

# Coursework Report – 5COSC019C Object Oriented Programming

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Have you submitted the video with the demonstration of your system?

☒ Yes

☐ No

[https://drive.google.com/file/d/1zVIQfkhje4vmF7KmiVd9ihNCbAsxoMSs/view?usp=share\\_link](https://drive.google.com/file/d/1zVIQfkhje4vmF7KmiVd9ihNCbAsxoMSs/view?usp=share_link)

## Phase 1 – Design and classes 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	Fully completed
Design a UML Class Diagram of your system (submitted in a separate file).	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Fully completed
Implementation Class Person	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Fully completed. (Add encapsulation principle and hold information about the name, surname, date of birth and mobile number.)  (Add setters and getters to access those private variable)  (Made Person class as a Supper class of Doctor and patient sub classes)
Implementation Class Doctor	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Fully completed. (Made it as a Sub class of The Person superclass.)  (Use encapsulation to medical licence number and the specialisation and made those variables private)  (Add override methods from Parent class and Add setters and getters to access those private variables and add other important methods as well)
Implementation Class Patient	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Fully completed. (Made it as a Sub class of The Person superclass.)

		<p>(use encapsulation to patient id to make it private)</p> <p>(Add override methods from Parent class and Add setters and getters to access those private variables and add other important methods as well)</p>
Implementation Class Consultation	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<p>Fully completed.</p> <p>(This includes private variables such as Date Time, price and other Private variables and methods for GUI)</p> <p>(Add getters and setters and toString methods to access the data of instances of this class)</p>
Implementation Interface WestminsterSkinConsultationManager	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<p>Completed.</p> <p>Created a interface called SkinConsultation Manager and it is implemented by WestminsterSkinConsultationManager.</p> <p>SkinConsultation Manager holds main method.</p> <p>WestminsterSkinConsultationManager holds static ArrayofObjects and other Static Methods.</p>

## **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 doctor in the system with all the relative information (max 10 doctors)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<p>Fully completed.</p> <p>Create an Object array to store doctor information.</p> <pre>static Doctor[] doctorArray = new Doctor[10];</pre> <p>And add 10 to size of object array to limit maximum doctors to 10.</p> <p>Used a static integer variable "doctorArrayIndex" inside the Doctor class and increment it once you add a doctor by creating a instance of this class.</p>

Delete a doctor from the system selecting the medical licence number. Display a message to confirm he/she has been removed and the total number of doctors in the centres.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<p>Fully completed.</p> <p>User don't have to go back and and check the licence number it already shows available doctors.</p> <p>User can delete a doctor by selecting licence number</p> <p>After delete a doctor the console shows the specific doctor was deleted and user can see the no of doctors available in the centre.</p> <p>(No errors. When user is going delete a doctor the program actually deleting the doctor object by make it's reference 'null' this will occurs "NullPointerException" this also <b>handle</b> by adding a break point and <b>exception handlers</b>.)</p>
Print on the screen the list the doctors in the centre with all the relative information. The list should be ordered alphabetically.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<p>Successfully Printing/displaying the list of doctors alongside their other information by looping through the doctor object Array using toString method.</p> <p>Sorting is not working.it prints relevant to the Arrayindex order.</p>
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	<p>Saving all information that user entered so far to the text file using FileWriter.</p> <p>Program doesn't load back information when the program rerun</p>

### 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?)
Doctor list visualisation. Sorting alphabetically.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<p>Available doctors in centre ,that previously added using console can visualize by clicking view doctors button.</p> <p>Doctor information display on gui using JTextArea.</p> <p>Sorting is not working.it prints relevant to the Arrayindex order.</p>

		(I didn't use any designer tools to build GUI everything is hardcoded by me using IntelliJ IDEA)
The user can select a doctor and add a consultation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<p>There is a small TextArea to see available doctors.</p> <p>Using that user can book a consultation with that available doctors by clicking book consultation button.</p> <p>But user have to add the doctor's name by their own.</p>
In the consultation the user can add all the patient details.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<p>Fully completed.</p> <p>User can book a consultation by clicking "Book a Consultation" button. It shows several InputDialog boxes to add patient details using user inputs.</p> <p>At the end of booking user can add notes if he want.</p> <p>(user can see the updated booking information by clicking refresh button)</p>
The user can select the date/time of the consultation considering that a doctor cannot have more than one consultation at the time.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<p>User have to add date/time manually by looking at the booked consultations text area.</p> <p>User can avoid have more than one consultation at the same time by looking at the booked consultations area .</p> <p>There is no automatic booking options if the user entered the same date and time.</p>
The user can enter and save the cost for the consultation. (£25 per hour and only the first one £15).	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<p>Fully completed.</p> <p>when booking a consultation, User can enter the cost by selecting no of hours for the consultation. For the first consultation done by GUI costs 15euro for each hour</p> <p>From the second booking onwards costs 25euro for each hour</p>
The user can add some notes (text information or images). This information has been encrypted.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<p>Fully completed.</p> <p>User have a option to add their private folder that includes their photos, sensitive data, etc once the booking consultation is finished.</p>

		<p>After user add their private folder system automatically encrypt the data.</p> <p>The encryptor uses DES algorithm to encrypt the data.</p>
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#### **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"/> Yes <input checked="" type="checkbox"/> No	
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	Exception handlers added to the code to handle exceptions. Most common exceptions are "NullPointerException", "InputMismatchException".