

Informatics Institute of Technology
Department of Computing
Object Oriented Programming Test Plan

Module	: 5COSC019C Object Oriented Programming
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Application overview

This application mainly consists of two interfaces. One is a console menu implementation to use by the management of the consultation center with some of the operations a manager should be able to perform in the system and other one is a GUI implementation to use by a common user. Also every time the application is executed it will be loading saved data from bin files (doctors.bin, consultations.bin, patients.bin) back into the system automatically while saving process of the data happened when user exit the application by clicking on quite button. Each time the above two operations are executed message will be displayed to user on the console menu informing either it succeeded on loading or saving data or not.

Application encrypts the text entered into notes by the user. Then again when user view this text they will be decrypted and displayed to the user. For this process application follows a Symmetric key encryption. Key is stored inside the data folder in a file named keystore. This file will be automatically created if it does not exist inside the data folder at the time application executed and if it does exist system reads the key inside the file and use it for encryption and decryption.

Every one of the user inputs are validated in this application. Also, exception handling has been done throughout the application to ensure every possible error is handled.

Some of the implemented input validations include

1. Validation for doctor name and surname (if it contains numeric values entered name will be rejected).
2. Validation for doctor's mobile number (if it contains more than 10 numbers or any characters, Symbols it will be rejected).
3. Date of Birth is validated (if it does not follow the given format of date/month/year it will be rejected).
4. User inputs for patient details such as name, mobile number, Date of birth are also well validated before inserted into the system. The same kind of validation is implemented into the inputs related to consultations to ensure that consultation date, time are valid, and user select a valid doctor in the system.

Below shows the test cases for each part of the coursework.

- Test Case 1 – Console menu implementations
- Test Case 2 – GUI implementations

Application is designed to hold only 10 doctors if the user tries to enter more than that error message will be displayed.

Unit testing is done using Junit 4 and implemented in a different class inside Test folder.

Test Cases 1

Details regarding each of the doctors will be added to the system.

Doctor 1:	
Name	Kumara
Surname	De Silva
DOB	03/12/1995
Tel	0710682333
Medical License number	ML001
Specialization	Cosmetic dermatology
Doctor 2:	
Name	Amila
Surname	Gunawardana
DOB	02/02/1994
Tel	0770689999
Medical License number	ML002
Specialization	Cosmetic dermatology
Doctor 3:	
Name	Savinda
Surname	Fernando
DOB	12/12/1997
Tel	0762555963
Medical License number	ML003
Specialization	Paediatric dermatology
Doctor 4:	
Name	Lakaml
Surname	Sampath
DOB	12/06/1992
Tel	0762369871
Medical License number	ML004
Specialization	Medical dermatology
Doctor 5:	
Name	Nayana
Surname	Alwis
DOB	26/01/1992
Tel	0778969756
Medical License number	ML005
Specialization	Paediatric dermatology

	Test Case	Expected Result	Actual Result	Pass/Fail
1	All doctors are added to the System successfully Press: 1	Display “Doctor entered to the system successfully” for each doctor.	Display “Doctor entered to the system successfully” for each doctor.	Pass
2	Check the maximum number of doctors can be in the System. For this we will be changing the value to 5 only for testing purposes to see if we try to add 6 th doctor what will be the result of the application.	Display ‘Sorry maximum number of doctors are allocated’	Display ‘Sorry maximum number of doctors are allocated’	Pass
3	Delete a doctor from the system doctor ML001 Press: 2	Display all the details of the doctor and “Doctor is removed !!!” and “Remaining doctors in the system 4”	Display all the details of the doctor and “Doctor is removed !!!” and “Remaining doctors in the system 4”	Pass
4	Show a list of doctors sorted according to their surnames Press: 3	Display a list of details about each doctor and it’s sorted according to the doctors last names.	Display a list of details about each doctor and it’s sorted according to the doctors last names.	Pass
5	Save details Press: 4	Display “Successfully write to the file 1, Successfully write to the file 2, Successfully write to the file 3”	Display “Successfully write to the file 1, Successfully write to the file 2, Successfully write to the file 3”	Pass
6	Open the GUI Press: 9	GUI will be open (one window)	GUI will be open (one window)	Pass

7	To exit the manager interface Press: 0	Application exists	Application exists	Pass
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Test Case 2

Details regarding each of the patients will be added to the system.

