
<td>Region</td>
<td>VARCHAR</td>
<td>20</td>
<td>- Postal or zip code</td>
<td>- Null</td>
</tr>
<tr>
<td>PostalCode</td>
<td>VARCHAR</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Country</td>
<td>VARCHAR</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phone</td>
<td>VARCHAR</td>
<td>15</td>
<td>Customer's phone number</td>
<td></td>
</tr>
<tr>
<td>Fax</td>
<td>VARCHAR</td>
<td>15</td>
<td>Customer's fax number</td>
<td></td>
</tr>
<tr>
<td>LoginName</td>
<td>VARCHAR</td>
<td>15</td>
<td>Customer's login name</td>
<td></td>
</tr>
<tr>
<td>Password</td>
<td>VARCHAR</td>
<td>15</td>
<td>Password</td>
<td></td>
</tr>
<tr>
<td>Website</td>
<td>VARCHAR</td>
<td>40</td>
<td>Customer's Website</td>
<td></td>
</tr>
<tr>
<td>Contact</td>
<td>VARCHAR</td>
<td></td>
<td>Composite Field</td>
<td></td>
</tr>
<tr>
<td>Title</td>
<td>VARCHAR</td>
<td>35</td>
<td>- Contractor title</td>
<td></td>
</tr>
<tr>
<td>FirstName</td>
<td>VARCHAR</td>
<td>30</td>
<td>- Contractor first name</td>
<td></td>
</tr>
<tr>
<td>LastName</td>
<td>VARCHAR</td>
<td>30</td>
<td>- Contractor last name</td>
<td></td>
</tr>
<tr>
<td>Email</td>
<td>VARCHAR</td>
<td>35</td>
<td>- Contractor email</td>
<td></td>
</tr>
<tr>
<td>Direct</td>
<td>VARCHAR</td>
<td>15</td>
<td>- Direct phone line</td>
<td></td>
</tr>
<tr>
<td>Since</td>
<td>DATETIME</td>
<td></td>
<td>The stated date</td>
<td></td>
</tr>
<tr>
<td>Type</td>
<td>VARCHAR</td>
<td>2</td>
<td>Type of customer</td>
<td>% Discount</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- GC General Customer</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- PC Premium Customer</td>
<td>15%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- BP Business Partner</td>
<td>30%</td>
</tr>
</tbody>
</table>

(see Table 25).

(see Table 26).
Table 9. Employees Table

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Length</th>
<th>Description</th>
<th>Key Field</th>
</tr>
</thead>
<tbody>
<tr>
<td>EmpID</td>
<td>INT</td>
<td>11</td>
<td>Employee ID</td>
<td>Field</td>
</tr>
<tr>
<td>SSN</td>
<td>VARCHAR</td>
<td>11</td>
<td>Social Security Number</td>
<td>Field</td>
</tr>
<tr>
<td>FirstName</td>
<td>VARCHAR</td>
<td>30</td>
<td>Employee’s name</td>
<td>Field</td>
</tr>
<tr>
<td>LastName</td>
<td>VARCHAR</td>
<td>30</td>
<td>Employee’s last name</td>
<td>Field</td>
</tr>
<tr>
<td>Address</td>
<td>VARCHAR</td>
<td>30</td>
<td>Composition Field: Address of employee</td>
<td>Field</td>
</tr>
<tr>
<td>Address1</td>
<td>VARCHAR</td>
<td>30</td>
<td>Employee’s phone number</td>
<td>Field</td>
</tr>
<tr>
<td>Address2</td>
<td>VARCHAR</td>
<td>30</td>
<td>Employee’s email address</td>
<td>Field</td>
</tr>
<tr>
<td>City</td>
<td>VARCHAR</td>
<td>20</td>
<td>Employee’s password</td>
<td>Field</td>
</tr>
<tr>
<td>State</td>
<td>VARCHAR</td>
<td>2</td>
<td>Employee’s hired date</td>
<td>Field</td>
</tr>
<tr>
<td>PostalCode</td>
<td>VARCHAR</td>
<td>10</td>
<td></td>
<td>Field</td>
</tr>
<tr>
<td>Phone</td>
<td>VARCHAR</td>
<td>15</td>
<td></td>
<td>Field</td>
</tr>
<tr>
<td>Email</td>
<td>VARCHAR</td>
<td>35</td>
<td></td>
<td>Field</td>
</tr>
<tr>
<td>Password</td>
<td>VARCHAR</td>
<td>15</td>
<td></td>
<td>Field</td>
</tr>
<tr>
<td>HireDate</td>
<td>SMALL DATETIME</td>
<td></td>
<td>Employee’s hired date</td>
<td>Field</td>
</tr>
</tbody>
</table>
### Table 10. Orders Table

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>OrderID</td>
<td>INT</td>
<td>Order ID</td>
</tr>
<tr>
<td>CusID</td>
<td>INT</td>
<td>Customer ID</td>
</tr>
<tr>
<td>OrderDate</td>
<td>SMALL DATETIME</td>
<td>Date of order</td>
</tr>
<tr>
<td>Status</td>
<td>VARCHAR</td>
<td>Status of the order</td>
</tr>
<tr>
<td>Payment</td>
<td>VARCHAR</td>
<td>Type of payment</td>
</tr>
<tr>
<td>AccNum</td>
<td>VARCHAR</td>
<td>The account number of customer's payment.</td>
</tr>
<tr>
<td>CarrierID</td>
<td>INT</td>
<td>The carrier ID</td>
</tr>
<tr>
<td>Tracking</td>
<td>VARCHAR</td>
<td>Tracking number</td>
</tr>
</tbody>
</table>

- **Order ID** - System generate unique number
- **Customer ID**
- **Date of order**
- **Status of the order** - IP In Process, IT In Transit, PS Package is Shipped, OS Out of Stock
- **Type of payment** - AX American Express, DS Discover Card, DT Direct Transfer, MO Money Order, MS Master Card, VS Visa Card

### Table 11. Transact Table

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>OrderID</td>
<td>INT</td>
<td>Order ID</td>
</tr>
<tr>
<td>ProdID</td>
<td>INT</td>
<td>Product ID</td>
</tr>
<tr>
<td>Quantity</td>
<td>INTEGER</td>
<td>Quantity of the product in the order</td>
</tr>
</tbody>
</table>

- **Order ID**
- **Product ID**
- **Quantity of the product in the order**
### Table 12. Products Table

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Description</th>
<th>Key Field</th>
</tr>
</thead>
<tbody>
<tr>
<td>ProdID</td>
<td>INT</td>
<td>Product ID</td>
<td>System generate unique number</td>
</tr>
<tr>
<td>SupID</td>
<td>INT</td>
<td>Supplier ID</td>
<td>Foreign Key</td>
</tr>
<tr>
<td>ProdName</td>
<td>VARCHAR</td>
<td>Product name</td>
<td></td>
</tr>
<tr>
<td>Description</td>
<td>TEXT</td>
<td>Description of the Product</td>
<td></td>
</tr>
<tr>
<td>PurchasePrice</td>
<td>MONEY</td>
<td>Purchase price per unit</td>
<td></td>
</tr>
<tr>
<td>SalePrice</td>
<td>MONEY</td>
<td>Sale Price Per Unit</td>
<td></td>
</tr>
<tr>
<td>StockQuantity</td>
<td>INTEGER</td>
<td>Current quantity in Stock</td>
<td></td>
</tr>
<tr>
<td>ReorderPoint</td>
<td>INTEGER</td>
<td>Minimum quantity of the Stock</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>before reorder</td>
<td></td>
</tr>
<tr>
<td>SaleUnit</td>
<td>VARCHAR</td>
<td>Unit used when sale the product</td>
<td></td>
</tr>
<tr>
<td>PurchaseUnit</td>
<td>VARCHAR</td>
<td>Unit used when purchase the product</td>
<td></td>
</tr>
<tr>
<td>Type</td>
<td>VARCHAR</td>
<td>Composite Key:</td>
<td>Classify kinds of the product</td>
</tr>
<tr>
<td>Age</td>
<td>VARCHAR</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>VARCHAR</td>
<td>(M)ale (F)emale (U)nisex</td>
<td></td>
</tr>
<tr>
<td>Picture</td>
<td>VARCHAR</td>
<td>20</td>
<td>The file’s name of product’s picture</td>
</tr>
<tr>
<td>Dimension</td>
<td></td>
<td>Composite Key:</td>
<td></td>
</tr>
<tr>
<td>Measure</td>
<td></td>
<td>- Measure</td>
<td>Used for shipping purpose</td>
</tr>
<tr>
<td>SizeZoneID</td>
<td>INT</td>
<td>- Link to size zone</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>REAL</td>
<td>- Weight in pounds</td>
<td></td>
</tr>
</tbody>
</table>

69
### Table 13. Suppliers Table

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Length</th>
<th>Description</th>
<th>Key Field</th>
</tr>
</thead>
<tbody>
<tr>
<td>SupID</td>
<td>INT</td>
<td></td>
<td>Supplier ID</td>
<td></td>
</tr>
<tr>
<td>CompanyName</td>
<td>VARCHAR</td>
<td>40</td>
<td>Supplier's company name</td>
<td></td>
</tr>
<tr>
<td>Address</td>
<td>VARCHAR</td>
<td>30</td>
<td>Composition Field:</td>
<td></td>
</tr>
<tr>
<td>Address1</td>
<td>VARCHAR</td>
<td>30</td>
<td>- Address of supplier</td>
<td></td>
</tr>
<tr>
<td>Address2</td>
<td>VARCHAR</td>
<td>30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>City</td>
<td>VARCHAR</td>
<td>20</td>
<td>- Region or State</td>
<td></td>
</tr>
<tr>
<td>Region</td>
<td>VARCHAR</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PostalCode</td>
<td>VARCHAR</td>
<td>10</td>
<td>- Postal or Zip code</td>
<td></td>
</tr>
<tr>
<td>Country</td>
<td>VARCHAR</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phone</td>
<td>VARCHAR</td>
<td>15</td>
<td>Supplier's phone number</td>
<td></td>
</tr>
<tr>
<td>Fax</td>
<td>VARCHAR</td>
<td>15</td>
<td>Supplier's fax number</td>
<td></td>
</tr>
<tr>
<td>Website</td>
<td>VARCHAR</td>
<td>40</td>
<td>Supplier's Website</td>
<td></td>
</tr>
<tr>
<td>Contact</td>
<td></td>
<td></td>
<td>Composite Field</td>
<td></td>
</tr>
<tr>
<td>Title</td>
<td>VARCHAR</td>
<td>35</td>
<td>- Contractor title</td>
<td></td>
</tr>
<tr>
<td>FirstName</td>
<td>VARCHAR</td>
<td>30</td>
<td>- Contractor first name</td>
<td></td>
</tr>
<tr>
<td>LastName</td>
<td>VARCHAR</td>
<td>30</td>
<td>- Contractor last name</td>
<td></td>
</tr>
<tr>
<td>Email</td>
<td>VARCHAR</td>
<td>35</td>
<td>- Contractor email</td>
<td></td>
</tr>
<tr>
<td>Direct</td>
<td>VARCHAR</td>
<td>15</td>
<td>- Direct phone line</td>
<td></td>
</tr>
</tbody>
</table>

### Table 14. CustomersTypes Table

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Length</th>
<th>Description</th>
<th>Key Field</th>
</tr>
</thead>
<tbody>
<tr>
<td>ID</td>
<td>VARCHAR</td>
<td>2</td>
<td>Customer type id</td>
<td>Description</td>
</tr>
<tr>
<td>Description</td>
<td>VARCHAR</td>
<td>50</td>
<td>Description</td>
<td>Discount rate (in percentage)</td>
</tr>
<tr>
<td>Discount</td>
<td>NUMBER</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table 15. OrderStatus Table

<table>
<thead>
<tr>
<th>ID</th>
<th>VARCHAR 2</th>
<th>Order status type id</th>
<th>Key Field</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>VARCHAR 30</td>
<td>Description</td>
<td></td>
</tr>
</tbody>
</table>

### Table 16. Payment Types Table

<table>
<thead>
<tr>
<th>ID</th>
<th>VARCHAR 2</th>
<th>Payment type id</th>
<th>Key Field</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>VARCHAR 30</td>
<td>Description</td>
<td></td>
</tr>
</tbody>
</table>

### Table 17. Carriers Table

<table>
<thead>
<tr>
<th>CarrierID</th>
<th>INT</th>
<th>Carrier ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>VARCHAR 50</td>
<td>System generate unique number</td>
</tr>
<tr>
<td>Key Field</td>
<td></td>
<td>Description</td>
</tr>
</tbody>
</table>

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Table 18. ShippingRates Table

<table>
<thead>
<tr>
<th>Column</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CarrierID</td>
<td>INT</td>
<td>Carrier ID - System generate unique number</td>
</tr>
<tr>
<td>WeightZoneID</td>
<td>INT</td>
<td>Weight Zone ID - System generate unique number</td>
</tr>
<tr>
<td>ShippingCost</td>
<td>REAL</td>
<td>The base price for shipping.</td>
</tr>
</tbody>
</table>

Table 19. WeightZoneID Table

<table>
<thead>
<tr>
<th>Column</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>WeightZoneID</td>
<td>INT</td>
<td>Weight Zone ID - System generate unique number</td>
</tr>
<tr>
<td>MinWeight</td>
<td>REAL</td>
<td>The minimum weight</td>
</tr>
<tr>
<td>MaxWeight</td>
<td>REAL</td>
<td>The maximum weight</td>
</tr>
</tbody>
</table>

Table 20. States Table

<table>
<thead>
<tr>
<th>Column</th>
<th>Type</th>
<th>Length</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ID</td>
<td>VARCHAR</td>
<td>2</td>
<td>Order status type id</td>
</tr>
<tr>
<td>StateName</td>
<td>VARCHAR</td>
<td>30</td>
<td>Description</td>
</tr>
</tbody>
</table>
Table 21. StateZones Table

<table>
<thead>
<tr>
<th>StateZoneID</th>
<th>INT</th>
<th>State Zone ID</th>
<th>Key Field</th>
</tr>
</thead>
<tbody>
<tr>
<td>ChargeRate</td>
<td>REAL</td>
<td>The charge rate in %</td>
<td></td>
</tr>
</tbody>
</table>

Table 22. SizeZones Table

<table>
<thead>
<tr>
<th>SizeZoneID</th>
<th>INT</th>
<th>State Zone ID</th>
<th>Key Field</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height</td>
<td>REAL</td>
<td>Height of the package</td>
<td></td>
</tr>
<tr>
<td>Width</td>
<td>REAL</td>
<td>Width of the package</td>
<td></td>
</tr>
<tr>
<td>Length</td>
<td>REAL</td>
<td>Length of the package</td>
<td></td>
</tr>
<tr>
<td>ChargeRate</td>
<td>REAL</td>
<td>The charge rate in %</td>
<td></td>
</tr>
</tbody>
</table>
### Table 23. Subcategories Table

