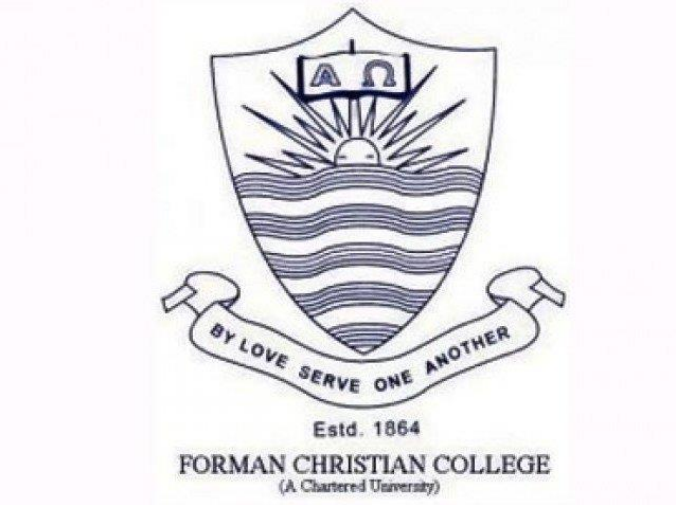
Programming II

Comp 111

Fall 2021



Department of Computer Science

Forman Christian College University

Lab 10
UML Diagrams

Question #	Total Marks
Question 1	5
Question 2	5
Question 3	5

Lab Problem

Draw UML Diagrams of all the following questions.

Question 1:
Implement a class ***Patient*** having ***PatientID,PatientName, PatientDisease and Treatment***. It should also have a method ***Chart()*** that prints the demographics of the patient. Implement another class Doctor, which will have ***DoctorName*** and ***DoctorID*** as its attributes and a method ***treat()*** that suggests the type of the***Treatment*** to the ***Patient***.

Hint: Workflow will be ….Create patient but without any value in treatment. Then create doctor.
After that call doctor treatment function and pass the patient object to set the treatment variable.

Question 2:
A class called `bird` contains three instance variables: `name` (`String`), color (`String`), and `gender` (`char` of either `'m'` or `'f'`). There should be getter and setter function for all instance variables. Function *Display* should print all the information of bird.
A class called `cage` is designed to hold different birds. Cage is not complete without the birds in it so it contains three instance variables: `cage_no` (`integer`), `size` (integer), list_of_Birds (objects of the class `birds`). There should be methods `addbird()`, deletebird`()` and DisplaycageData(). Write a test driver to test all the methods in the class `Cage`.

Question 3:

A student class has two attributes Id and name. A course class has a name and has students enrolled (List of students). You should be able to add/drop a student to/from the course.

You can use a class to model the courses, as shown in Figure

The name of the course.
An array to store the students for the course.
The number of students (default: 0).
Creates a course with the specified name.
Returns the course name.
Adds a new student to the course.
Drops a student from the course.
Returns the students for the course.
Returns the number of students for the course.