



Daffodil
International
University

SEMESTER PROJECT (Object Oriented Programming Lab) Fall- 2023

TITLE: Computer Brand Shop

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Abstract

The provided Java program is a text-based interface for a computer brand shop, specifically for laptops and desktops. It allows users to navigate through a menu to select their preferred brand and model, displaying details such as features, original prices, and discounted prices. The program uses a hierarchical structure with methods for each level of selection, enhancing code modularity and readability. Error handling is implemented to address potential input issues.

Introduction

The provided Java program represents a simple interactive interface for a computer brand shop, specifically tailored for laptops and desktops. The program uses a console-based menu system to guide users through the selection of computer types, brands, and models. It incorporates object-oriented principles, featuring classes like Asus, HP, Dell, Acer, Lenovo, Intel, Toshiba, and Apple, each containing arrays of laptops or desktops. Users can navigate through the available options, view features, and calculate discounted prices. Additionally, exception handling for non-integer inputs is present but, in the future, I will enhance it for a more user-friendly experience.

Project code github link: <https://github.com/sami5671/Computer-Brand-Shop-Java->

Required Tool & gathering materials

Device (PC or Laptop):

Windows 11 HP EliteBook 840g5

Programming Language: JAVA

Development Environment:

1. Installed the Java Development Kit (JDK) on my windows operating system
2. Text Editor: Visual Studio Code

Scanner Class (for Input):

I used Scanner for user to take inputs from the keyboard.

Error Handling:

Implement proper error handling mechanisms. Currently, the system catches exceptions but not providing meaningful feedback. In the Future, I will Enhance error messages for better user interaction.

For Idea Generation:

I research on geeks for geeks Website for Project Ideas.

How My Computer Shop System Work:

My Java program appears to be a simple text-based interface for a computer brand shop, where users can navigate through laptop and desktop options, select brands, and view details about specific models. Here's a brief explanation of how it works:

Main Method:

The program starts by calling the `mainPage()` method from the main method.

The `mainPage()` method displays the main menu, prompting the user to choose between laptops, desktops, or exit.

User Input Handling:

User input is obtained using a Scanner object named `input`.

Switch Statement:

The user's choice is processed using a switch statement in the `mainPage()` method.

Depending on the choice, the program either calls methods for listing laptops (`listOfLaptop()`), listing desktops (`listOfDesktop()`), or exits.

List of Laptops and Desktops:

The `listOfLaptop()` and `listOfDesktop()` methods present the user with a list of brands to choose from using switch statements.

After choosing a brand, the user is prompted to select a specific model or go back to the previous menu.

Model Selection:

For each brand, there is a corresponding method (e.g., `listOfAsusModel()`, `listOfLenovoModel()`) handling the selection of laptop or desktop models.

The user can view the features and pricing details of each model.

Recursive Calls:

The program uses recursive calls to return to previous menus, allowing users to navigate back through the options. For example, after viewing details for a specific laptop model, the user is presented with the option to view more models or go back to the laptop brand selection.

Exception Handling:

The program includes basic exception handling using a try-catch block to handle input-related exceptions. If the user enters invalid input, an error message is displayed, and the corresponding method is called again.

Model Features Display:

The showLaptopFeatures() method displays the features of a selected laptop model.

Here is the Visual Representation of my System:

1. User will show this interface while open the project. There will be two option 1. Laptop 2. Desktop. User can choose any one option or exit.

```
=====> Welcome to (SAMI'S Computer Brand Shop) <=====
*****= Selete Anyone(1/2):
1) Laptop
2) Desktop
3) Exit
*= Enter your choice device:
```

2. If the user select 1 then it will show the available laptops on this shop.

```
=====> Welcome to (SAMI'S Computer Brand Shop) <=====
*****= Selete Anyone(1/2):
1) Laptop
2) Desktop
3) Exit
*= Enter your choice device: 1

*= Choose any one from the below brands:
1) Asus
2) HP
3) Dell
4) Acer
5) Previous Manu
*= Enter your choice brand: █
```

3. Or if the user selects 2 then it will show the available Desktops on this shop.

```
=====> Welcome to (SAMI'S Computer Brand Shop) <=====
=*****= Selete Anyone(1/2):
1) Laptop
2) Desktop
3) Exit
*= Enter your choice device: 2

*= Choose any one from the below brands:
1) Lenovo
2) Intel
3) Toshiba
4) Apple
5) Previous Manu
*= Enter your choice brand: █
```

4. If the user selects the laptop option then select the 3 I mean dell then it will only show dell available laptops with configurations.

```
=====> Welcome to (SAMI'S Computer Brand Shop) <=====
=*****= Selete Anyone(1/2):
1) Laptop
2) Desktop
3) Exit
*= Enter your choice device: 1

*= Choose any one from the below brands:
1) Asus
2) HP
3) Dell
4) Acer
5) Previous Manu
*= Enter your choice brand: 3

*= Available laptops of Dell:
1)470 G7 Notebook PC
2)E203MAH N500 Pentium
3)ProBook x360435 Notebook
4)DELL ENVY Laptop - 17t-cg000
5) Previous Manu
*= Enter your choice model: █
```

5. If user select suppose the choice 4 no laptop it will show the 4 no. laptop's features with all configurations. After that it will also give us a section where the original price, current discount, and discounted price will be shown.

```
== Available laptops of Dell:
1)470 G7 Notebook PC
2)E203MAH N500 Pentium
3)ProBook x360435 Notebook
4)DELL ENVY Laptop - 17t-cg000
5) Previous Manu
== Enter your choice model: 4

Features of DELL ENVY Laptop - 17t-cg000
=====
Windows 8 Pro 64
AMD Ryzenâ? 3 APU Processor
8 GB memory; 256 GB NVMe storage
13.3" FHD (1920x1080) touch display
AMD Radeonâ? UMA Graphics

|^|Original Price: 45600 BDT
|^|Current Discount: 5%
|^|Discount Price: 43320 BDT

== Available laptops of Dell:
1)470 G7 Notebook PC
2)E203MAH N500 Pentium
3)ProBook x360435 Notebook
4)DELL ENVY Laptop - 17t-cg000
5) Previous Manu
== Enter your choice model: █
```

In the same way all brand types laptop and computers configuration and current price and discounted prices a user can watch.

Future Development:

1. User Authentication:

If your project involves user accounts, consider implementing user authentication for a more personalized experience.

2. Enhance User Interface:

Add more formatting to the user interface to make it visually appealing. Use clear and concise messages to guide the user through the system.

3. Graphics and Animation:

If you want to make your project visually appealing, consider adding graphics or animations, especially if you are creating a GUI-based application.

4. Expand Product Information:

Include more detailed information about each product, such as specifications, customer reviews, etc. Allow users to compare different models easily.

5. Implement a Shopping Cart:

If you want to simulate a real shopping experience, consider adding a shopping cart functionality where users can add products before making a purchase.

6. Persistence:

Implement a way to persistently store information about available products, prices, and discounts. This could involve reading from and writing to files or using a simple database.

Conclusion

In conclusion, the Computer Shop System, driven by a Java program, provides a user-friendly text interface for exploring and selecting laptops and desktops with detailed configurations and pricing information. Its structure involves main menus, brand-specific options, and recursive navigation. The system incorporates exception handling and model feature displays, ensuring a robust user experience. For future development, considerations include user authentication, enhanced UI, graphics, expanded product information, shopping cart functionality, and persistence for a more comprehensive and personalized shopping experience. This project lays a solid foundation for further refinement and innovation in the realm of computer retail systems.

**THANK YOU FOR
YOUR PATIENCE**