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Software Dev I

Project 2 Final Report

Abstract

For my final project I decided to create a shopping simulation program. The user will be

able to select from a list of various products and be able to simulate an almost authentic

shopping experience. In order to create and simulate a better shopping experience I added the

use of a user graphic interface in which the user can see the different classes of the program

being implemented and displayed. Through the use of the graphical user interface (GUI), the

user's interaction with the system is made made easier and the process can be completed

smoother. The program consists of an Item class that defines and creates each item, A Cart

class that will define and contain several accessor methods, a ShoppingWindow class where

the user experience will take place. The class uses a graphical user interface where the user

can directly interact with the system in an organized window.

Introduction

When deciding what application project to select, I had several options to choose from

but the project I decided to take on was very relevant to modern technology and consumerism.

Today, a lot of the shopping that takes place is now done online more than ever. Online

shopping, sometimes even through an application, is very common and useful on several of

today's most popular shopping sites. By using several java coding techniques and teachings I

am attempting to re-create a rather familiar shopping experience all coded and created with java

language code. In this paper I will be describing the different classes used in the program and how each class is equipped with unique methods that each serve a vital purpose in the overall function of the system. In addition to this I will be explaining how the program will function and the user experience.

Detailed System Description

The final complete Shopping program system will be run through a WindowBuilder application. Here, the user will be able to scroll through a drop down list of different specified Items. Each Item contains instance data that contain variables with a unique id number, price and item name. The Item class also contains getter methods for each instance variable. Through the use of the Cart class, the user will able to add specified user selected items to their "shopping" cart. There will be a tab on the user graphic interface where the user can actively view their cart with their added items as they shop to ensure easy and simple application use. The Cart class contains an ArrayList of type Item objects. The Cart object contains variables that store its total price and the size of the cart The cart total will be displayed to the user at the view cart tab on the Shopping window. In the view cart tab there will be a table displaying all of the current items in the user's cart. Each item in the cart is displayed with its item ID, item name and price. In order to efficiently and correctly display the user's cart, I created a CartTableModel class that creates a DefaultTableModel object using the graphical user interface (GUI). Here several methods of the cart class are called to display its contents and data. This class makes the action of displaying the cart items much easier and simplifies the process.

Literature Survey

In today's world online shopping is extremely prevalent and generated different companies billions of dollars. Some companies have created online shopping experience that influence customers to buy and shop more which in-turn generates even more money for these companies. In 2005, the research study was done on the potential benefits and effects of online shopping on company profits. "In addition, research studies revealed that profits from online shopping would be high such as three-fold increase in 5 years" (Chang 2005). Online shopping was predicted to bolster company profits and researchers were right. Online shopping has revolutionized the shopping experience and has even caused companies to start like for example, Amazon. Amazon is one of the world's largest businesses. Amazon operates almost exclusively online and the E-commerce company has generated hundreds of billions of dollars. (Aczel 2006). Amazon's success is a clear indicator of the massive utility of e-commerce programs and systems. Although my shopping program is not as complex as some commercial e-commerce sites, it still displays the simplicity and efficiency of online shopping and how it useful it is.

User Manual

When the user first opens the application a drop down list will be displayed that contains a list of all the items in the shopping programs inventory. Here the user can select the item they wish to add to the cart. Right below the drop down list is a text box where the user will be able to enter the quantity. Entering a non positive integer will result in an error. After the user has selected the item and quantity amount of their choice, the user will push the 'Add to Cart' button that is located towards the lower portion of the shopping window. After the user has successfully

selected an item, quantity and pressed the add to cart button, they must click on the View Cart tab. In the View Cart tab, they will see a large table displayed in the window. This is the table that will display the items in their current cart. Each cart item is listed on the table from top to bottom in respect chronologically. In addition each item's its specific price and item ID is displayed next to each item inside the cart table display. To the right of the cart contents display, there is a button labeled 'Refresh'. The button can be pressed after each user committed purchase in order to display the user's current cart contents. Towards the bottom of the View Cart tab window the user's cart total is displayed in currency format; to view when the user is done shopping.

Conclusion

Several tasks are completed by the system through the use of its several classes and their methods. The user can effectively and efficiently simulate a shopping program through the use of the programmed graphical user interface (GUI). The interface makes the user experience more appealing as well as making it much easier to follow and carry out. A variety of various items will be presented to the user where they will be given a chance to add the different Items of different quantities to their cart. The use of the Graphical User Interface allows the user to experience a more authentic online shopping experience The simplicity that the graphic interface creates will allow for a straightforward shopping experience. Overall the system works as a well-designed GUI where the user experience is uncomplicated and easy to understand. My program specifically is utilizing java to create a simple, easy and uncomplicated shopping program all on a graphical user interface.

Works Cited

Chang, Man Kit, Waiman Cheung, and Vincent S. Lai. "Literature derived reference models for the adoption of online shopping." *Information & Management* 42.4 (2005): 543-559.

Aczel, Amir D., Jayavel Sounderpandian, and Lou Patille. *Student problem solving guide for use with complete business statistics*. McGraw-Hill, Irwin, 2006.