

**UNIVERSITY OF NORTH TEXAS  
COLLEGE OF ENGINEERING  
COMPUTER SCIENCE AND ENGINEERING**

**CSCE 5430-001 –Software Engineering  
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**Appendix A – A Case Study for Online Shopping (iCLOTHING)**

## **Overview**

iCLOTHING, Inc. is a locally owned fashion store located in Denton City, Texas, US. Currently iCLOTHING, Inc. has three departments, including women, men, and kids. Each department has roughly 7000 – 70000 individual item. It covers an area of about 7,000 square feet and three floors. iCLOTHING, Inc. has had the distinction of receiving the prestigious “Best Fashion Store in Denton” 7 times in a row.

Of late, iCLOTHING, Inc. has been experiencing a fall in its sales. iCLOTHING, Inc. conducted a survey to find out the potential causes of a dip in sales. The results of the survey reflected a spurt of new competitive warehouse stores and the growing popularity of e-commerce as the two most potential reasons for the dip in sales. As a result, iCLOTHING, Inc. can no longer afford to rely only on its loyal customer base. It needs to explore new markets and also tap potential new customers. Opening up more fashion stores does not seem to be a feasible solution, as it involves a lot of investment in terms of both cost and time. Hence, realizing the gravity of the situation and after studying the latest trends, the management at iCLOTHING, Inc. has decided to plunge into the world of Internet commerce.

The task of putting iCLOTHING, Inc. on the Internet has been assigned to Jane Doe, who currently heads the new business intelligence division at iCLOTHING, Inc. Jane Doe holds a master’s degree in Software Engineering and is considered the most tech-savvy person at iCLOTHING, Inc. Jane has been constantly upgrading his knowledge about the latest trends in IT and has done much research on the major software solution providers. As the result of his research and knowledge, Jane has decided to approach Solution@CSCE5430.Projects, Inc. to get a Web site created for iCLOTHING, Inc.

## **System Requirements**

After much research and groundwork, Jane has prepared a functional specifications list which details the features that the iCLOTHING, Inc. Web site will have. A copy of this list is shown below.

1. The first Web page of the Web site should be the Home page, which contains links to information such as "About iCLOTHING, Inc.", how to contact us, an overview of the departments and their categories that are available in the store, and links to the other Web pages on the site. Existing users should be able to log in and new users should be able to get themselves registered.
2. The Web site should also support security features such as user authentication and password encryption.
3. A user registration form should be provided for new users to get registered.
4. The Web site should have a database that stores each and every category/sub-category of information about items, such as the brand, size, price, and some description. In addition, the database should also contain information about registered users and the details of their transactions, such as the items they bought, the price they paid, the date on which they bought the items, and a mode of payment.

5. There should be a product catalog that displays information about all the items that are available.
6. Users should be able to create, add items to, and modify their shopping carts.

## Detail Requirements

After thoroughly analyzing the system's requirements, Solution@SE2203B.Assignments, Inc. has decided that the iCLOTHING, Inc. Web site will consist of two types of components:

- The customer interface component
- The administrator component

The customer interface component will provide a platform for customers of iCLOTHING, Inc. to interact online with iCLOTHING, Inc. and buy items. The administrator component will help the system administrator at iCLOTHING, Inc. add new categories or products to the product catalog and keep a check on the billing and resolve security issues.

Customers visiting the iCLOTHING, Inc. Web site will use the **customer interface component** to:

1. Get themselves registered at the iCLOTHING, Inc. Web site.
2. Get authenticated using username and password.
3. Contact iCLOTHING, Inc. for any specific query, comments, or feedback.
4. Browse through different department (i.e., Women, Men, and Kids), categories (such as Shirts, Activeware, Jeans, Swimware, Pants, etc.), sub-categories (such as Polo shirts, Dress shirts, Casual shirts, etc.) and items that are available at the iCLOTHING, Inc. fashion store. Items information includes ID, brand, price, size, description.
5. Search for any particular item or brand (such as D&G, Versace, GUCCI, Calvin Klein, etc).
6. Create and modify their shopping carts.
7. Order items that they wish to buy.
8. View some information about different items.
9. Choose the mode of payment when they are ordering items.
10. Get the items delivered on their doorsteps.

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**Note:** Customers who are not registered with the iCLOTHING, Inc. Web site can browse items and categories. However, they cannot place an order for any items or leave comments and feedback before successfully logged in.

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The system administrator at iCLOTHING, Inc. will use the **administrator component** to:

1. Update the database from time to time.
2. Add new products, categories, or sub-categories to the product catalog.
3. After the customer has confirmed the order, the billing information will be validated and an e-mail is sent to the administrator and the customer confirming the order.
4. When the quantity of any item reaches zero, this item appears as out-of-stock to the customers and an email is sent to the administrator about status of this new item.