Coursework Report – 5COSC019C Object Oriented Programming

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Have you submitted the <u>video with the demonstration</u> 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.
https://drive.google.com/file/d/17w-5mrfsASVi3_SnuWwWG-aIk341Ii0Y/view?usp=sharing
…….

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	Done
Design a UML Class Diagram of your system (submitted in a separate file).	☒ Yes ☐ No	Done
Implementation Class Product	☒ Yes ☐ No	Done
Implementation Class Electronics	☒ Yes ☐ No	Done
Implementation Class Clothing	☒ Yes ☐ No	Done
Implementation Class User	☒ Yes ☐ No	Done
Implementation Class Shopping Cart	☒ Yes ☐ No	Done
Implementation Interface WestminsterShoppingManager	☒ Yes ☐ No	Done

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 (max 50 Products)	☒ Yes ☐ No	Everything was implemented, and an error message is displayed on the console when more than 50 items are entered.
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	Everything was implemented, and upon deletion, a message displaying all information related to the deleted product, as well as the total number of products remaining in the system, was also displayed.
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	Everything was implemented, and the list was sorted based on the product ID.
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	Done

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	Everything was implemented as in the specification.
The GUI is open and a list of products with the information as per specification has been displayed	☒ Yes ☐ No	Everything was implemented as in the specification.
Items with low availability are highlighted in red	☒ Yes ☐ No	Everything was implemented as in the specification.
The user can select a product and all the details are displayed as per specification in the below panel	☒ Yes ☐ No	Everything was implemented as in the specification.

The user can add products to the shopping cart and all the information are displayed in a separate frame	☒ Yes ☐ No	Everything was implemented as in the specification.
The final price is displayed correctly	☒ Yes ☐ No	Everything was implemented as in the specification.
The discounts, if applicable, are displayed as per specification and the final price updated accordingly	☐ Yes ☒ No	A 20% categorical discount was correctly applied. Additionally, a 10% discount for one-time purchase also applied, but it was also applied when the same user shopped more than once.

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	Wrote a total of 49 test cases for both console and the GUI
Implementation of an automated unit test for each scenario in the console menu.	☒ Yes ☐ No	Implemented nine test case methods for main scenarios in the console menu.
Error Handling across all the code, input validation and code quality.	☒ Yes ☐ No	Done