<table>
<thead>
<tr>
<th>SubCatID</th>
<th>INT</th>
<th>Subcategory ID</th>
<th>Key Field</th>
</tr>
</thead>
<tbody>
<tr>
<td>CatID</td>
<td>INT</td>
<td>Categories ID</td>
<td>Foreign Key</td>
</tr>
<tr>
<td>SubCatName</td>
<td>VARCHAR 30</td>
<td>Name of subcategory</td>
<td></td>
</tr>
<tr>
<td>Description</td>
<td>VARCHAR 50</td>
<td>Description</td>
<td></td>
</tr>
</tbody>
</table>

### Table 24. ProductCat Table

<table>
<thead>
<tr>
<th>ProdID</th>
<th>INT</th>
<th>Product ID</th>
<th>Composite key</th>
</tr>
</thead>
<tbody>
<tr>
<td>SubCatID</td>
<td>INT</td>
<td>Subcategories ID</td>
<td>Composite key</td>
</tr>
<tr>
<td>StartDate</td>
<td>SMALL DATETIME</td>
<td>The first date to be</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>put in this subcategory</td>
<td></td>
</tr>
<tr>
<td>EndDate</td>
<td>SMALL DATETIME</td>
<td>The last date to be</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>put in this subcategory</td>
<td></td>
</tr>
<tr>
<td>Promotion</td>
<td>Money</td>
<td>Promotion price used during promotion a product</td>
<td></td>
</tr>
</tbody>
</table>
### Table 25. Categories Table

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Length</th>
<th>Description</th>
<th>Key Field</th>
</tr>
</thead>
<tbody>
<tr>
<td>CatID</td>
<td>INT</td>
<td></td>
<td>Category ID</td>
<td>Key Field</td>
</tr>
<tr>
<td>CatName</td>
<td>VARCHAR</td>
<td>30</td>
<td>Name of the Category</td>
<td></td>
</tr>
<tr>
<td>Description</td>
<td>VARCHAR</td>
<td>50</td>
<td>Description</td>
<td></td>
</tr>
</tbody>
</table>

- System generate unique number

### Table 26. WebStats Table

<table>
<thead>
<tr>
<th>Field</th>
<th>Type</th>
<th>Length</th>
<th>Description</th>
<th>Key Field</th>
</tr>
</thead>
<tbody>
<tr>
<td>WebStatsID</td>
<td>INT</td>
<td></td>
<td>Web statistic ID</td>
<td>Key Field</td>
</tr>
<tr>
<td>Browser</td>
<td>VARCHAR</td>
<td>20</td>
<td>Browser type</td>
<td>Allow null</td>
</tr>
<tr>
<td>Version</td>
<td>VARCHAR</td>
<td>20</td>
<td>Browser' version</td>
<td>Allow null</td>
</tr>
<tr>
<td>RemoteAddress</td>
<td>VARCHAR</td>
<td>20</td>
<td>IP address of client</td>
<td>Allow null</td>
</tr>
<tr>
<td>RemoteHost</td>
<td>VARCHAR</td>
<td>50</td>
<td>Host name of client</td>
<td>Allow null</td>
</tr>
<tr>
<td>HttRef</td>
<td>VARCHAR</td>
<td>50</td>
<td>Reference page</td>
<td>Allow null</td>
</tr>
<tr>
<td>SessionID</td>
<td>INT</td>
<td></td>
<td>Session ID of client</td>
<td>Allow null</td>
</tr>
<tr>
<td>ActiveDate</td>
<td>DATE</td>
<td></td>
<td>The date when client visit the site</td>
<td>Allow null</td>
</tr>
</tbody>
</table>
CHAPTER SIX
MACROTOYS WEBSITE

In this chapter, we will take a look to see how this website work.

6.1 Customers Website

We start from the first page, Index.html (see Figure 13). In this page, we will see many animation pictures, created in Crystal 3D Impact Pro, and Adobe Photoshop 5.5. Macromedia DreamWeaver 3.0 had been used to create the moving objects. The "Continue" button links to the next page, Preface.cfm (see Figure 14), which provide some information about this comprehensive project. After that, we will see the main page or products page, Showcategories.cfm (see Figure 19). In the main page, there are five links on the left column, which are the links to its corresponding .cfm files:

- "ABOUT US" will link to AboutUs.cfm (see Figure 15).
- "PRODUCTS" will link to ShowCategories.cfm (see Figure 19).
- "NEW ITEMS" will link to NewItems.cfm (see Figure 16).
- "FAQ" will link to FAQ.cfm (see Figure 17).
- "CONTACT US" will link to Contact.cfm (see Figure 18).
To shop on Macrotoys website, we should begin with the products page. From there, we can search products in three ways, which are by searching box, categories, or all products. Then it will link to another page, which presents the list of searched products. Those links can be Results.cfm (see Figure 20), ShowSubCat.cfm, or GetProduct.cfm. After that it will show all the details of the item we are searching in ShowOneItem.cfm (see Figure 21) including product picture, product ID, product name, price per package, the number of items per package, and weight per package.

To buy the products, one must click buy in ShowOneItem.cfm page that will link to AddItem.cfm, which allows us to see the shopping cart. This page also helps to add more items, and change the quantity of each product. The “Check Out” button from this page will turn the page to Checkout.cfm (see Figure 23). In the check out page, as an existing customer, we have to log in by typing in user name and password. A new customer who does not have an existing account will have to create a new account in the CustomerEntry.cfm (see Figure 24). Next, we will see the payment page, Payment.cfm (see Figure 25). The payment page provides us with the information of our shipping address, shopping list with tax and shipping cost including payment
options. The last page for shopping is an order confirmation page, OrderConfirm.cfm (see Figure 26), which provide the order confirmation number for the customer to track his/her order status or to contact Macrotoys customer services for any order change.

6.2 Customers Services Pages

Macrotoys' customer services will get all customers' information by going to CServices.cfm (see Figure 27), which provides the menu of database links to Macrotoys' database including orders, customers, employees, suppliers, products, categories, and sub categories. Each button will connect to each database table. Mostly the order database would be the most requested when contact to the customers. So, unlike other menu buttons, the orders button will turn the page to CSCheckOrders.cfm (see Figure 28), which provides a customer service agent to define the order report for the faster service by specifying the order date, the shipping region, and the sort-by function instead of searching on the large numbers of the data. Then it will link to the orders list. For all other menu buttons, they will be directly linked to the database such as "Customers" button to the customers list, CSCustomers.cfm, "Product"
button to the products list, CSProducts.cfm. However, all the information shown cannot be changed or deleted.

6.3 Administration Pages

The administration menu page looks the same as CServices.cfm (see Figure 27) but it is ZADMIN.cfm. All the linking buttons are also have the same feature. The difference is that when it shows the information report, the user, an administrator, can adjust, and also can delete each field from the report. For example, ZOrders.cfm (see Figure 30) has two more buttons to create a new order, and/or to delete an existing order. Moreover, it has an "Update" button that lets the administrator change and updates the data.
Figure 19. ShowCategories .cfm
Figure 20. Results.cfm

Figure 21. ShowOneItem .cfm
Figure 22. AddItem.cfm
AND YOU ARE...

User Name: 

Password: 

Figure 23. CheckOut.cfm

Figure 24. CustomerEntry .cfm

Figure 25. Payment.cfm

Figure 26. OrderConfirm .cfm
Figure 27. CServices.cfm

Figure 28. CSCheckOrders.cfm

Figure 29. CSOrders.cfm

Figure 30. ZOrders.cfm
CHAPTER SEVEN

ALTERNATIVES AND

THE NEXT STEPS

7.1 Alternatives

The followings are some alternatives to make this website work better:

- Database

  In this simulation, Microsoft Access 2000 has been used for the database. Although it did not create any problem during the testing, it is recommended to change the database type to Oracle 8.0 for a real world website. Since, Microsoft Access 2000 will allow less people to access database at the same moment.

- Products

  Since, this project is just a simulating website, the author has inserted only 63 products only, which are not enough for all sub categories listed in the website. There are many links that are empty, as the author has not provided with a lot of products because this is a simulation and not a real world website. However, the author has already made a way to provide all the links to each sub category.

- Shipping
Due to the difference of shipping cost in each area, and several shipping rates for the sizes of a package, the author has tried to avoid the problems by using the fixed rate to all products. On the other hand, it was the strategy to persuade the customers to save the shipping cost with the more buying.

- Graphic

Almost all the graphics in the website were created by the author, and some are modified from the original except the product pictures. Many graphics are in the big size and might not properly download and present with a good feature in a less potential computer.

- JavaScript

The learner may experience the some bad features if open the website by using the Netscape Navigator Browser. The author recommends using the Microsoft Internet Explorer as a browser, and the screen size 800 x 600 pixels would be the best resolution for this site.

7.2 The Next Steps

To apply this website in a real world, we need some more connections for its on time transportation and secure transaction. We require the connections to outsiders’ websites, such as UPS or FedEx, and bank or credit card
company. In order to implement these functions, the knowledge of CGI and/or C programming, which is out of the scope of this project, is needed.

Moreover, to control and modify the website, we need a website development team, who can create and implement an e-commercial website. This team should have a combination of specialists from dissimilar knowledge background. The web developers should have knowledge not only how to implement the database, HTML, and CFML, but also should know how to make the website have a good look. So, this team should be composed of both IT people and graphic designers. A development team would respond to create an easy usage, and a high image of the website to be simply used for the existing customers and attractive for the new visitors.
APPENDIX A:

WEBSITE SOURCE CODES
<CFHEADER Name="Expires" Value="#Now()#">
<CFHEADER NAME="pragma" VALUE="no-cache">
<CFIF IsDefined("Cookie.CartID")>
<!—If there are 0 of any item, remove that item from the cart --->
<CFQUERY datasource="#Application.datasource#" name="PurgeEmptyItems">
DELETE FROM CART
WHERE CartID = #Val(Cookie.CartID)#
AND Quantity = 0
</CFQUERY>
<!— Get List of Cart Items --->
<CFQUERY datasource="#Application.datasource#" NAME="GetCartItems">
SELECT P.ProdID AS PID, ProdName, SalePrice, Quantity
FROM CART, PRODUCTS P
WHERE CART.ProdID = P.ProdID
AND CartID = #Val(Cookie.CartID)#
</CFQUERY>
</CFIF>
<!— Your Shopping Cart --->
<br>
<table width="520" border="1" cellspacing="1" cellpadding="1" align="center" bordercolorlight="Aqua" bordercolor="Blue" bgcolor="Aqua">
<!— The column headings --->
<TR>
<TD align="center" bgcolor="#0000FF"><font face="Bookman Old Style" color="White"> ID# </font></TD>
<TD align="center" bgcolor="#0000FF"><font face="Bookman Old Style" color="White">Product</font></TD>
<TD align="center" bgcolor="#0000FF"><font face="Bookman Old Style" color="White">Price</font></TD>
<TD align="center" bgcolor="#0000FF"><font face="Bookman Old Style" color="White">Quantity</font></TD>
<TD align="center" bgcolor="#0000FF"><font face="Bookman Old Style" color="White">SubTotal</font></TD>
</TR>
<!— If the shopping cart is empty. --->
<CFIF IsDefined("Cookie.CartID")>
<CFIF GetCartItems.RecordCount LT 1>
<TR>
<TD bgcolor="#FFFF99" colspan="5" align="center"><font face="Bookman Old Style" size="-1"><b>(There is currently no item in your shopping cart.)</b></font></TD>
</TR>
</CFOUTPUT>
</CFIF>
<!— If the cart is not empty... --->
<CFELSE>
<!— If quantities of the Items are changed --->
<FORM ACTION="changequant.cfm" METHOD="POST">
<CFSET TotalCost = 0>
<!— Display the data for the current item --->
<CFOUTPUT QUERY="GetCartItems">
<TR>
<td align="center" bgcolor="#FFFF99"><font face="Bookman Old Style" color="Black">#PID#</font></td>
<td align="center" bgcolor="#FFFF99"><font face="Bookman Old Style" color="Blue">#ProdName#</font></td>
</CFOUTPUT>
</CFSET>
</FORM>
</CFELSE>
<!— If quantities of the Items are changed --->
<FORM ACTION="changequant.cfm" METHOD="POST">
<CFSET TotalCost = 0>
<!— Display the data for the current item --->
<CFOUTPUT QUERY="GetCartItems">
<TR>
<td align="center" bgcolor="#FFFF99"><font face="Bookman Old Style" color="Black">#PID#</font></td>
<td align="center" bgcolor="#FFFF99"><font face="Bookman Old Style" color="Blue">#ProdName#</font></td>
</CFOUTPUT>
</CFSET>
</FORM>
</CFIF>
</CFOUTPUT>
</CFHEADER>
</CFQUERY>
<CFIF IsDefined("Cookie.CartID")>
<CFIF GetCartItems.RecordCount LT 1>
<TR>
<TD bgcolor="#FFFF99" colspan="5" align="center"><font face="Bookman Old Style" size="-1"><b>(There is currently no item in your shopping cart.)</b></font></TD>
</TR>
</CFOUTPUT>
</CFIF>
<!— If the cart is not empty... --->
<CFELSE>
<!— If quantities of the Items are changed --->
<FORM ACTION="changequant.cfm" METHOD="POST">
<CFSET TotalCost = 0>
<!— Display the data for the current item --->
<CFOUTPUT QUERY="GetCartItems">
<TR>
<td align="center" bgcolor="#FFFF99"><font face="Bookman Old Style" color="Black">#PID#</font></td>
<td align="center" bgcolor="#FFFF99"><font face="Bookman Old Style" color="Blue">#ProdName#</font></td>
</CFOUTPUT>
</CFSET>
</FORM>
</CFELSE>
<!— If quantities of the Items are changed --->
<FORM ACTION="changequant.cfm" METHOD="POST">
<CFSET TotalCost = 0>
<!— Display the data for the current item --->
<CFOUTPUT QUERY="GetCartItems">
<TR>
<td align="center" bgcolor="#FFFF99"><font face="Bookman Old Style" color="Black">#PID#</font></td>
<td align="center" bgcolor="#FFFF99"><font face="Bookman Old Style" color="Blue">#ProdName#</font></td>
</CFOUTPUT>
</CFSET>
</FORM>
</CFIF>
<\!---- Add cost of current item(s) to total cost --->
<CFSET TotalCost = TotalCost + (GetCartItems.SalePrice * GetCartItems.Quantity)>
</CFOUTPUT>

