**COMSATS** **University Islamabad, Lahore Campus**

**Department of Computer Science**



**Project II – Semester Fall 2020**

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| Course Title: | Object Oriented Programming-Lab | | | | Course Code: | | CSC241 | Credit Hours: | | 4(3,1) |
| Course Instructor/s: | Ms. Muntaha Iqbal | | | | Program Name: | | BCE | | | |
| Semester: | 3rd | Batch: | FA19-BCE | Section: | A | | Date: | | 01-12-2020 | |
|  |  | | | | **Maximum Marks:** | | | | **30** | |
| Student’s Name: | **Hassaan Saleem** | | | | Reg. No. | FA19-BCE-024 | | | | |
| **Important Instructions:**   * Student is himself/herself responsible for successful submission of the project on CU-Online. * Your submission must include the following in a single pdf file.   1. Code of all classes  2. Snapshot of the output of submitted code.   * Don’t waste your time in implementing irrelevant things, which are not asked. * Copied project will get zero credit. * Deadline: December 05, 2020 at 4:45pm | | | | | | | | | | |

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| --- | --- | --- | --- |
| Question # | 1 | 2 | Total |
| Obtained Marks |  |  |  |
| Total Marks | 15 | 15 | 30 |

**CL04, CLO5 -> PLO05, PLO10 -> (A3, P2, p3) Follow the instructions given below and write down the code of given problem.**

**Task 1:** Create a class Student with id, name, gender and CGPA. Here gender is enumeration named Gender with two values Male and Female. In student class, all attributes are private and exposed via getters and setters. Create another class Department with three attributes departmentID, departmentName, and ArrayList f Student. In department class, all attributes are privates and exposed via getter and setters. Both classes have a fully parameterized constructor.

**Task 2:** In test class, create two arrays of departments to save data of each department. For each department ask user to input number of students and then values for each attribute of Student. Once you are done with user input, print data of all students department Wise.

Answer is given in the external Project name file.