Patients 1:	
Name	Sasiru
Surname	Perera
DOB	19/12/2001
Tel	0753540054
Patent id	P001
Cost	1h
notes	Rash on skin
Patient 2:	
Name	Janaka
Surname	Fernando
DOB	04/04/1994
Tel	0775689369
Patent id	P002
Cost	1h
notes	Acne
Patient 3:	
Name	Namalika
Surname	Fernando
DOB	01/06/1963
Tel	0774596315
Patent id	P003
Cost	2h
notes	Pemphigus
Patient 4:	
Name	Shamelee
Surname	Silva
DOB	05/02/1955
Tel	0714569870
Patent id	P004
Cost	1h
notes	Pemphigus
Patient 5:	
Name	Namal
Surname	Fernando
DOB	20/10/1970
Tel	0772365894
Patent id	P005
Cost	2h
notes	folliculitis

	Test Case	Expected Result	Actual Result	Pass/Fail
1	Doctors are listed with relative information.	Doctors with all the information about them are shown in a table in the main window.	Doctors with all the information about them are shown in a table in the main window.	Pass
2	Users need to be able to sort the doctors table when he/she clicks on the Sort button.	Table will be sorted according to the doctor's surname (A-Z).	Table will be sorted according to the doctor's surname (A-Z).	Pass
3	<i>User can select a doctor and add a consultation with the doctor if he/she available at that time and date</i>			
3.1	User can click on add consultations button to open another window	different window will open with all related user inputs needed to add a consultation	different window will open with all related user inputs needed to add a consultation	Pass
3.2	User can enter the medical number of the needed doctor and a time and date for consultation and then click the check availability button to see if the doctor is available or not	Popup message will display informing about doctors' availability to user	Popup message will display informing about doctors' availability to user	Pass
3.3	User can add other patient details and click on add consultation button	Popup message will display saying consultation been added with selected doctor	Popup message will display saying consultation been added with selected doctor	Pass
3.4	If user keep the unavailable doctor as selected doctor system should assign a random doctor for the consultation	Random doctor will be assigned and inform user about it by popup message	Random doctor will be assigned and inform user about it by popup message	Pass
3.5	If it's an existing patient only patient id number need to be entered other patient details will be auto filled.	Successfully auto filled	Successfully auto filled	Pass

	Example: add another consultation for P001			
4	<i>Once the consultation is saved user can select it and visualize the information</i>			
4.1	User can click on view consultations button to open another window	Different window will be open with a search box, search button and another textbox to cancel consultation	Different window will be open with a search box, search button and another textbox to cancel consultation	Pass
4.2	User can enter the patient id number and click on search button Example: P001	All consultations booked by P001 will be displayed	All consultations booked by P001 will be displayed	Pass
4.3	Two consultations for same time from same patient should have different cost Example: P001 (1 Con – 1* £ 15 = £ 15, 2 Con – 1* £ 25 = £ 25)	Related information with relevant correct cost values displayed	Related information with relevant correct cost values displayed	Pass
4.4	User can select a consultation from the search result and click on cancel button to cancel it Example: Cancel second consultation of P001	Popup message will display informing user that the consultation has been cancelled	Popup message will display informing user that the consultation has been cancelled	Pass
5	<i>Additional button is added as View all patients to show all the patients entered to the system</i>			
5.1	User can click on view all patients button to open another window	All the patient details will be shown in a table in another window	All the patient details will be shown in a table in another window	Pass

<< **End** >>