<\!---- Display the total cost --->
<CFOUTPUT>
<b>DollarFormat(TotalCost)\</b>
</CFOUTPUT>
</CFIF>
</CFIF>

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<!DOCTYPE HTML PUBLIC "+/W3C//DTD HTML 4.0 Transitional//EN">
<html>
<head>
<title>About US</title>
<meta http-equiv="Page-Enter" content="RevealTrans(Duration=3, Transition=18)">
<meta content="MSHTML 5.00.2614.3500" name=GENERATOR>
<script language="JavaScript">
function MM_timelinePlay(tmLnName, myID) {
    var j, tmLn, props, keyFr, firstFr, propsN, obj, firstTime = false;
    if (document.MM_Time == null) MM_initTimelines(); // if *very* 1st time
    tmLn = document.MM_Time[tmLnName];
    if (myID == null) { myID = ++tmLn.ID; firstTime = true; } // if new call, incr ID
    if (myID == tmLn.ID) // if Im newest
        setTimeout("MM_timelinePlay(\"'+tmLnName+'\",\'+myID+'\'),tmLn.delay);
    fNew = ++tmLn.curFrame;
    for (i = 0; i < tmLn.length; i++) {
        sprite = tmLn[i];
        if (sprite.charAt(0) == 's') {
            if (sprite.obj) {
                numKeyFr = sprite.keyFrames.length; firstKeyFr = sprite.keyFrames[0];
                if (fNew > firstKeyFr && fNew <= sprite.keyFrames[numKeyFr-1]) { // in range
                    keyFr = 1;
                    for (j = 0; j < sprite.values.length; j++) {
                        props = sprite.values[j];
                        if (numKeyFr != props.length) {
                            if (props[prop2] == null) sprite.obj[prop] = props[fNew-firstKeyFr];
                            else sprite.obj[prop][prop2] = props[fNew-firstKeyFr];
                        } else {
                            while (keyFr < numKeyFr && fNew > sprite.keyFrames[keyFr]) keyFr++;
                            if (firstTime || fNew == sprite.keyFrames[keyFr-1]) {
                                if (props[prop2] == null) sprite.obj[prop] = props[keyFr-1];
                                else sprite.obj[prop][prop2] = props[keyFr-1];
                            } } } }
            } else if (sprite.charAt(0) == 'b' && fNew == sprite.frame) eval(sprite.value);
            if (fNew > tmLn.lastFrame) tmLn.ID = 0;
    }
}
function MM_initTimelines() {
    // MM_initTimelines() Copyright 1997 Macromedia, Inc. All rights reserved.
    var ns = navigator.appName == "Netscape";
    document.MM_Time = new Array();
    document.MM_Time[0] = new Array();
    document.MM_Time["Timeline1"] = document.MM_Time[0];
    document.MM_Time[0].MM_Name = "Timeline1";
    document.MM_Time[0].fps = 15;
    document.MM_Time[0][0] = new String("sprite");
    document.MM_Time[0][0].slot = 1;
    if (ns)
        document.MM_Time[0][0].obj = document["Layer3"]; else
        document.MM_Time[0][0].obj = document.all["Layer3"] = null;
    document.MM_Time[0][0].keyFrames = new Array(180, 182, 215, 230, 265, 318, 320);
    document.MM_Time[0][0].values = new Array(3);
    document.MM_Time[0][0].values[0].prop = "left";

document.MM_Time[0][0].values[1].prop = "top";
if (!ns) {
  document.MM_Time[0][0].values[1].prop2 = "style";
}
document.MM_Time[0][0].values[2] = new Array("hidden", "visible", "visible", "visible", "visible", "visible", "hidden");
document.MM_Time[0][0].values[2].prop = "visibility";
if (!ns) {
  document.MM_Time[0][0].values[2].prop2 = "style";
  document.MM_Time[0][0].lastFrame = 320;
  for (i = 0; i < document.MM_Time.length; i++) {
    document.MM_Time[i].ID = null;
    document.MM_Time[i].curFrame = 0;
  }
}
//-->
</script>
PRODUCT & SERVICE:

Our business includes selling a variety of both licensed and non-licensed toy products ranging from moderate to high quality, with an emphasis on electronic commerce and e-commerce. However, the Internet provides an opportunity to merge into other markets around the world.

STRATEGIC INTENT:

To maintain a strong relationship with our partners and suppliers, and to preserve the superior image of our products, thus increasing our market share.

DRIVING FORCE:

Exploit information technology, including the Internet, to achieve a prominent position in the competitive market and maintain our position with a satisfactory relationship between our associates and us.

function regenerate()
{
    window.location.reload();
}

<SCRIPT>
</SCRIPT>

</HTML>
document.MM_Time = new Array(1);
document.MM_Time[0] = new Array(1);
document.MM_Time["Timeline1"] = document.MM_Time[0];
document.MM_Time[0].MM_Name = "Timeline1";
document.MM_Time[0].fps = 15;
document.MM_Time[0][0] = new String("sprite");
document.MM_Time[0][0].slot = 1;
if (ns)
  document.MM_Time[0][0].obj = document["Layer2"];else
  document.MM_Time[0][0].obj = document.all ? document.all["Layer2"] : null;
document.MM_Time[0][0].keyFrames = new Array(50, 60, 80, 85, 90);
document.MM_Time[0][0].values = new Array(2);
document.MM_Time[0][0].values[0] = new Array(55,55,55,55,55,55,55,55,55,55,55,55,55,55,55,55,55,55,55,55,55,55,55,55,55,55,55,55,55,55,55,55,55,55,55,55,55,55,55,55,55,55);
document.MM_Time[0][0].values[0].prop = "left";
document.MM_Time[0][0].values[1].prop = "top";


for (i=0; i<document.MM_Time.length; i++) {
  document.MM_Time[i].ID = null;
document.MM_Time[i].curFrame = 0;
}

<script language="JavaScript" fptype="dynamicanimation">
  function dynAnimation() {}
  function clickSwapImg() {}
</script>

<script language="JavaScript1.2" fptype="dynamicanimation" src="../animate.js">
</script>
</head>
<body onLoad="MM_timelinePlay('Timeline1')">
<div id="Layer2" style="position:absolute; width:120px; height:40px; z-index:1; left: 55px; top: 350px">
  <a href="show/categories.cfm" onMouseOver="document["fpAnimswapImgFP1"].imgRollIn=document["fpAnimswapImgFP1"].src;document["fpAnimswapImgFP1"].src=document["fpAnimswapImgFP1"].lowsrc;
  onMouseOut="document["fpAnimswapImgFP1"].imgRollIn=document["fpAnimswapImgFP1"].src;document["fpAnimswapImgFP1"].imgRollIn"
    src="images/Cont.jpg" width="118" height="38" border="0" id="fpAnimswapImgFP1" name="fpAnimswapImgFP1"
    dynamicanimation="fpAnimswapImgFP1" lowsrc="images/Cont1.jpg"/>
</div>
</body>
</html>
<!--- AddItem.cfm --->
<!--- If the CartID cookie is not set, set a value --->
<CFPARAM NAME="Cookie.CartID" DEFAULT="#RandRange(1,50000)#">

<cfquery name="CheckCart" datasource="#Application.datasource#" dbtype="ODBC">
SELECT ProdID, Quantity
FROM CART
WHERE CartID = #Val(Cookie.CartID)#
AND ProdID = #Val(Form.ProdID)#
</cfquery>

<!--- If the item is already in the basket --->
<CFIF CheckCart.RecordCount GT 0>
<!--- Increment Quantity --->
<CFQUERY datasource="#Application.datasource#" name="IncrementQuantity">
UPDATE CART
SET Quantity = (Quantity + 1)
WHERE CartID = #Val(Cookie.CartID)#
AND ProdID = #Val(Form.ProdID)#
</cfquery>

<!--- Otherwise, just add it to the basket --->
<CFELSE>
<!--- Increment Quantity --->
<CFQUERY datasource="#Application.datasource#" name="AddCartItem">
INSERT INTO CART(CartID, ProdID, Quantity)
VALUES (#Val(Cookie.CartID)#, #Val(Form.ProdID)#, 1)
</cfquery>
</CFIF>

<!DOCTYPE HTML PUBLIC "-/W3C//DTD HTML 3.2 Final//EN">

<HTML>
<HEAD>
<TITLE>Shopping Cart</TITLE>
</HEAD>

<body background="images\BG3.jpg" link="White" vlink="White" alink="White">
<img src="images/brandW.gif" width="130" height="36" hspace="39" vspace="30" border="0" align="left" alt="">
</body>
</HTML>
<!--Application.cfm-->

<CFAPPLICATION NAME="CF45_MACROTOYS" SESSIONMANAGEMENT="Yes">

<!--Set parameters-->

<CFPARAM name="Application.datasource" default="macrotoys">
<CFPARAM name="Application.TaxRate" default="0.0775">
<CFPARAM name="Application.dbtype" default="Access">
<!-- ChangeQuants.cfm -->

<!-- Get Cart Item Count -->
<CFQUERY Datasource="#Application.datasource#" name="CartItems">
    SELECT CartID, ProdID, Quantity
    FROM CART
    WHERE CartID = #Val(Cookie.CartID)#
</CFQUERY>

<CFLOOP query="CartItems">
  <!-- If the cached quantity changed... -->
  <CFIF CartItems.Quantity NEQ Evaluate("Form.Quantity#CartItems.ProdID#") AND IsNumeric(Evaluate("Form.Quantity#CartItems.ProdID#"))>
    <!-- Store new Quantity in a temporary Variable -->
    <CFSET NewQuantity = Evaluate("Form.Quantity#CartItems.ProdID#")>
    <!-- Update Quantity in Cart -->
    <CFQUERY datasource="#Application.datasource#" name="ChangeQuantity">
        UPDATE CART
        SET Quantity = #Val(Variables.NewQuantity)#
        WHERE CartID = #Val(Cookie.CartID)#
        AND ProdID = #Val(CartItems.ProdID)#
    </CFQUERY>
  </CFIF>
</CFLOOP>

<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">

<HTML>
    <HEAD>
        <TITLE>Change Quantity</TITLE>
    </HEAD>

    <body background="images\BG3.jpg" link="White" vlink="White" alink="White">
        <img src="images/brandW.gif" width="130" height="36" hspace="39" vspace="30" border="0" align="left" alt="">
        <img src="images/WELCOME.gif" width="270" height="30" hspace="130" vspace="33" border="0" align="left" alt="">
        <cfinclude template="AddLinks.cfm">
        <div id="Layer1" style="position:absolute; width:350px; height:200px; z-index:1; left: 220px; top: 120px">
            <CFINCLUDE TEMPLATE="_showitems.cfm">
        </div>
    </BODY>
</HTML>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">
<html>
<head><title>Check Out</title></head>
<body background="images\BG.jpg">
<img src="images/brandW.gif" width="130" height="36" hspace="39" vspace="30" border="0" align="left" alt="">
<img src="images/CUSTOMER ENTRY.gif" width="200" height="30" hspace="165" vspace="33" border="0" align="left" alt="">
<cfinclude template="AddLinks.cfm">
<br><br><br><div id="Layer1" style="position:absolute; width:480px; height:400px; z-index:1; left: 300px; top: 140px">
<br><br><font face='Bookman Old Style' size="+1" color="Blue">AND YOU ARE... </font><br>
<table border="1" cellpadding="3" bordercolor="Blue" bordercolorlight="Aqua" bordercolordark="Blue"
bgcolor="#999999" cellspacing="0">
<tr align="center" valign="middle">
<td align="center">
<cfform action="customerentry.cfm" method="post"><input type="submit" value="New Customer" align="right"></cfform></td>
<td>
<cfform action="findcustomer.cfm" method="post">
<table border="0" cellspacing="3">
<cfif isdefined("URL.badlogin")>
<tr><td colspan=2><font face="Bookman Old Style" size="-2" color="Blue">User name and password not found.</font></td></tr>
</cfif>
<tr>
<td><font face="MS Sans Serif" size="-2" color="Black">User Name</font></td>
<td><cfinput type="text" name="UserName" message="Please enter your user name!" required="Yes" size="15"></cfinput></td>
</tr>
<tr>
<td><font face="MS Sans Serif" size="-2" color="Black">Password</font></td>
<td><cfinput type="password" name="Password" size="15"></cfinput></td>
</tr>
<tr>
<td align="center"><input type="submit" value="Existing Customer"></td>
</tr>
</table>
</cfform>
</td>
</tr>
</table>
</div>
<br><br><br><br><br><br><br><br><br><br><br><br>
</body></html>
<cfparam name="SendTo" default="services@macrotoys.com">
<cfparam name="FromValue" default="">
<cfset PageCaption = "Send a message">
<cfif IsDefined("url.sendto")>
  <cfset SendTo = url.sendto>
</cfif>
<cfif IsDefined("Session.ReturnAddr")>
  <cflock scope="session" timeout="30" type="readonly">
    <cfset FromValue = Session.returnaddr>
  </cflock>
</cfif>
</html>
<head>
<title>Contact Us</title>
</head>

