**Java Course Project**

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**Cheapmart overview**

Cheapmart is an American electronic commerce company based in Governor State University, which was founded by students of Group 1 on July 31, 2018. Cheapmart is attempting to be the largest retailer next to Amazon and Walmart as measured by revenue and market capitalization. As of now, Cheapmart have five categories which consist of Electronics, outdoor, kitchen, clothing, and exercise equipment. The company sell low end products under its brand name Cheapmart. By challenging Walmart and Amazon’s traditional retail sells, Cheapmart inspires to be the most valuable retailer in the United States. As of now Amazon prime subscribers are at a 100 million, which is approximately 64% percent of all households in the United States. Walmart is in every city in the United States, with that in existence Cheapmart as ways to go.

**Product class**

For the product class, the programmer is writing the code to declare what the product’s description and the type of information it will hold. The programmer used a constant identifier to describe each product. Through this code (string) we were mainly targeting the description and linking each product to a specific category. We chose 5 categories; electronics, kitchen, outdoors, clothing and exercising equipment. Since the project is a store (Cheap Mart) similar to Amazon, the programmer had to ensure proper methods were included. Certain strings were used for this program, for example the variable declaration to specify the variable name and the type of information that particular product hold. Along with the variable declaration, the programmer also used the set character with each character corresponding to a specific price.

**mainDriver class**

This class contains main function and combines all the other classes.

The function of this class is to give the option to the user for shopping different products and checking out with the cart. The class imports scanner to get input from user for getting the product options, quantity, shipping address, credit card details and some other things. The class also imports the decimal formatting used to display for the final price in 2 decimal points.

The class contains object from the Product class with valid parameters that is as follows:

1. Name of the product,
2. Description
3. Size
4. Price
5. Quantity
6. Seller
7. And Category

The above functions are all hard coded. But we have an ability to change the values of the above product using the setter functions.

The class contains object from the cart class with valid parameters that is as follows:

1. Name of the product – passing using the product value.
2. Shipping address – Prompt user
3. Quantity – prompt user
4. Price – passing using the product value
5. Credit card number – prompt user
6. Credit card Expiration – prompt user
7. Credit card CVV – prompt user

Most of the above parameters can be returned by getter method and also changed by setter methods.

This class contains a method called dir() which directs all the users decisions. We are hoping that user is already logged into the account and he is the only user. The project is basically a low fidelity, so we are not dealing with user interface for now. Our main goal is to show how the methods in java work using different class and their constructors to help user to make decisions.

This dir() method display the categories of the products for user to choose from and prompts the user to make a valid selection. There is a loop to validate the input and it will continue till a correct input is made. The name of the loop control variable is correctChoice and it is initialed false when declared.

A switch statement inside the loop which is controlled by a variable called choice (type int) that is used for decision making for choice of the product. A appropriate method is called when the correct decision is make. For example the user is prompt to choose the Category, if the user chooses Electronics, then the method Electronics() is called.

The method has no parameters, the code inside the method is creating new objects from the Product class, assigning new hard coded values to it and then passed to a method called OptionsMenu(with all 5 new objects as parameters).

Options menu show the list of names of the products using getter method of the product class. Another choice making switch statement is called that has purchase method with appropriate parameter.

The purchase method displays the following thing to the command line:

Name, Description, Size, Price, Quantity ( 1 by default) , Seller and Category of the selected product.

The user is asked if they want to buy the product or return to main menu. If the user buys the product, he/she is prompted for quantity as number of product to buy. Then it is displayed with shipping charges and additional tax. The user is then prompted to enter the credit card number, expiration code, cvv and shipping/delivery address. Final amount is displayed that consist of the product of number of quantity of the product and the price of the product and then added the shipping cost as well as the tax.

All the parameter are used to put it the cart method constructor to create a new object from cart class. There is a method called continue() that will ask user if they want to continue shopping or exit the program.

If the sure had selected not the but the product, the code will redirect to the dir() method to start over.If the user decides to exit the program another method Goodbye() is called and which display closing greeting to the user and exits the program. The method continue is validated with a decision making if else, that is an else which call the method itself ( continue() method) if the incorrect input is made.

**Categories class**

The Categories made for the online store consists of clothing, exercise tools, kitchenware, outdoor supplies, and Electronics. The program operates by having the user select which category it wants to look upon. First the program will output a welcome to you. “Hello and welcome to cheap mart!” Once you have been introduced the program will give you access to the five categories of shopping that we created for the user. Users will then be able to choose which category to shop and buy from. The program will then use continuation statements to get the shopper through the website efficiently and quickly, ensuring the shopper finds what they need. Every category was made using the product names, details, price, quantity, and cart methods. The program will let the user add the items they want to buy, to the cart.