** COMSATS University Islamabad, Lahore Campus**

***Lab 11***

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| Course Title: | Object Oriented Software Engineering | | | | Course Code: | CSC 304 | Credit Hours: | | 3(2,1) |
| Course Instructor IndhsdjsIInstructorInstructor/s: | Yella Mehroze | | | | Theory/Lab Name: | Lab | | | |
| Semester: | 4th | Batch: | Fa19-BSE | Section: | A , B | Semester | | Spring 2021 | |

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Section - B

**Outline**

**Learning Outcomes**

* **Learning reusability via client server framework**
* **Learning basics of client server architecture**
* **Understanding how client server framework works**
* **Identification of scenarios in which client server approach is preferable**
* **Identification of scenarios in which writing a single program (for every possible computation) is beneficial**
* **Designing a server for different applications**

**[Write your solutions in this document]**

# **Task 1**

For each of the following systems, discuss under what circumstances it would be worth making it into a client–server system, as opposed to just creating a single program that does everything. In the case of a client–server system, indicate what work could be done by the server, and what by the client. In answering this question, make your best judgment, using whatever knowledge you already have about software applications.

1. A word processor.

**A single program**.

1. A system for doctors to look up patient records when visiting a patient.

**Client-Server system**

**All the patient information will store on the database server and we can get it whenever need arises.**

c) A home alarm system that monitors various sensors such as motion detectors, smoke detectors and window-opening sensors.

**Client-Server System**

**The sensors act as a client and the server responds by pulling an alarm.**

# **Task 2**

If you were designing a server for the following classes of applications, list the kinds of main activities that you might expect the server to do:

1. A server for an airline reservation system.

* It should load available flight data.
* It should add, update and delete client data.
* It should have login portal.
* It should disconnect after 10 minutes of inactivity.

1. A server that contains the master list of toll-free telephone numbers that different telephone companies will need to access.

* It should provide the data of toll-free numbers.
* It should keep customer details.
* It should add, update or delete client information.
* It should connect a client call

1. A server that forms the center of a building alarm system; clients are individual controllers for devices around the building.

* It should work 24/7.
* It should send notification to devices.
* It should be protected.
* It should be encrypted.

***For any queries***

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