<META http-equiv="Page-Enter" content="RevealTrans (Duration=3, Transition=5)"
</head>
<body background="images/BG2.jpg" link="Blue" vlink="Blue" alink="Red">
<img lowsrc="images/brandW.gif" width="130" height="36" hspace="39" vspace="30" border="0" align="left" alt="">
<img lowsrc="images/SEARCH RESULTS.gif" width="150" height="30" hspace="175" vspace="33" border="0" align="left" alt="">
<img src="images/CONTACT US.gif">
<cfinclude template="AddLinks.cfm">
<dl id="Layer1" style="position:absolute; width:450px; height:750px; z-index:1; left: 265px;top: 140px">
<br>
<font face="Bookman Old Style" size="4" color="Blue">If you need any additional information regarding your order, products, and services, please feel free to call or send an E-mail to us.</font>
<br>
<br>
<font face="Bookman Old Style" size="4" color="BLACK"><b>Call Us:</b></font><br>
<font face="Arial" size="2" color="Black">INSIDE USA: &nbsp;800-MAGROTOYS (622-7686)<br>OUTSIDE USA: &nbsp;CALL 1-909-333-3000</font><br>
<br>
<font face="Bookman Old Style" size="4" color="White"><b>Send E-mail:</b></font><br>
<cfform action="SendEmail.cfm" method="post" name="frmEmail">
</font>
<table width="100%" cellpadding="8">
<tr>
<td><font face="Arial" color="White" size="2"><b>TO:</b></font></td><td><cfinput type="Text" name="emailto" value="#SendTo#" required="No" size="40"></td></tr>
<tr>
<td><font face="Arial" color="White" size="2"><b>FROM:</b></font></td><td><cfinput type="Text" name="emailfrom" size="40" value="#FromValue#"></td></tr>
<tr>
<td><font face="Arial" color="White" size="2"><b>SUBJECT:</b></font></td><td><cfinput type="Text" name="emailsubj" size="40"></td></tr>
<tr>
<td colspan="2"><textarea name="emailmsg" cols="100" rows="12"></textarea></td>
</tr>
</table>
<br>
<input type="submit" name="submit" value="Send E-mail">
</cfform>
</dl>
</div>
</body>
</html>
<html lang="en">
  <head>
    <title>Customers Entry</title>
  </head>
  <body background="images/BG2.jpg">
    <img src="images/brandW.gif" width="130" height="36" hspace="39" vspace="30" border="0" align="left" alt="">
    <img src="images/NEW CUSTOMER.gif" width="170" height="30" hspace="180" vspace="0" border="0" align="left" alt="">
    <cfinclude template="AddLinks.cfm">
    <cfinclude template="MovingText.cfm">
    <br><br><br><br><br><br>
    <span style="position:absolute;left: 340px;top:ISOpx;width:350px">
      <cfform action="savecustomer.cfm" method="POST">
        <table border="0" cellpadding="5">
          <tr>
            <td><cfinput type="text" name="FirstName" message="Please enter your first name!" required="yes" size="20"></td>
            <td><font face="MS Sans Serif" size="-2"><b>FirstName</b> *</font></td>
          </tr>
          <tr>
            <td><cfinput type="text" name="LastName" message="Please enter your last name!" required="yes" size="20"></td>
            <td><font face="MS Sans Serif" size="-2"><b>LastName</b></font></td>
          </tr>
          <tr>
            <td colspan="3"><cfinput type="text" name="Title" message="Please enter your title!" value="Sales Manager" required="no" size="45"></td>
            <td><font face="MS Sans Serif" size="-2"><b>Title</b></font></td>
          </tr>
          <tr>
            <td colspan="3"><cfinput type="text" name="CompanyName" message="Please enter your company name!" required="no" size="45"></td>
            <td><font face="MS Sans Serif" size="-2"><b>Company Name</b></font></td>
          </tr>
          <tr>
            <td colspan="3"><cfinput type="text" name="Address1" message="Please enter your address!" required="yes" size="45"></td>
            <td><font face="MS Sans Serif" size="-2"><b>Address Line 1</b> *</font></td>
          </tr>
          <tr>
            <td colspan="3"><cfinput type="text" name="Address2" value="" required="no" size="45"></td>
            <td><font face="MS Sans Serif" size="-2"><b>Address Line 2</b></td>
          </tr>
          <tr>
            <td><cfinput type="text" name="City" message="Please enter your city!" required="yes" size="15"></td>
            <td><font face="MS Sans Serif" color="White" size="-2"><b>City</b> *</font></td>
          </tr>
          <tr>
            <td colspan="3"><cselect name="StateID">
              <cfoutput query="State">
                <option value="#ID#">#StateName#</cfoutput></select></td>
            <td><font face="MS Sans Serif" size="-2"><b>State</b> *</font></td>
          </tr>
        </table>
      </cfform>
    </span>
  </body>
</html>
<table>
<thead>
<tr>
<th>Zip Code</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Telephone</td>
<td></td>
</tr>
<tr>
<td>Fax</td>
<td></td>
</tr>
<tr>
<td>E-mail</td>
<td></td>
</tr>
<tr>
<td>User Name</td>
<td></td>
</tr>
<tr>
<td>Password</td>
<td></td>
</tr>
</tbody>
</table>

<!--- Identify this form as new customer to next form --->

<Input type="Hidden" name="NewCustomer" value="xxxx" />

Submit value="Continue" &nbsp;&nbsp;&nbsp;&nbsp; Reset
Whatis the best way to shop at Macrotoys?<br>

There are several ways to shop at Macrotoys. For instance, you can start with clicking at category, and sub category. You can use search box to find exactly what you're looking for. You can also take a look for all available products by clicking at the all products label.

When you're ready to make a purchase, we make it easy for you to order and pay for your items. For more details, read about How does the order process work? &nbsp;&nbsp;&lt;A HREF="#L"&gt;TOP&lt;/LI&gt;&lt;br&gt;

Is it safe to use my credit card?<br>

Absolutely! In fact, it's safer to use your credit card over the Internet than in a restaurant or department store.

Does Macrotoys charge sales tax?<br>

State laws require a California-based business (such as Macrotoys) to collect sales tax on orders shipped to California addresses. In our case, the amount of sales tax collected is based on the tax rate for the City of Commerce, California. We are currently not required to collect sales tax on orders shipped to residents of any other states.

Can people outside of the U.S. shop at Macrotoys?<br>

MacrotDys currently ships to the United States, Canada, American Samoa, Federated States of Micronesia, Guam, Marshall Islands, Northern Mariana Islands, Palau, Puerto Rico, the Virgin Islands, and APO/FPO U.S. Military Addresses.
However, due to the different shipping rate for each country, please contact our customer services for more details.

How does the order process work?

When you see an item you want to buy, click on "Buy." This places the item in your shopping cart. To continue shopping, select "continue shopping." When you're finished shopping, select "checkout" from the shopping cart page. In Checkout, you will be asked for your name, and shipping address. Next, you'll be shown the total amount of your order, including sales tax (for shipments to California addresses only) and shipping charges. If the information is correct, click "confirm payment." If any of the information is incorrect, you can click back and adjust information on previous pages.

Once you have verified everything, click on "confirm payment." After a few seconds, you'll see a page confirming your order and giving you an Order Number to use if you need to contact us. We will also confirm your order via e-mail within 24 hours.

How can I change or cancel my order?

Our goal is to provide the fastest possible service to our customers, and we try to ship orders out as quickly as possible. This makes it extremely difficult to cancel or make changes to orders. There is a good possibility that by the time you call with a change or cancellation, your package could already be on its way to you! If you would like to make a change or cancel your order, please contact us as soon as possible.

How and when are confirmations sent out?

Macrotoys order confirmations are sent out via e-mail automatically. You will receive your order confirmation within 24 hours of placing your order. You will receive your shipping confirmation once your package has shipped from our warehouse. The shipping confirmation may include a tracking number if the carrier provides this service.

I didn't receive an order and/or shipping confirmation. What do I do?

If you have not received your order confirmation within 2 days of your order, please let us know. We will make every effort to respond within 24 hours regarding the status of your order.

Why was my order backordered and when will I get it?

Our product availability policy is designed so that when we say an item is in stock, we mean it. In a few cases, however, we may take your order and find out that our inventory is not what we thought it was (i.e. an item was damaged or defective). In this case, we will notify you via e-mail that it is on backorder and do our utmost to fulfill the order as soon as possible at no additional charge. If you would like us to cancel the item, just contact us by phone or e-mail. We will take care of it immediately.
<!---FindCustomer.cfm--->
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">

<!--- find customer record --->
<CFQUERY datasource=#Application.datasource# Name="GetCustomerID" MAXROWS="1">
    SELECT CusID FROM CUSTOMERS
    WHERE UserName = '#Form.UserName#'
    AND Password = '#Form.Password#'
</cfquery>

<html>
<head>
<title>Find Customer</title>
</head>

<body>
<!— Store customerID as form field --->
<CFOUTPUT Query="GetCustomerID">
    <CFLOCATION url="payment.cfm?CusID=#GetCustomerID.CusID#">
</cfoutput>

<!— If customer record properly validated and saved then go to checkout --->
<CFLOCATION URL="checkout.cfm?badlogin=1">
</body>
</html>
<cfquery name="GetProduct" datasource="#Application.datasource#" dbtype="ODBC">
SELECT ProdID, ProdName, SalePrice, Picture FROM PRODUCTS ORDER BY ProdID</cfquery>

<!--Create a new layer for a table---->
<table width="500" border="1" cellspacing="1" cellpadding="1" align="center" bgcolor="#008080">
<tr align="center" bgcolor="#008080">
<td>Product ID</td>
<td>Product Name</td>
<td>Price/Package</td>
<td>Picture</td>
</tr>
</table>

<!--Highlight the even rows of the results in the table---->
<tr align="center" valign="middle" bgcolor="#ffffff">#ProdID#</tr>
<tr align="center" valign="middle" bgcolor="#7fff7f">#ProdName#</tr>
<tr align="center" valign="middle" bgcolor="#ffffff">#DollarFormat(SalePrice)#</tr>
<tr align="center" valign="middle" bgcolor="#7fff7f">#Picture#</tr>
</table>

<!--Insert Pictures of Product---->
</table>

<!--Previous 10 items---->
<a href="getproduct.cfm?first=#StartLastPage#">Previous 10 items</a>
<cif StartNextPage Ite GetProduct.RecordCount>
  <a href="getproduct.cfm?first=#StartNextPage#">Next 10 items</a>
</cif>
</cfoutput>
</div>
</body>
</html>
function MM_timelinePlay(tmLnName, myID) { //v1.2
//Copyright 1997 Macromedia, Inc. All rights reserved.
var i, j, tmLn, props, keyFrm, sprite, numKeyFr, firstKeyFr, propNum, theObj, firstTime = false;
if (document.MM_Time == null) MM_initTimelines(); //if *very* 1st time

}
if (!ns)
    document.MM_Time[0][1].values[4].prop2 = "style";
document.MM_Time[0].lastFrame = 210;
document.MM_Time[1] = new Array(0);
document.MM_Time["Timeline2"] = document.MM_Time[1];
document.MM_Time[1].MM_Name = "Timeline2";
document.MM_Time[1].fps = 14;
document.MM_Time[1].lastFrame = 0;
for (i = 0; i < document.MM_Time.length; i++) {
    document.MM_Time[i].ID = null;
    document.MM_Time[i].curFrame = 0;
    document.MM_Time[i].delay = 1000/document.MM_Time[i].fps; }
</SCRIPT>

<bgsound src="sound/SALONTUN.WAV" loop="2"></HEAD>

</BODY>
<CFIF IsDefined("Cookie.CartID")>

<!--- Delete cart data --->
<CFQUERY datasource="#Application.datasource#" name="PurgeEmptyItems">
    DELETE FROM CART
    WHERE CartID = #Val(Cookie.CartID)#
</cfquery>

<!--- Delete Cookie --->
<CFCOOKIE NAME="CartID" EXPIRES="NOW"></CFIF>
Welcome to MACROTOYS

If you need any additional information, please contact our customer services at 1-800-MACROTOYS. Outside USA, please call 1-909-333-3000.
<cfinclude template="ShoppingCart.cfm">
<cfinclude template="AddLinks.cfm">
</body>
</html>

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<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">

<CFTRANSACTION>
  <CFSET Expires = CreateODBCDate(CreateDate(Form.Exp2,Form.Exp1,1))>
  <CFSET NewOrderID = CreateUUID()>
  <CFQUERY datasource="#Application.datasource#" Name="OrderTransaction">
    INSERT INTO ORDERS
    (OrderID,
      CusID,
      OrderDate,
      SubTotal,
      Tax,
      CostTotal,
      CardType,
      Expire,
      CardNum,
      FirstName,
      LastName,
      CompanyName,
      Address1,
      Address2,
      City,
      Region,
      PostalCode,
      Phone,
      Fax,
      Email)
    SELECT
      '#NewOrderID#',
      CusID,
      #Now#,
      #Val(Form.SubTotal)#,
      #Val(Form.Tax)#,
      #Val(Form.TotalCost)#,
      '#Form.CardType#',
      '#Expires#',
      '#Form.CardNum#',
      FirstName,
      LastName,
      CompanyName,
      Address1,
      Address2,
      City,
      Region,
      PostalCode,
      Phone,
      Fax,
      Email
    FROM CUSTOMERS
    WHERE CusID = '#Form.CusID#'
  </cfquery>
</CFTRANSACTION>

<!--- set order number variable to be 13 digits--->
<CFSET OrderID = #Left(NewOrderID,13)#>
<!--- Clear Cart --->
<CFINCLUDE TEMPLATE="KillCart.cfm">

<HTML>
<HEAD>
<TITLE>Order Confirmation</TITLE>
</HEAD>
Order Confirmed.

Thanks for your order! Your order number is #<CFOUTPUT>#Left(OrderID,13)#</cfoutput>.

Since this is not a real online store, processing ends here. If this were a real store, there would be credit card processing.
<!---Payment.cfm--->
<CFQUERY datasource="#Application.datasource#" name="GetCustomerInfo" maxrows="1">
    SELECT *
    FROM CUSTOMERS
    WHERE CUSTOMERS.CusID = '#URLCusID#
</cfquery>

<CFIF IsDefined("Cookie.CartID")>
  <!-- Get List of Cart Items --->
  <CFQUERY datasource="#Application.datasource#" NAME="GetCartItems">
    SELECT P.ProdID AS PID, ProdName, SalePrice, Quantity
    FROM CART, PRODUCTS P
    WHERE CART.ProdID = P.ProdID
    AND CartID = #Val(Cookie.CartID)#
  </cfquery>
</cfif>

