



# UNIVERSITY OF COLOMBO SCHOOL OF COMPUTING

## Take Home Assignment -2017

### SCS 2104- Programming III

#### Getting a good grade:

All questions require you to write an object-oriented program, making full use of classes, objects and all their associated features. Marking will take into account the quality of the program you write. In particular pay attention to the following:

- Proper declaration and use of classes.
- Proper use of objects
- The layout and presentation of the program code
- Appropriate selection of variables and method names
- Exception Handling
- Good use of comments to make sure that your code is properly documented

A clean straightforward working program, making good use of classes and objects, is considered better than a larger and more complex but less well-organized program.

\*\*\*\*\***IMPORTANT**\*\*\*\*\*

All work must be your own. All forms of plagiarism and cheating (for example downloading programs/content directly from the Internet or copying from another student) are regarded seriously and could result in **heavy penalties including failure in the assignment.**

## Assignment

### Scenario:

A Hospital consists of a number of specialized wards (such as Maternity, Pediatrics, Oncology, Gynecologist etc.). Each ward has a number of patients, who are admitted on the recommendation of external physicians (may be their family doctors) and confirmed by a consultant employed by the Hospital. On admission, the personal details of every patient are recorded. A separate register is to be held to store information of tests undertaken and results of a prescribed treatment. A number of tests may be conducted for each patient. Each patient is assigned to one leading consultant, but may be examined by another doctor, if required. Doctors are specialists in some branch of medicine and may be leading consultants for a number of patients, not necessarily from the same ward.

Payment details of each patient needs to be recorded separately. The hospital management requires to maintain the details of the employees of the hospital (Doctors, Nurses, Maintenance staff etc.) The attendance of the employees needs to be recorded in order to process their salaries.

### Task 1:

Implement a stand-alone application for the above scenario

The system must be implemented based on the object orientation concepts and database connectivity in Java. You may design user interfaces according to your solution.

### Task 2:

Prepare a System Requirements Specification document for you solution. The document must contain the following:

- ER Diagram of the application
- Mapped tables for the ER diagram
- Class diagram
- Screen shots of the user interfaces

### Task 3:

You will be having a 10 minute viva (You need to have the hard copy of the SRS document during the viva session)

## **Assignment Marking Criteria**

### **Implementation of the application and Viva (80)**

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|--|----|
| ➤ Proper usage of object orientation concepts and exception handling | 20 |
| ➤ Creativity of the solution   | 10 |
| ➤ Quality of the overall system                                      | 10 |
| ➤ Database Connectivity  | 20 |
| ➤ User Interfaces  | 20 |

### **SRS Document (20)**

**Assignment Deadline 07<sup>th</sup> May 2017**