

Informatics Institute of Technology  
BEng (Hons) in Software Engineering

Object Oriented Programming

COSC019C

Coursework Report

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# 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.

[https://drive.google.com/drive/folders/1UBERXnkUZgqWuI4sJipdJW9KMYpMDogP?usp=drive\\_link](https://drive.google.com/drive/folders/1UBERXnkUZgqWuI4sJipdJW9KMYpMDogP?usp=drive_link)

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## 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 issues?)
Design a UML Use Case Diagram of your system (submitted in a separate file).	<input type="checkbox"/> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Completed with all possible scenarios implemented.
Design a UML Class Diagram of your system (submitted in a separate file).	<input type="checkbox"/> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Completed with all the classes and methods, attributes of the code.
Implementation Class Product	<input type="checkbox"/> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Fully completed.
Implementation Class Electronics	<input type="checkbox"/> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Fully completed.
Implementation Class Clothing	<input type="checkbox"/> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Fully completed.
Implementation Class User	<input type="checkbox"/> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Fully Completed.
Implementation Class Shopping Cart	<input type="checkbox"/> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Fully Completed.
Implementation Interface WestminsterShoppingManager	<input type="checkbox"/> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Fully Completed.

## **Phase 2 – Console menu implementation**

<b>Task</b>	<b>Did you attempt the task?</b>	<b>Student's comments</b> (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)	<input type="checkbox"/> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Fully Completed. The maximum number of products that can be added is restricted to 50.
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 type="checkbox"/> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Fully completed. Product deleted by ID with a confirmation message and updated product count.
Print on the screen the list of the products in the system with all the relative information. The list should be ordered alphabetically.	<input type="checkbox"/> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Fully completed. All products are displayed in alphabetical order, with all the required information.
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 type="checkbox"/> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Fully Completed. The system loads the file based on user input, returns the information and runs as a new instance.

## **Phase 3 – GUI Implementation**

<b>Task</b>	<b>Did you attempt the task?</b>	<b>Student's comments</b> (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.	<input type="checkbox"/> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Fully Completed. The drop-down menu is displayed.
The GUI is open, and a list of products with the information as per specification has been displayed.	<input type="checkbox"/> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Fully completed. All products added by the admin are displayed.
Items with low availability are highlighted in red.	<input type="checkbox"/> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Fully completed. Products less than 5 are marked in red.

The user can select a product and all the details are displayed as per specification in the below panel.	<input type="checkbox"/> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Fully completed. The user selection is displayed once added to the cart.
The user can add products to the shopping cart and all the information are displayed in a separate frame.	<input type="checkbox"/> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Fully completed. The shopping cart frame pops up, and displays total.
The final price is displayed correctly.	<input type="checkbox"/> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Fully completed. Total is displayed.
The discounts, if applicable, are displayed as per specification, and the final price is updated accordingly.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Partially completed.

#### **Phase 4 – Testing and system validation**

<b>Task</b>	<b>Did you attempt the task?</b>	<b>Student's comments</b> (To which extent you implemented the task? Have you encountered any problems or issue?)
Test plan. (Submitted in a separate file).	<input type="checkbox"/> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Uploaded in a separate file.
Implementation of an automated unit test for each scenario in the console menu.	<input type="checkbox"/> Yes <input type="checkbox"/> <input checked="" type="checkbox"/> No	Not completed.
Error Handling across all the code, input validation and code quality.	<input type="checkbox"/> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	All the errors prompted are handled entirely.