<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">
<html>
<head>
<title>Payment</title>
<meta http-equiv="Page-Exit" content="RevealTrans(Duration=3, Transition=20)">
</head>
<body background="images/BGIong.jpg" link="White" vlink="White" alink="White">
  <img src="images/brandW.gif'" width="130" height="36" hspace="39" vspace="30" border="0" align="left" alt="">
  <img src="images/CHECKOUT.gif" width="140" height="30" hspace="195" vspace="33" border="0" align="left" alt="">
  <cfinclude template="AddLinks.cfm">
  <br><br><br><br>
  <span style="position: absolute; left: 205px;top: 120px;width:520px">
    <font face="Bookman Old Style" size="4" color="#000000">Shipping Address:</font>
    <cfoutput query="GetCustomerInfo">
      <table>
        <tr>
          <td colspan="2"><b>First Name</b></td>
          <td><font face="Bookman Old Style" color="Blue">#GetCustomerInfo.FirstName#</font></td>
        </tr>
        <tr>
          <td colspan="2"><b>Last Name</b></td>
          <td><font face="Bookman Old Style" color="Blue">#GetCustomerInfo.LastName#</font></td>
        </tr>
        <tr>
          <td colspan="2"><b>Company Name</b></td>
          <td><font face="Bookman Old Style" color="Blue">#GetCustomerInfo.CompanyName#</font></td>
        </tr>
        <tr>
          <td colspan="2"><b>Address 1</b></td>
          <td><font face="Bookman Old Style" color="Blue">#GetCustomerInfo.Address1#</font></td>
        </tr>
        <tr>
          <td colspan="2"><b>Address 2</b></td>
          <td><font face="Bookman Old Style" color="Blue">#GetCustomerInfo.Address2#</font></td>
        </tr>
        <tr>
          <td colspan="2"><b>City, Region, Postal Code</b></td>
          <td><font face="Bookman Old Style" color="Blue">#GetCustomerInfo.City#, #GetCustomerInfo.Region#, #GetCustomerInfo.PostalCode#</font></td>
        </tr>
      </table>
    </cfoutput>
  </span><br>
  <!-- Show Order Details --->
  <font face="Bookman Old Style" size="4" color="Black">Your Shopping Cart</font><br>
  <table width="520" border="1" cellspacing="1" cellpadding="1" align="center" bordercolor="#" bordercolorlight="#" bgcolor="#">
    <tr>
      <!-- The column headings -->
      </tr>
<table>
<thead>
<tr>
<th>ID#</th>
<th>Product</th>
<th>Price</th>
<th>Quantity</th>
<th>Sub Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total

| CFSETr SubTotal=0 |
| CFSET TotalCost=0 |
| CFSET Tax=0 |
| CFSET Shipping=0 |

<!-- If the shopping cart is empty. -->

| CFIF NOT IsDefined("Cookie.CartID") |
| CFSETr ITEMS=0 |
| CFELSE |
| CFIF ITEMS LT 1 |
| TR |
| TD BGColor="#FFFF99" COLSpan=5 ALIGN="CENTER" |
| font face="Bookman Old Style" size="-1" color="Black">(There is currently no item in your shopping cart.)</b></font> |
| /TD |
| /TR |

<!-- If the cart is not empty -->

| CFELSE |
| CFSET SubTotal = 0 |

<!-- Display the data for the current item -->

| CFOUTPUT QUERY="GetCartItems" |
| TR |
| TD align="center" bgColor="#FFFF99">#PID# |
| TD align="center" bgColor="#FFFF99">#ProdName# |
| TD align="center" bgColor="#FFFF99">#DollarFormat(SalePrice)# |
| TD align="center" bgColor="#FFFF99">#DollarFormat(SalePrice * Quantity)# |

<!-- Add cost of current item(s) to total cost -->

| CFSETr SubTotal = SubTotal + (GetCartItems.SalePrice * GetCartItems.Quantity) |
| CFOUTPUT |
| TR |
| TD COLSpan=4" BGColor="#FFFF99" ALIGN="RIGHT" |
| font face="Bookman Old Style" SIZE="-1" color="Blue">SUB TOTAL

<!-- Display the total cost -->

<p>| CFOUTPUT |
| font face=&quot;Bookman Old Style&quot; SIZE=&quot;-1&quot; color=&quot;Blue&quot;&gt;#DollarFormat(SubTotal) |
| CFOUTPUT |
| TR |
| TD COLSpan=4&quot; BGColor=&quot;#FFFF99&quot; ALIGN=&quot;RIGHT&quot; |</p>
<table>
<thead>
<tr>
<th><strong>TAX</strong></th>
<th><strong>SHIPPING</strong></th>
<th><strong>TOTAL</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>$0.00</td>
<td>$9.95</td>
<td>$10.95</td>
</tr>
<tr>
<td>$0.00</td>
<td>$14.95</td>
<td>$15.95</td>
</tr>
<tr>
<td>$0.00</td>
<td>$19.95</td>
<td>$20.95</td>
</tr>
<tr>
<td>$0.00</td>
<td>$0.00</td>
<td>$0.00</td>
</tr>
</tbody>
</table>

<!— Display the total cost —>
<CFSET TotalCost = SubTotal + Tax + Shipping>
<CFOUTPUT>
<b>$</b><CFORMAT(TotalCost)#</CFFORMAT></b></CFOUTPUT>
</CFIF>
</TABLE>

<!--- Empty cart --->
<CFIF ITEMS LT 1>
<p><font face="Bookman Old Style" color="White">Your shopping cart is empty. Please continue shopping and place items in your cart before checking out.</font></b></p>
Click here to continue shopping.

<table>
<thead>
<tr>
<th>Payment Details:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gard Type</strong></td>
</tr>
<tr>
<td><strong>Expiration</strong></td>
</tr>
<tr>
<td><strong>Card Number</strong></td>
</tr>
</tbody>
</table>

**Card Type**:
- Visa
- Discover
- MasterCard
- American Express

**Expiration**:
- JAN
- FEB
- MAR
- APR
- MAY
- JUN
- JUL
- AUG
- SEP
- OCT
- NOV
- DEC

**Card Number**: 

Please enter a valid credit card number!
<!--- Save Customer Information on Form as hidden field --->
<INPUT TYPE="HIDDEN" NAME="CusID" VALUE="#URLCusID#">

<INPUT TYPE="HIDDEN" NAME="SubTotal" VALUE="#SubTotal#">

<INPUT TYPE="HIDDEN" NAME="Tax" VALUE="#Tax#">

<INPUT TYPE="HIDDEN" NAME="TotalCost" VALUE="#TotalCost#">
</cfoutput>

<INPUT TYPE="SUBMIT" VALUE="Confirm Payment">
</CFFORM>
</CFIF>
</SPAN>

</BODY>
</HTML>
<cfset NameSearch = form.search>

<cfquery name="SearchProducts" datasource="#Application.datasource#">
select ProdID, ProdName, SalePrice, Picture
from PRODUCTS
where ProdName like '%#NameSearch#%'
</cfquery>
</HEAD>

<TITLE>Search Results</TITLE>
</HEAD>

<body background="images\BG1.jpg" link="Blue" vlink="Blue" alink="Red">
<img lowsrc="images/brandW.gif" width="130" height="36" vspace="30" border="0" align="left" alt="">
<img lowsrc="images/SEARCH RESULTS.gif" width="180" height="30" border="0" align="left" alt="">
<cfinclude template="AddLinks.cfm">
</body>
</html>
<tr align="center" bgcolor="blue">
<TD><font face="Bookman Old Style" size="+1" color="Yellow">Sorry, no match for "#NameSearch#"</font></td>
</TR>
</cfoutput>
</CFIF>
</table>
</div>
</body>
</html>
<CFTRANSACTION>
<CFQUERY datasource="#Application.datasource#" Name="SaveCustomer">
</cfquery>
</cftransaction>
<html>
<head>
<title>Save Customer</title>
</head>
<body>
<!--- Store customer ID as form field, cut a NewID to be 15 digits --->
<CFLOCATION url="payment.cfm?CusID=#LEFT(NewID,15)#">
</body>
</html>
<html><head><title>E-mail Has Been Sent</title></head><body background="images\BG5.jpg" link="White" vlink="White" alink="White">
<img lowsrc="images/brandW.gif" width="130" height="36" hspace="39" vspace="30" border="0" align="left" alt="">
<img lowsrc="images/SEARCH RESULTS.gif" width="150" height="30" hspace="175" vspace="33" border="0" align="left" alt="" src="images/CONTACT US.gif">
<cfinclude template="AddLinks.cfm">
<cfinclude template="ShoppingCart.cfm">
<div id="Layer1" style="position:absolute; width:450px; height:750px; z-index:1; left: 265px; top: 140px">
<CFOUTPUT>
<font face="Bookman Old Style" size="4" color="Blue"><b>Your E-mail has been sent.</b></font><br><br>
<table width="400" height="25" border="0" cellspacing="0" cellpadding="0">
<tr align="left" valign="middle">
<td align="left" valign="middle"><a href="showcategories.cfm"><img src="images/Shopping.jpg" width="163" height="25"></a></td>
</tr></table></CFOUTPUT>
</div>
</body></html>
<!--Send-Email-Action.cfm-->
<cfif IsDefined("form.remember")>
  <cfif form.remember>
    <cflock scope="session" timeout="30" type="exclusive">
      <cfset Session.ReturnAddr = form.emallfrom>
      <cfcookie name="ReturnAddr" value="#Session.ReturnAddr#">
      <cfcookie name="poplogin" value="#Session.Username#:#Session.Password#">
    </cflock>
  </cfif>
</cfif>

<cfif IsDefined("form.forget")>
  <cfif form.forget>
    <cfcookie name="ReturnAddr" expires="NOW">
    <cfcookie name="poplogin" expires="NOW">
  </cfif>
</cfif>

<cfset ToField = form.emailto>
<cfset FromField = form.emailfrom>
<cfset SubjField = form.emailsubj>
<cfset MsgField = form.emailmsg>
<cfmail to="#ToField#" 
    from="#FromField#" 
    subject="#SubjField#">
#MsgField#
</cfmail>

<cfset PageCaption = "Email sent to #ToField#">
<cfinclude template="htmlheader.cfm">
<body>
<cfoutput>
<p>Queued the following for delivery to #ToField#: </p>
<cfif form.remember>
<p>Wrote return address cookie</p>
</cfif>
From: #FromField# <br>
Subject: #SubjField# <br>
<pre>#MsgField#</pre>
</cfoutput>
</body>
<!--- ShoppingCart.cfm --->
<div id="Layer9" style="position:absolute; width:50px; height:20px; z-index:1; left: 620px; top: 3px"><a href="showcart.cfm"><img src="images/ShowCart.jpg" width="96" height="23" hspace="39" vspace="3" border="0" align="left" alt=""></a></div>
<!—ShowCart.cfm—>
<CFHEADER Name="Expires" Value="#Now()#">
<CFHEADER NAME="pragma" VALUE="no-cache">
<CFIF IsDefined("Cookie.CartID")>
<!— If there are 0 of any item, remove that item from the cart —>
<CFQUERY datasource="#Application.datasource#" name="PurgeEmptyItems">
  DELETE FROM CART
  WHERE CartID = #Val(Cookie.CartID)#
  AND Quantity = 0
</cfquery>
<!— Get List of Cart Items —>
<CFQUERY datasource="#Application.datasource#" NAME="GetCartItems">
  SELECT P.ProdID AS PID, ProdName, SalePrice, Quantity
  FROM CART, PRODUCTS P
  WHERE CART.ProdID = P.ProdID
  AND CartID = #Val(Cookie.CartID)#
</cfquery>
</cfif>
</HTML>

<TITLE>Show Categories</TITLE>
</HEAD>

<body background="images/BG3.jpg" link="White" vlink='White" alink="White">

<font face="Bookman Old Style" size="4" color="Black"><I>Your Shopping Cart</i></font>

<table width="520" border="1" cellspacing="1" cellpadding="1" align="center" bordercolorlight="Aqua"
bordercolordark="Blue" bgcolor="Aqua">
  <TR>
    <TD align="center" BGCOLOR="#00FF00"><font face="Bookman Old Style" color="White"> ID#</font></TD>
    <TD align="center" BGCOLOR="#00FF00"><font face="Bookman Old Style" color="White">Product</font></TD>
    <TD align="center" BGCOLOR="#00FF00"><font face="Bookman Old Style" color="White">Price</font></TD>
    <TD align="center" BGCOLOR="#00FF00"><font face="Bookman Old Style" color="White">Quantity</font></TD>
    <TD align="center" BGCOLOR="#00FF00"><font face="Bookman Old Style" color="White">SubTotal</font></TD>
  </TR>
</table>

<!— If the shopping cart is empty.—>
<CFIF IsDefined("Cookie.CartID")>
<CFIF GetCartItems.RecordCount LT 1>
  <TR>
    <TD BGCOLOR="#FFFF99" COLSPAN="5" ALIGN="CENTER">
      <font face="Bookman Old Style" size="-1">(There is currently no item in your shopping cart.)</font>
    </TD>
  </TR>
</CFIF>
</CFIF>

<font face="Bookman Old Style" size="4" color="Black"><I>Your Shopping Cart</i></font>

<table width="520" border="1" cellspacing="1" cellpadding="1" align="center" bordercolorlight="Aqua"
bordercolordark="Blue" bgcolor="Aqua">
  <TR>
    <TD align="center" BGCOLOR="#00FF00"><font face="Bookman Old Style" color="White"> ID#</font></TD>
    <TD align="center" BGCOLOR="#00FF00"><font face="Bookman Old Style" color="White">Product</font></TD>
    <TD align="center" BGCOLOR="#00FF00"><font face="Bookman Old Style" color="White">Price</font></TD>
    <TD align="center" BGCOLOR="#00FF00"><font face="Bookman Old Style" color="White">Quantity</font></TD>
    <TD align="center" BGCOLOR="#00FF00"><font face="Bookman Old Style" color="White">SubTotal</font></TD>
  </TR>
</table>

