# Coursework Report – 5COSC019C Object Oriented Programming

Student Name: Dilhara Manthilina

Student ID: 20221643

|  |  |  |
| --- | --- | --- |
| Have you submitted the video with the demonstration of your system? | Yes | No |

If the video has been submitted specify where:

Blackboard

On the cloud (file shared from Google drive, or OneDrive or DropBox, etc), or YouTube. **Copy here the link:** [**https://drive.google.com/drive/folders/1QToGOR9kIbPrN1w0NRqp6WvjsbUYcSqH?usp=drive\_link**](https://drive.google.com/drive/folders/1QToGOR9kIbPrN1w0NRqp6WvjsbUYcSqH?usp=drive_link)

**Phase 1 – Design and class implementation**

|  |  |  |
| --- | --- | --- |
| **Task** | **Did you attempt the task?** | **Student’s comments** (To which extent you implemented the task? Have you encountered any problems or issue?) |
| Design a UML Use Case Diagram of your system (submitted in a separate file). | Yes  No | A use case diagram has been made covering all key features of the application |
| Design a UML Class Diagram of your system (submitted in a separate file). | Yes  No | A class diagram has been made for CLI part including all the classes available and their attributes |
| Implementation Class Product | Yes  No | Done as per the instructions |
| Implementation Class Electronics | Yes  No | Done as per the instructions |
| Implementation Class Clothing | Yes  No | Done as per the instructions |
| Implementation Class User | Yes  No | Done as per the instructions to store user login data |
| Implementation Class Shopping Cart | Yes  No | Done as per the instructions |
| Implementation Interface WestminsterShoppingManager | Yes  No | Done as per the instructions to add products, delete products, view products and save or load product detail from a file |

**Phase 2 – Console menu implementation**

|  |  |  |
| --- | --- | --- |
| **Task** | **Did you attempt the task?** | **Student’s comments** (To which extent you implemented the task? Have you encountered any problems or issue?) |
| Add a product in the system with all the relative information | Yes  No | The product has been added to list without issues |
| Delete a product from the system by selecting the product ID. Display a message to confirm it has been removed and the total number of products in the system. | Yes  No | The product is deleted from the list without issues  And current total products left and deleted product details is shown |
| Print on the screen the list of the products in the system with all the relative information. The list should be ordered alphabetically. | Yes  No | Available products with their details is shown on the CLI |
| Save in a file entered by the user so far. The user should be able to load back the information running a new instance of the application. | Yes  No | Product data is saved and loaded from the file successfully |

**Phase 3 – GUI Implementation**

|  |  |  |
| --- | --- | --- |
| **Task** | **Did you attempt the task?** | **Student’s comments** (To which extent you implemented the task? Have you encountered any problems or issue?) |
| The user can select the category through the drop down menu | Yes  No | Implemented as per instruction with all and categories separately |
| The GUI is open and a list of products with the information as per specification has been displayed | Yes  No | Product details is shown without issues and can be sorted |
| Items with low availability are highlighted in red | Yes  No | Products with less than 3 items left are highlighted red |
| The user can select a product and all the details are displayed as per specification in the below panel | Yes  No | Done as per instructions with all details shown |
| The user can add products to the shopping cart and all the information are displayed in a separate frame | Yes  No | Done per instruction and a separate frame was used for the shopping cart |
| The final price is displayed correctly | Yes  No | Final price is correctly calculated with first purchase or 3 same product discounts |
| The discounts, if applicable, are displayed as per specification and the final price updated accordingly | Yes  No | The applicable discount are shown and the final price is updated correctly |

**Phase 4 – Testing and system validation**

|  |  |  |
| --- | --- | --- |
| **Task** | **Did you attempt the task?** | **Student’s comments** (To which extent you implemented the task? Have you encountered any problems or issue?) |
| Test plan. (Submitted in a separate file). | Yes  No | Tests were done to check add product, delete product, delete products with null id, delete non existing product, saving and loading product details to file and its content |
| Implementation of an automated unit test for each scenario in the console menu. | Yes  No | Done as per above |
| Error Handling across all the code, input validation and code quality. | Yes  No | Error handling was done across the code for exceptions |