

Coursework Report – 5COSC019C Object Oriented Programming

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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/file/d/1IJrdvBFfPiA1uPQFFrCufySprXYkcWWK/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).	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Use Case diagram is submitted in a separate File along with the project
Design a UML Class Diagram of your system (submitted in a separate file).	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Submitted in a separate file
Implementation Class Product	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Product class has completed with Inheritance and encapsulation. Contains 4 instance variables, 2 constructors (With 1 default constructor), 4 getter and setter methods.
Implementation Class Electronics	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Completed with Inheritance and encapsulation. Contains 2 instance variables, 2 constructors (With 1 default constructor), 2 getter and setter methods.
Implementation Class Clothing	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Completed with Inheritance and encapsulation. Contains 2 instance variables, 1 constructor, 2 getter and setter methods.
Implementation Class User	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Completed with Inheritance and encapsulation. Contains 2 instance variables, 1 constructor, 2 getter and setter methods each.

Implementation Class Shopping Cart	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Imported Array and Array list. Included instance variable to declare list of products. Contains methods to add, remove and calculate the final cost.
Implementation Interface WestminsterShoppingManager	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Full implementation of the interface has done. Considered the following, 1) The maximum number of products that the system can have 2) Adding products through their IDs and Product type. 3) Printing the products with relevant information 4) Deleting the products from the console with a confirmation message and the remaining items 5) Saving and loading methods has correctly implemented. 6) Menu is displayed

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 doctors)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	A product is added mainly with their IDs and with all the information, and a check about the max number of products has been done.
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.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	The information of the deleted product is displayed. Confirmation message is displayed. Remaining product count after deleting products is displayed.
Print on the screen the list of the products in the system with all the relative information. The list should be ordered alphabetically.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	List is printed with all the product information, in alphabetical order based on their IDs.
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.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	File is saved with all information. When the application is closed and started, the data are loaded back.

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?)
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The user can select the category through the drop down menu	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Dropdown menu contains all the 3 options (all, electronics, clothing. User can select one of the option and table is updated accordingly.
The GUI is open and a list of products with the information as per specification has been displayed	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	A GUI can be opened, the list of products is clearly displayed. The list is sorted alphabetically.
Items with low availability are highlighted in red	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
The user can select a product and all the details are displayed as per specification in the below panel	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	All the information of the product is displayed according to the row that has been selected.
The user can add products to the shopping cart and all the information are displayed in a separate frame	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	User can add more than 1 products to the cart and all the relevant information is displayed in another frame (Shopping cart)
The final price is displayed correctly	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	The first purchase is applied 10% discount. 3 purchases from the same category applied 20% discount.
The discounts, if applicable, are displayed as per specification and the final price updated accordingly	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	The first purchase is applied 10% discount. 3 purchases from the same category applied 20% discount.

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).	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Have done in another document and attached with Screenshots.
Implementation of an automated unit test for each scenario in the console menu.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Error Handling across all the code, input validation and code quality.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	All validations and errors are handled.

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