<!— If the shopping cart is empty.—>
<CFIF IsDefined("Cookie.CartID")>
<CFIF GetCartItems.RecordCount LT 1>
  <TR>
    <TD BGCOLOR="#FFFF99" COLSPAN="5" ALIGN="CENTER">
      <font face="Bookman Old Style" size="-1">(There is currently no item in your shopping cart.)</font>
    </TD>
  </TR>
</CFIF>
</CFIF>
<CFELSE>
<!--If quantities of the items are changed --->
<FORM ACTION="changequants.cfm" METHOD="POST">
<CFSET TotalCost = 0>
<!-- Display the information for the current item --->
<CFOUTPUT QUERY="GetCartItems">
<TD ALIGN="center" bgcolor="#ffff99"><font face="Bookman Old Style" color="Black">#PID#</font></TD>
<TD ALIGN="center" bgcolor="#ffff99"><font face="Bookman Old Style" color="Blue">#ProdName#</font></TD>
<TD ALIGN="RIGHT" bgcolor="#ffff99"><font face="Bookman Old Style" color="Black">#DollarFormat(SalePrice)#</font></TD>
<TD ALIGN="center" bgcolor="#ffff99"><font face="Bookman Old Style" color="Black">#DollarFormat(SalePrice * Quantity)#</font></TD>
</CFOUTPUT>
<!--- Add cost of current item(s) to total cost --->
<CFSET TotalCost = TotalCost + (GetCartItems.SalePrice * GetCartItems.Quantity)>
</CFPUTPUT>
<!-- Display the total cost --->
<CFOUTPUT>
<TR COLSPAN="4" BGCOLOR="#FFFF99" ALIGN="RIGHT">
<FONT FACE="Bookman Old Style" SIZE="-1"><b>TOTAL</b></FONT></TD>
</CFOUTPUT>
</TABLE><br>
</CFOUTPUT>
<table width="400" height="25" border="0" cellspacing="0" cellpadding="0">
<tr align="left" valign="middle"><A HREF="showcategories.cfm"><img src="images/Shopping.jpg" width="163" height="25"></A></tr>
<tr align="left" valign="middle"><INPUT TYPE="SUBMIT" VALUE="Change Quantities"></tr>
<tr align="left" valign="middle"><INPUT TYPE="BUTTON" VALUE="Checkout" onClick="location.href = 'checkout.cfm'"></tr>
</FORM>
<!-- If the cart is empty --->
<CFELSE>
<TD BGCOLOR="#FFFF99" COLSPAN="5" ALIGN="CENTER">
<font face="Bookman Old Style" size="-1" color="Black">(There is currently no item in your shopping cart.)</font></TD>
</CFELSE>
<script language="JavaScript">
</script>

function MM_timelineGoto(tmLnName, fNew, numGotos) { //v2.0
//Copyright 1997 Macromedia, Inc. All rights reserved.
var i,j,tmLn,props,keyFrm,sprite,numKeyFr,firstKeyFr,lastKeyFr,propNum, theObj;
if (document.MM_Time == null) MM_initTimelines(); //if *very* 1st time
if (numGotos != null)
for (i = 0; i < tmLn.length; i++) {
sprite = (jmpFwd) ? tmLn[i] : tmLn[(tmLn.length-1)-i]; //count bkwds if jumping back
if (sprite.charAt(0) == 's') {
numKeyFr = sprite.keyFrames.length;
firstKeyFr = sprite.keyFrames[0];
lastKeyFr = sprite.keyFrames[numKeyFr - 1];
for (j=0; j < sprite.length; j++) {
props = sprite.values[j];
if (numKeyFr == props.length) propNum = keyFrm-1 //only keyframes
else propNum = Math.min(Math.max(0,fNew-firstKeyFr),props.length-1); //or keep in legal range
if (sprite.obj != null) {
if (props[prop1] == null) sprite.obj[props] = props[propNum];
else sprite.obj[props.prop2][props] = props[propNum];
}
}
else if (sprite.charAt(0) == 'b' && fNew == sprite.frame) eval(sprite.value);
}
}

function MM_timelinePlay(tmLnName, myID) { //v1.2
//Copyright 1997 Macromedia, Inc. All rights reserved.
var i,j,tmLn,props,keyFrm,sprite,numKeyFr,firstKeyFr,propNum, theObj, firstTime=false;
if (document.MM_Time == null) MM_initTimelines(); //if *very* 1st time
if (myID == null) { myID = ++tmLn.ID; firstTime=true; }//if new call, incr ID
if (myID == tmLn.ID) { //if lm newest
setTimeout('MM_timelinePlay("'+tmLnName+'","'+myID+'"),tmLn.delay);
}
fNew = ++tmLn.curFrame;
for (i=0; i < tmLn.length; i++) {
sprite = tmLn[i];
if (sprite.charAt(0) == 's') {
if (sprite.obj) {

</div>
</BODY>
</HTML>
numKeyFr = sprite.keyFrames.length; firstKeyFr = sprite.keyFrames[0];
if (fNew >= firstKeyFr && fNew <= sprite.keyFrames[numKeyFr-1]) {//in range
  keyFrm = 1;
  for (i=0; i<sprite.values.length; i++) {
    props = sprite.values[i];
    if (numKeyFr != props.length) {
      if (props.prop2 == null) sprite.obj[props.prop] = props[fNew-firstKeyFr];
      else sprite.obj[props.prop2][props.prop] = props[fNew-firstKeyFr];
    } else {
      while (keyFrm < numKeyFr && fNew > sprite.keyFrames(keyFrm)) keyFrm++;
      if (firstTime || fNew == sprite.keyFrames[keyFrm-1]) {
        if (props.prop2 == null) sprite.obj[props.prop] = props[keyFrm-1];
        else sprite.obj[props.prop2][props.prop] = props[keyFrm-1];
      }
    }
  }
} else if (sprite.charAt(0) == 'b' && fNew == sprite.frame) eval(sprite.value);
if (fNew > tmLn.lastFrame) tmLn.ID = 0;
}
}

function MM_jnitTimelines() {
  //MM_jnitTimelines() Copyright 1997 Macromedia, Inc. All rights reserved.
  var ns = navigator.appName == "Netscape";
  document.MM_Time = new Array();
  document.MM_Time[0] = new Array();
  document.MM_Time["Timeline1"] = document.MM_Time[0];
  document.MM_Time[0].MM_Name = "Timeline1";
  document.MM_Time[0].fps = 12;
  document.MM_Time[0][0].frame = 16;
  document.MM_Time[0][1].value = "MM_timelineGoto("Timeline1",'1')";
  document.MM_Time[0][1].slot = 1;
  if (ns)
    document.MM_Time[0][1].obj = document["Layer3"];
  else
    document.MM_Time[0][1].obj = document.all ? document.all["Layer3"] : null;
  document.MM_Time[0][1].keyFrames = new Array(1, 10, 20, 30, 40);
  document.MM_Time[0][1].values = new Array();
  document.MM_Time[0].lastFrame = 40;
  for (i=0; i<document.MM_Time.length; i++) {
    document.MM_Time[i].ID = null;
    document.MM_Time[i].curFrame = 0;
  }
}
<!--ShowItems.cfm-->
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">
<!-In case that there are more than 10 productsto be shown-->
<cfparam name="FirstRow" default="1">
<cfif IsDefined("URL.first")>
<cfset FirstRow = URL.first>
</cfif>
<cfset StartNextPage = FirstRow + 10>
<cfset StartLastPage = FirstRow - 10>
<html>
<head>
<title>Products List</title>
</head>
<body background="images\BG5.jpg" link="Blue" vlink="Blue" alink="Red">
<img src="images/brandW.gif" width="130" height="36" hspace="39" vspace="30" border="0" align="left" alt="">
<img src="images/WELCOME.gif" width="270" height="30" hspace="130" vspace="33" border="0" align="left" alt="">
<cfinclude template="ShoppingCart.cfm">
<cfinclude template="AddLinks.cfm">

<!—Create a new layer for a table—•>
<div id="Layer1" style="position:absolute; width:450px; height:400px; z-index:1; left: 230px; top: 120px">
<cfoutput>
<cfquery name="GetProduct" datasource="#Application.datasource#" dbtype="ODBC">
  SELECT PRODUCTS.ProdID, ProdName, SalePrice, Picture, SubCatID
  FROM ProductCats INNER JOIN PRODUCTS ON ProductCats.ProdID = PRODUCTS.ProdID
  WHERE SubCatID = #SubCatID#
  ORDER BY PRODUCTS.ProdID
</cfquery>

<!—Highlight the even rows of the results in the table——>
<tr align="center" bgcolor="#FFFF66">
  <td><font face="Bookman Old Style" color="White">Product ID</font></td>
  <td><font face="Bookman Old Style" color="White">Product Name</font></td>
  <td><font face="Bookman Old Style" color="White">Price/Package</font></td>
  <td><a href="showoneitem.cfm?ProdID=#ProdID#"><img src="product/#picture#" width="50" height="50" border="0" alt="MORE DETAILS"></a></td>
</tr>
</cfoutput>
</div>
</body>
</html>
<table>
<thead>
<tr>
<th>CFML Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>&lt;cfoutput&gt;</code></td>
<td>Begin output block</td>
</tr>
<tr>
<td><code>&lt;cfif StartLastPage gte 1&gt;</code></td>
<td>If StartLastPage greater than or equal to 1</td>
</tr>
<tr>
<td><code>&lt;a href=&quot;getproduct.cfm?first=#StartLastPage#&quot;&gt;Previous 10 items&lt;/a&gt;</code></td>
<td>Link to previous 10 items</td>
</tr>
<tr>
<td><code>&lt;cfif StartNextPage le GetProduct.RecordCount&gt;</code></td>
<td>If StartNextPage less than or equal to GetProduct.RecordCount</td>
</tr>
<tr>
<td><code>&lt;a href=&quot;getproduct.cfm?first=#StartNextPage#&quot;&gt;Next 10 items&lt;/a&gt;</code></td>
<td>Link to next 10 items</td>
</tr>
<tr>
<td><code>&lt;/cfoutput&gt;</code></td>
<td>End output block</td>
</tr>
<tr>
<td><code>&lt;/cfif&gt;</code></td>
<td>End if block</td>
</tr>
</tbody>
</table>

**Output:**

137
<cfquery name="GetSubCat" datasource="#Application.datasource#" dbtype="ODBC">
SELECT CatID, SubCatName, SubCatID
FROM SUBCATEGORIES
WHERE CatID = #CatID#
</cfquery>

<HTML>
<HEAD>
<TITLE>Shows Sub Categories</TITLE>
</HEAD>

<body background="images\BG5.jpg" link="Blue" alink="Red">
<img src="images/brandW.gif" width="130" height="36" hspace="39" vspace="30" border="0" align="left" alt="">
<img src="images/WELCOME.gif" width="270" height="30" hspace="130" vspace="33" border="0" align="left" alt="">
<cfinclude template="ShoppingCart.cfm">
<cfinclude template="AddLinks.cfm">
<BR><BR><BR><BR>  
<div id="Layer1" style="position:absolute; width:400px; height:300px; z-index:1; left: 285px; top: 110px">
<table width="300" border="2" cellspacing="1" cellpadding="1" align="center" bordercolordark="Blue" bordercolorlight="Aqua">
<tr align="center" bgcolor="#fff(CurrentRow Mod 2 Is 0, DE('FFFF66'), DE('ffffff'))#">
<td><FONT FACE="Bookman Old Style" SIZE="3" COLOR="#000FF"><A HREF="showitems.cfm?SubCatID=#SubCatID#"<b><center>#SubCatName#</b></A></FONT></td>
</TR>
</TABLE>
</div>
</BODY>
</HTML>
APPENDIX B:

CUSTOMER SERVICES SOURCE CODES
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">
<cfquery name="LoadCategories" datasource="#Application.datasource#">
SELECT *
FROM CATEGORIES
</cfquery>
<html>
<head>
<title>Categories List</title>
</head>
<body background="images\ZBG1.jpg">
<img lowsrc="images/brandW.gif" width="130" height="36" hspace="322" vspace="0" border="0" align="left" alt="">
<div id="Layer1" style="position:absolute; width:720px; height:290px; z-index:1; left: 40px; top:70px">
<FONT FACE="Bookman Old Style" SIZE="3" COLOR="#000000"><b><i>CATEGORIES LIST</i></b></FONT>
<cfform action="ZCategoriesUpdate.cfm" method="POST" enablecab="Yes" name="ShowCategories">
<cfgrid name="CategoriesUpdate" width="710" height="290" query="LoadCategories" insert="No" delete="No" sort="Yes" font="Arial" bold="No" italic="No" appendkey="No" highlightref="No" griddatalign="LEFT" gridlines="Yes" rowheaders="Yes" rowheaderalign="CENTER" rowheaderitalic="No" rowheaderbold="No" colheaders="Yes" colheaderalign="LEFT" colheaderitalic="No" colheaderbold="Yes" bgcolor="#FFFFCC" selectmode="BROWSE" picturebar="Yes">
</cfgrid>
</cfform>
</div>
</body>
</html>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">
<cfquery name="OrderCheck" datasource="#Application.datasource#">
    select distinct Region from ORDERS
</cfquery>

<html>
<head>
<title>Check Orders</title>
</head>
<body background="images/ZBG3.jpg" bgcolor="White">
    <img lowsrc="images/brandW.gif" width="130" height="36" hspace="0" vspace="0" border="0" align="left"

    <div id="Layer1" style="position:absolute; width:450px; height:400px; z-index:1; left: 175px; top: 120px">
        <FONT FACE="Bookman Old Style" SIZE="4" COLOR="#000060">
            <b><i>Define the Order Report</i></b>
        </FONT>
        <cfform action="CSOrders.cfm" method="POST" enablecab="Yes" name="ShowOrders">
            <table border="1" width="100%" bordercolordark="Black" bgcolor="#1111FF">
                <tr>
                    <td><b><font face="Arial" size="2" color="White">Order Date</font></b></td>
                    <td><select name="dateoperator">
                        <option value="">Before
                        <option value="">After
                    </select></td>
                </tr>
                <tr>
                    <td><b><font face="Arial" size="2" color="White">Shipping Region</font></b></td>
                    <td><select name="regoperator">
                        <option value="">Is
                        <option value="">Not
                    </select></td>
                </tr>
                <tr>
                    <td><b><font face="Arial" size="2" color="White">Sort By</font></b></td>
                    <td colspan="5">
                        <select name="sort">
                            <option value="Region">Shipping Region
                            <option value="OrderDate">Order Date
                        </select>
                    </td>
                </tr>
            </table>
            <input type="submit" name="submit" value="Show Orders List">
        </cfform>
    </div>
</body>
</html>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">
<cfquery name="LoadCustomers" datasource="#Application.datasource#">
SELECT * FROM CUSTOMERS
</cfquery>

<html>
<head>
<title>Customers List</title>
</head>

<body background="images\ZBG1200.jpg">
<img lowsrc="images/brandW.gif" width="130" height="36" hspace="322" vspace="0" border="0" align="left" alt="">

<cfgrid name="CustomersUpdate" width="1185" height="290" query="LoadCustomers" insert="No" delete="No" sort="Yes" font="Arial" bold="No" italic="No" appendkey="No" highlightref="No" griddataalign="LEFT" gridlines="Yes" rowheaders="Yes" rowheaderalign="CENTER" rowheaderitalic="No" rowheaderbold="No" colheaders="Yes" colheaderalign="LEFT" colheaderitalic="No" colheaderbold="Yes" bgcolor="#FFFFCC" selectmode="BROWSE" picturebar="Yes"/>
</cfgrid>

<A HREF="CServices.cfm" onclick="self.location.href='CServices.cfm'"> <INPUT TYPE="BUTTON" VALUE="MENU"/>
</A>
</cfgrid>

</body>
</html>
<cfquery name="LoadEmployees" datasource="#Application.datasource#">
SELECT *
FROM EMPLOYEES</cfquery>

<html>
<head>
<title>Employees List</title>
</head>

<body background="images/ZBG1200.jpg">
<img lowsrc="images/brandW.gif" width="130" height="36" vspace="0" border="0" align="left" alt="">
<div id="Layer1" style="position:absolute; width:1135px; height:290px; z-index:1; left: 40px; top:70px">
<FONT FACE="Bookman Old Style" SIZE="3" COLOR="#000000"><b><i>EMPLOYEES LIST</i></b></FONT>
<cfgrid name="EmployeesUpdate" width="1135" height="290" query="LoadEmployees" insert="No" delete="No" sort="Yes" font="Arial" bold="No" italic="No" appendkey="No" highlightref="No" griddataalign="LEFT" gridlines="Yes" rowheaders="Yes" rowheaderalign="CENTER" rowheaderitalic="No" rowheaderbold="No" colheaders="Yes" colheaderalign="LEFT" colheaderitalic="No" colheaderbold="Yes" bgcolor="#FFFFCC" selectmode="BROWSE" picturebar="Yes">
</cfgrid>
</div>
</body>
</html>
Employees Update</title>

<script language="JavaScript">
<!DOCTYPE PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">
<html>
<head>
<title>Employees Update</title>
<script language="JavaScript">
function MM_swapImgRestore() { //v3.0
var i,x,a=document.MM_sr; for(i=0;a&&i<a.length&&(!x.oSrc)&&i++) x.src=x.oSrc;
}
function MM_preloadImages() { //v3.0
var d=document; if(d.images){ if(!d.MM_p) d.MM_p=new Array();
var i,j=d.MM_p.length,a=MM_preloadImages.arguments; for(i=0; i<a.length; i++)
if (a[i].indexOf("#")!=0){ d.MM_p[i]=new Image; d.MM_p[i].src=a[i];}
}
function MM_findObj(n, d) { //v3.0
var p,i,x; if(!d) d=document; if((p=n.indexOf("?"))>0&&parent.frames.length) {
 d=parent.frames[n.substring(p+1)].document; n=n.substring(0,p);}
if(!(x=d[n]&&d.all) x=d.all[n]; for (i=0;(!x&&!d.layers&&i<d.layers.length);i++) x=MM_findObj(n,d.layers[i].document); return x;
}
function MM_swapImage() { //v3.0
var i,j=0,x a=MM_swapImage.arguments; document.MM_sr=new Array; for(i=0;i<(a.length-2);i+=3)
 if((x=MM_findObj(a[i]))!=null){document.MM_sr[j++]=x; if(!x.oSrc) x.oSrc=x.src; x.src=a[i+2];}
</script>
</head>
<body background="images/ZBG1.jpg">
<CFGRIDUPDATE GRID="EmployeesUpdate" DATASOURCE="#Application.datasource#" TABLENAME="EMPLOYEES" KEYONLY="No"></CFGRIDUPDATE>
</body>
</html>
<cfparam name="SortOrder" default="CusID">
<cfset RptRegion = form.region>
<cfset RptRebOp = form.regoperator>
<cfset RptDate = "#form.MonthName#/ #form.MonthDay#/ #form.Year#">
<cfset RptDateOp = form.dateoperator>
<cffif IsDefined("form.sort")>
  <cfset SortOrder = form.sort>
</cffif>
</cfif>
<cfquery name="LoadOrders" datasource="#Application.datasource#">
select distinct OrderlD, OrderDate, SubTotal, Tax, CostTotal, CusID, FirstName, LastName, CardType, CardNum, Expire, Address1, Address2, City, Region, PostalCode
from ORDERS
where (Region #RptRebOp# #RptRegion#)
and (OrderDate #RptDateOp# #CreateODBCDate(RptDate)#)
order by #SortOrder# DESC
</cfquery>
<html>
<head>
<title>Orders List</title>
</head>
<body background="images\ZBG900.jpg">
<img src="images/brandW.gif" width="130" height="36" hspace="322" vspace="0" border="0" align="left" alt="">
<div id="Layer1" style="position:absolute; width:900px; height:280px; z-index:1; left: 40px; top:70px">
<FONT FACE="Bookman Old Style" SIZE="3" COLOR="#000000"><b><i>ORDERS&nbsp;&nbsp;LIST</i></b></FONT>
<cfform action="ZOrdersUpdate.cfm" method="POST" enablecab="Yes" name="ShowOrders">
<cfgrid name="OrdersUpdate" width="900" height= "290" query="LoadOrders" insert="No" delete="No" sort="Yes" font="Arial" bold="No" italic="No" appendkey="No" highlightref="No" griddataalign="LEFT" gridlines="Yes" rowheaders="Yes" rowheaderalign="CENTER" rowheaderitalic="No" rowheaderbold="No" colheaders="Yes" colheaderalign="LEFT" colheaderitalic="No" colheaderbold="Yes" bgcolor="#FFFFCC" selectmode="BROWSE" picturebar="Yes">
<cfgridcolumn name="OrderID" header="Order ID">
<cfgridcolumn name="OrderDate" header="Order Date">
<cfgridcolumn name="CusID" header="Customer ID">
<cfgridcolumn name="FirstName" header="First Name">
<cfgridcolumn name="LastName" header="Last Name">
<cfgridcolumn name="CardType" header="Card Type">
<cfgridcolumn name="CardNum" header="Card Number">
<cfgridcolumn name="Expire" header="Expire">
<cfgridcolumn name="Address1" header="Address1">
<cfgridcolumn name="Address2" header="Address2">
<cfgridcolumn name="City" header="City">
<cfgridcolumn name="Region" header="Region">
<cfgridcolumn name="PostalCode" header="Zip Code">
<cfgridcolumn name="SubTotal" header="Sub Total">
<cfgridcolumn name="Tax" header="Tax">
<cfgridcolumn name="CostTotal" header="Total">
</cfgridcolumn>
</cfgridcolumn>
</cfgridcolumn>
</cfgridcolumn>
</cfgridcolumn>
</cfgridcolumn>
</cfgridcolumn>
</cfgridcolumn>
</cfgridcolumn>
</cfgridcolumn>
</cfgridcolumn>
</cfgrid>
</cfform></div>
</body>
<cfquery name="LoadSubCat" datasource="#Application.datasource#">
SELECT *  
FROM Subcategories
</cfquery>

<html>
<head>
<title>Sub Categories List</title>
</head>

<body background="images/ZBG1.jpg">
<img src="images/brandW.gif" width="130" height="36" hspace="322" vspace="0" border="0" align="left" alt=""/>

<div id="Layer1" style="position:absolute; width:720px; height:290px; z-index:1; left: 40px; top:70px">
<FONT FACE="Bookman Old Style" SIZE="3" COLOR="#000000"><b>SUB CARTEGORIES LIST</b></FONT>
<cfform action="ZSubCatUpdate.cfm" method="POST" enablecab="Yes" name="ShowSubCat">
<cfgrid name="SubCatUpdate" width="710" height="290" query="LoadSubCat" insert="No" delete="No" sort="Yes" font="Arial" bold="No" italic="No" appendkey="No" highlightref="No" griddataalign="LEFT" gridlines="Yes" rowheadersalign="Yes" rowheaderalign="CENTER" rowheaderitalic="No" rowheaderbold="No" colheadersalign="LEFT" colheaderitalic="No" colheaderbold="Yes" bgcolor="#FFFFCC" selectmode="BROWSE" picturebar="Yes">
</cfgrid>
</div>
</body>
</html>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">
<cfquery name="LoadSuppliers" datasource="#Application.datasource#">
  SELECT *
  FROM SUPPLIERS
</cfquery>

<html>
<head>
  <title>Suppliers List</title>
</head>
<body background="images\ZBG1200.jpg">
  <img lowsrc="images/brandW.gif" width="130" height="36" vspace="0" border="0" align="left" alt=""
  <div id="Layer1" style="position:absolute; width:1130px; height:290px; z-index:1; left: 40px; top:70px">
    <a href="CServices.cfm" onclick="self.location.href = 'CServices.cfm">
    <cfinput type="BUTTON" value="MENU" />
  </div>
</body>
</html>
APPENDIX C:

ADMINISTRATION SOURCE CODES
<html><head><title>Administrative Menu</title><script language="JavaScript">
</script></head><body background="images/ZBG3.jpg">
<img lowsrc="images/brandW.gif" width="130" height="36" hspace="322" vspace="0" border="0" align="left">
<table width="100%" height="115" border="0" cellspacing="5" cellpadding="5" align="center">
<tr><td align="center"><a href="ZCustomers.cfm" onMouseOut="MM_swapImgRestore()" onMouseOver="MM_swapImage('CUSTOMERS','images/ZCUSTOMERS1.GIF',1)"
 name="CUSTOMERS" border="0" src="images/ZCUSTOMERS.GIF" width="140" height="40" alt=""></a></td>
<td align="center"><a href="ZProducts.cfm" onMouseOut="MM_swapImgRestore()" onMouseOver="MM_swapImage('PRODUCTS','/images/ZPRODUCTS1.GIF',1)" name="PRODUCTS" border="0" src="images/ZPRODUCTS.GIF" width="140" height="40" alt=""></a></td></tr>
<tr><td align="center"><a href="ZEmployees.cfm" onMouseOut="MM_swapImgRestore()" onMouseOver="MM_swapImage('EMPLOYEES','images/ZEMPLOYEES1.GIF',1)" name="EMPLOYEES" border="0" src="images/ZEMPLOYEES.GIF" width="140" height="40" alt=""></a></td>
<td align="center"><a href="ZCategories.cfm" onMouseOut="MM_swapImgRestore()" onMouseOver="MM_swapImage('CATEGORIES','/images/ZCATEGORIES1.GIF',1)" name="CATEGORIES" border="0" src="images/ZCATEGORIES.GIF" width="140" height="40" alt=""></a></td></tr>
<tr><td align="center"><a href="ZSuppliers.cfm" onMouseOut="MM_swapImgRestore()" onMouseOver="MM_swapImage('SUPPLIERS','images/ZSUPPLIERS1.GIF',1)" name="SUPPLIERS" border="0" src="images/ZSUPPLIERS.GIF" width="140" height="40" alt=""></a></td>
<td align="center"><a href="ZSubCategories.cfm" onMouseOut="MM_swapImgRestore()" onMouseOver="MM_swapImage('SUBCATS','/images/ZSUBCATS1.GIF',1)" name="SUBCATS" border="0" src="images/ZSUBCATS.GIF" width="140" height="40" alt=""></a></td></tr>
</table>
</body></html>
</div>

</div>

</table>

</table>

</body>
</html>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">
<cfquery name="LoadCategories" datasource="#Application.datasource#">
   SELECT *
   FROM CATEGORIES
</cfquery>

<html>
<head>
<title>Categories List</title>
</head>

<body background="images\ZBG1.jpg">
<img lowsrc="images/brandW.gif' width="130" height="36" vspace="0" border="0" align="left" alt="">
<div id="Layer1" style="position:absolute; width:720px; height:290px; z-index:1; left: 40px; top:70px">
<FONT FACE="Bookman Old Style" SIZE="3" COLOR="#000000">
<b><i>CATEGORIES LIST</i></b></FONT>
<form action="ZCategoriesUpdate.cfm" method="POST" enablecab="Yes" name="ShowCategories">
<cfgrid name="CategoriesUpdate" width="710" height="290" query="LoadCategories" insert="Yes" delete="Yes" sort="Yes" font="Arial" bold="No" italic="No" appendkey="No" highlightref="No" griddataalign="LEFT" gridlines="Yes" rowheaders="Yes" rowheaderalign="CENTER" rowheaderitalic="No" rowheaderbold="No" colheaders="Yes" colheaderalign="LEFT" colheaderitalic="No" colheaderbold="Yes" bgcolor="#FFFFCC" selectmode="EDIT" picturebar="Yes">
</cfgrid>
<br>
<a href="ZADMIN.cfm" onclick="self.location.href ='ZADMIN.cfm""> <input type="BUTTON" value="CANCEL "></a>
</form>
</div>
</body>
</html>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">
<html>
<script language="JavaScript">

function MM_swapImgRestore(){ //v3.0
    var i,x,a=document.MM_sr; for(i=0;a[i]&i<a.length;++i) x.oSrc=x.src=x.oSrc;
}

function MM_swapImage(){//v3.0
    var p,i,j=0,x,a=[MM_swapImage.arguments]; document.MM_sr=new Array; for(i=0;i<(a.length-2);i+=3)
        if((x=MM_findObj(a[i]))!=null){document.MM_sr[j++]=x; if(!x.oSrc)x.oSrc=x.src; x.src=a[i+2];
}
</script>

<head>
<title>Categories Update</title>
</head>

<body background="#ZBG1.jpg">
<br><br><br>
<FONT FACE="Bookman Old Style" SIZE="3" COLOR="#800000">Categories Update</FONT>

<br>
<body background="#ZBG1.jpg">
<br><br><br>
<FONT FACE="Bookman Old Style" SIZE="3" COLOR="#800000">Categories Update</FONT>

<br>
<body background="#ZBG1.jpg">
<br><br><br>
<FONT FACE="Bookman Old Style" SIZE="3" COLOR="#800000">Categories Update</FONT>

<br>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">
<cfquery name="OrderCheck" datasource="#Application.datasource#">
  select distinct Region from ORDERS
</cfquery>

<html>
<head>
<title>Check Orders</title>
</head>
<body background="images/ZBG3.jpg" textcolor="White">
<img src="images/brandW.gif" width="130" height="36" hspace="322" vspace="0" border="0" align="left" alt="">

<div id="Layer1" style="position:absolute; width:450px; height:400px; z-index:1; left: 175px; top: 120px">
  <font face="Bookman Old Style" size="4" color="#000000"><b><i>Define the Order Report</i></b></font>
  <cfform action="ZOrders.cfm" method="POST" enablecbb="Yes" name="ShowOrders">
    <table border="1" width="100%" bordercolorlight="White" bordercolordark="Black" bgcolor="#1111FF">
      <tr>
        <td><b><font face="Arial" size="2" color="White">Order Date</font></b></td>
        <td><select name="dateoperator">
          <option value="<">Before</option>
          <option value=">">After</option>
        </select></td>
        <td><cfmodule template="ZDateSelect.cfm"></td>
      </tr>
      <tr>
        <td><b><font face="Arial" size="2" color="White">Shipping Region</font></b></td>
        <td><select name="regoperator">
          <option value="=">Is</option>
          <option value="<>">Not</option>
        </select></td>
        <td><cfselect name="region" query="OrderCheck" value="Region" display="Region" required="Yes"></cfselect></td>
      </tr>
      <tr>
        <td><b><font face="Arial" size="2" color="White">Sort By</font></b></td>
        <td colspan="5">
          <select name="sort">
            <option value="Region">Shipping Region</option>
            <option value="OrderDate">Order Date</option>
          </select>
        </td>
      </tr>
    </table>
    <br><br>
    <input type="submit" name="submit" value="Show Orders List">
  </cfform>
</div>
</body>
<html>
<head>
<title>Customers List</title>
</head>
<body background="images\ZBG1200.jpg">
<img lowsrc="images/brandW.gif" width="130" height="36" hspace="322" vspace="0" border="0" align="left" alt="">
<div id="Layer1" style="position:absolute; width:1185px; height:290px; z-index:1; left: 40px; top:70px">
<FONT FACE="Bookman Old Style" SIZE="3" COLOR="##000000"><b><i>CUSTOMERS<br>&nbsp;LIST</i></b></FONT>
<cfform action="ZCustomersUpdate.cfm" method="POST" enablecab="Yes" name="ShowCustomers">
<cfgrid name="CustomersUpdate" width="1185" height="290" query="LoadCustomers" insert="Yes" delete="Yes" sort="Yes" font="Arial" bold="No" italic="No" appendkey="No" highlightref="No" griddataalign="LEFT" gridlines="Yes" rowheaders="Yes" rowheaderalign="CENTER" rowheaderitalic="No" rowheaderbold="No" colheaders="Yes" colheaderalign="LEFT" colheaderitalic="No" colheaderbold="Yes" bgcolor="##FFFFCC" selectmode="EDIT" picturebar="Yes">
</cfgrid>
</cfform>
</div>
</body>
</html>
<!—ZDateSelect.cfm—>
<!— optional attributes —>
<cfparam name="Attributes.Day" default="#Day(Now())#">
<cfparam name="Attributes.Month" default="#Month(Now())#">
<cfparam name="Attributes.Year" default="#Year(Now())#">

<cfset YearRange = "10">
<cfset MonthList = "January,February,March,April,May,June,July,August,September,October,November,December">
<cfset MonthDays = "31,28,31,30,31,30,31,31,30,31,30,31">
<cfset YearBase = Year(Now()) - YearRange>

<select name="MonthName">
<cfloop list="#MonthList#" index="idx">
<cfoutput>
<option value="#ListFindNoCase(MonthList, idx)#" #if(idx is MonthAsString(Attributes.Month), DE("selected"), DE(""))# >#idx#</cfoutput>
</cfloop>
</select>

<select name="MonthDay">
<cfloop from="1" to="31" index="idx">
<cfoutput>
<option value="#idx#" #if(idx is Attributes.Day, DE("selected"), DE(""))# >#idx#</cfoutput>
</cfloop>
</select>

<select name="Year">
<cfloop from="#YearBase#" to="#Evaluate(#YearBase# + (#YearRange# * 2))#" index="idx">
<cfoutput>
<option value="#idx#" #if(idx is Attributes.Year, DE("selected"), DE(""))# >#idx#</cfoutput>
</cfloop>
</select>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">
<cfquery name="LoadEmployees" datasource="#Application.datasource#">
  SELECT *
  FROM EMPLOYEES
</cfquery>

<html>
<head>
<title>Employees List</title>
</head>
<body background="images\ZBG1200.jpg">
<img lowsrc="images/brandW.gif" width="130" height="36" vspace="0" border="0" align="left" alt="">

<dl id="Layer1" style="position:absolute; width:1135px; height:290px; z-index:1; left: 40px; top:70px">
  <FONT FACE="Bookman Old Style" SIZE="3" COLOR="#000000"><b><i>EMPLOYEES LIST</i></b></FONT>
  <cfForm action="ZEmployeesUpdate.cfm" method="POST" enablecab="Yes" name="ShowEmployees">
  <cfgrid name="EmployeesUpdate" width="1135" height="290" query="LoadEmployees" insert="Yes" delete="Yes" sort="Yes" font="Arial" bold="No" italic="No" appendkey="No" griddataalign="LEFT" gridlines="Yes" gridrowheaders="Yes" gridrowheaderalign="CENTER" gridrowheaderitalic="No" gridrowheaderbold="No" colheaders="Yes" colheaderalign="LEFT" colheaderitalic="No" colheaderbold="Yes" bgcolor="#FFFFCC" selectmode="EDIT" picturebar="Yes">
  </cfgrid>
  <INPUT TYPE="SUBMIT" VALUE=UPDATE">
  <A HREF="ZADMIN.cfm" onclick="self.location.href = 'ZADMIN.cfm'" <INPUT TYPE="BUTTON" VALUE="CANCEL">
  </cfForm>
</div>
</body>
</html>
<html><head><title>Employees Update</title></head><body background="images/ZBGl.jpg">
<br><br><br><font face="Bookman Old Style" size="3" color="#000000"><center><b><i>EMPLOYEESTABLE HAS BEEN UPDATED</i></b></font></center>

<cfgridupdate grid="EmployeesUpdate" datasource="#Application.datasource#" tablename="EMPLOYEES" keyonly="No">
</cfgridupdate>
</body></html>
```html
<!DOCTYPE HTML PUBLIC "//W3C//DTD HTML 4.0 Transitional//EN" >

<cfparam name="SortOrder" default="CusID" />
<cfset RptRegion = form.region >
<cfset RptRegOp = form.regoperator >
<cfset RptDate = "/form.MonthName/#/form.MonthDay#/form.Year#" >
<cfset RptDateOp = form.dateoperator >
<cfif IsDefined("form.sort")>
    <cfset SortOrder = form.sort >
</cfif>

<cfquery name="LoadOrders" datasource="#Application.datasource#">
    select distuhd:OrderlD,OrderDate,SubTotal,Tax,CostTotal,CusID,FirstName,LastName,CardType,
    CardNum,Expire,Address1,Address2,City,Region,PostalCode:
    from ORDERS
    where (Region #RptRegOp# "#RptRegion#")
    and (OrderDate #RptDateOp# CreateODBCDate(RptDate)#)
    order by #SortOrder# DESC
</cfquery>

<html>
<head><title>Orders List</title></head>
<body background="images/2BG900.jpg">

<dlv id="Layer1" style="position:absolute; width:900px; height:280px; z-index:1; left: 40px; top:70px">
    <FONT FACE="Bookman Old Style" SIZE="3" COLOR="#000000"><b><i>PURCHASES LIST</i></b></FONT>
    <cfgrid ad:join="ZOrdersUpdate.cfm" method="POST" enablecab="Yes" name="ShowOrders">
        <cfgridcolumn name="OrderID" header="Order ID" />
        <cfgridcolumn name="OrderDate" header="Order Date" />
        <cfgridcolumn name="CusID" header="Customer ID" />
        <cfgridcolumn name="FirstName" header="First Name" />
        <cfgridcolumn name="LastName" header="Last Name" />
        <cfgridcolumn name="CardType" header="Card Type" />
        <cfgridcolumn name="CardNum" header="Card Number" />
        <cfgridcolumn name="Expire" header="Expire" />
        <cfgridcolumn name="Address1" header="Address1" />
        <cfgridcolumn name="Address2" header="Address2" />
        <cfgridcolumn name="City" header="City" />
        <cfgridcolumn name="Region" header="Region" />
        <cfgridcolumn name="PostalCode" header="Zip Code" />
        <cfgridcolumn name="SubTotal" header="Sub Total" />
        <cfgridcolumn name="Tax" header="Tax" />
        <cfgridcolumn name="CostTotal" header="Total" />
    </cfgrid>

    <INPUT TYPE="SUBMIT" VALUE=" UPDATE ">
    <A HREF="ZADMIN.cfm" onclick="self.location.href = 'ZADMIN.cfm'" <INPUT TYPE="BUTTON" VALUE=" CANCEL ">
</form>
</div>
</body>
```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">
<html>
<script language="JavaScript">
/*
function MM_swapImgRestore(){
var i,a=document.MM_sr;
for(i=0;a&amp;&amp;i&lt;a.length&amp;&amp;(x=a[i])&amp;&amp;x.oSrc;i++) x.src=x.oSrc;
}
*/
function MM_findObj(n,d){
var p,i,x; if(!d)d=document;
if((p=n.indexOf("?"))&gt;0&amp;&amp;parent.frames.length){
d=parent.frames[n.substr(p+1)].document;
}
for(i=0;i&lt;d.all.length;i++)x=d.all[i];
for(i=0;i&lt;d.forms.length;i++)x=d.forms[i];
for(i=0;i&lt;d.layers.length;i++)x=MM_flndObj(n,d.layers[i].document);
return x;
}
function MM_swapImage(){
var i,a=document.MM_sr;
for(i=0;i&lt;(a.length-2);i+=3) if((x=MM_flndObj(a[i]))!=null){
if(!x.oSrc)x.oSrc=x.src;x.src=a[i+2];
}
}
</script>
<head>
<title>Orders Update</title>
</head>
<body background="images/ZBG1.jpg">
<br><br><br>
<FONT FACE="Bookman Old Style" SIZE="3" COLOR="#000000"><center>
ORDERS TABLE HAS BEEN UPDATED</center></FONT>
<br><br><br>
<br><br><br>
</body>
</html>
<!doctype html public "-//w3c//dtd html 4.0 transitional//en">
<cfquery name="loadproducts" datasource="#application.datasource#">
  select *
  from products
</cfquery>

<html>
<head>
<title>products list</title>
</head>
<body background="images\zb900.jpg">
<img lowsrc="images/brandw.gif" width="130" hspace="322" vspace="0" border="0" align="left" alt="">
<div id="layer1" style="position:absolute; width:805px; height:290px; z-index:1; left: 40px; top:70px">
  <font face="bookman old style" size="3" color="#000000"><b><l>PRODUCTS &nbsp;&nbsp;LIST</i></b></font>
  <cfgrid name="productsupdate" width="805" height="290" query="loadproducts" insert="yes" delete="yes" sort="yes" font="arial" bold="no" italic="no" appendkey="no" highlightref="no" griddataalign="left" gridlines="yes" rowheaders="yes" rowheaderalign="center" rowheaderitalic="no" rowheaderbold="no" colheaders="yes" colheaderalign="left" colheaderitalic="no" colheaderbold="yes" bgcolor="#ffffffcc" selectmode="edit" picturebar="yes">
  </cfgrid>
  <input type="submit" value="update">
  <a href="zadmin.cfm" onclick="self.location.href ="zadmin.cfm""> <input type="button" value="cancel"></a>
  </cfgrid>
</body>
</html>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">
<html>
<script language="JavaScript">
<!--
function MM_swapImgRestoreQ(){//v3.0
var i,x,a=document.MM_sr; for(i=0;a&amp;&amp;i&amp;&lt;a.length&amp;&amp;(x=a[i])&amp;&amp;x.oSrc;i++) x.src=x.oSrc;
}

function MM_swapImage(){//v3.0
var p,i,x,a=MM_swapImage.arguments;document.MM_sr=new Array; for(i=0;i&amp;&lt;(a.length-2);i+=3)
if((x=lj^M_findObj(a[i]))!=null){document.MM_sr[i++]=x; if(!x.oSrc)x.oSrc=x.src; x.src=a[i+2];}
-->
</script>
<head>
<title>Products Update</title>
</head>
<body background="images\ZBG1.jpg">
<img src="images/brandW.gif" width="130" height="36" hspace="322" vspace="0" border="0" align="left">
<br><br><br>
<FONT FACE="Bookman Old Style" SIZE="3" COLOR="#000000"><center><b><i>
PRODUCTS TABLE HAS BEEN UPDATED</i></b></FONT></center>
<CFGRIDUPDATE GRID="ProductsUpdate" DATASOURCE="#Application.datasource#" TABLENAME="PRODUCTS" KEYONLY="No"></CFGRIDUPDATE></body>
</html>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">
<cfquery name="LoadSubCat" datasource="#Application.datasource#">
    SELECT *
    FROM Subcategories
</cfquery>

<html>
<head>
<title>Sub Categories List</title>
</head>
<body background="images\ZBG1.jpg">
<dlv id="Layer1" style="position:absolute; width:720px; height:290px; z-index:1; left:40px; top:70px">
    <FONT FACE="Bookman Old Style" SIZE="3"
    COLOR="#000000"><b><l>SUB CARTEGORIES LIST</b></FONT>
    <cfform action="ZSubCatUpdate.cfm" method="POST" enablecab="Yes" name="ShowSubCat">
        <cfgrid name="SubCatUpdate" width="710" height="290" query="LoadSubCat" insert="Yes" delete="Yes" sort="Yes"
        font="Arial" bold="No" italic="No" appendkey="No" highlightref="No" griddataalign="LEFT" gridlines="Yes"
        rowheaders="Yes" rowheaderalign="CENTER" rowheaderitalic="No" rowheaderbold="No" colheaders="Yes"
        colheaderalign="LEFT" colheaderitalic="No" colheaderbold="Yes" bgcolor="#FFFFCC" selectmode="EDIT"
        picturebar="Yes"/>
    </cfform>
    <INPUT TYPE="SUBMIT" VALUE="UPDATE">
    <A HREF="ZADMIN.cfm" onclick="self.location.href ="ZADMIN.cfm"> <INPUT TYPE="BUTTON" VALUE="CANCEL"/>
</dlv>

</body>
</html>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">
<html>
<script language="JavaScript"> </script>
<head>
<title>Suli Categories Update</title>
</head>
<body background="images/ZBG1.jpg">
<img lowsrc="images/brandW.gif" width="130" height="36" hspace="322" vspace="0" border="0" align="left"
alt="" />
<br><br>,

<font face="Bookman Old Style" size="3" color="#000000"><center><b><i>8inbsp;&nbsp;SUBCATEGORIESTABLEHASBEEN UPDATED</i></b></font></center>

</body>
</html>
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.0 Transitional//EN">
<cfquery name="LoadSuppliers" datasource="#Application.datasource#">
SELECT *
FROM SUPPLIERS
</cfquery>

<html>
<head>
<title>Suppliers List</title>
</head>

<body background="images/ZBG1200.jpg">
<img src="images/brandW.gif" width="130" height="36" hspace="322" vspace="0" border="0" align="left" alt="">
<div id="Layer1" style="position:absolute; width:1130px; height:290px; z-index:1; left: 40px; top:70px">
<FONT FACE="Bookman Old Style" SIZE="3" COLOR="##000000"><b><i>SUPPLIERS &nbsp;LIST</i></b></FONT>
<form action="ZSuppliersUpdate.cfm" method="POST" enablecab="Yes" name="ShowSuppliers">
<cfgrid name="SuppliersUpdate" width="1130" height="290" query="LoadSuppliers" insert="Yes" delete="Yes" sort="Yes" font="Arial" bold="No" italic="No" appendkey="No" highlight="No" griddataalign="LEFT" gridlines="Yes" rowheaders="Yes" rowheaderalign="CENTER" rowheaderitalic="No" rowheaderbold="No" colheaders="Yes" colheaderalign="LEFT" colheaderitalic="No" colheaderbold="Yes" bgcolor="#FFFFCC" selectmode="EDIT" picturebar="Yes">
</cfgrid>

<input type="submit" value="UPDATE">
<a href="ZADMIN.cfm" onclick="self.location.href ="ZADMIN.cfm">
<input type="button" value="CANCEL">
</a></form>
</div>
</body>
</html>
REFERENCES


[5] Gosney, John W. and Mears, Christine M., Business Intelligent with ColdFusion, Prima Tech, United States, 2000
