Faculty of Computing and Information Technology (PUFCIT)
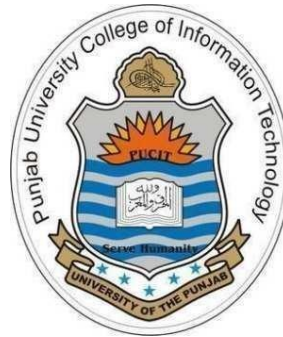
Database Systems Lab 09

BS-SE Morning Fall-20 (New Campus)   **Date: 17-12-2021**

Instructions:

- **You're NOT allowed to consult your classmates during lab work. Of course, it won't go in your benefit.**
- **First read the statement carefully before solving it as half of the solution lies in question statement.**
- **In case of any ambiguity, benefit will be given to the students.**
- **Lab has total 2 questions. Each Question carries equal marks.**
- **Use https://app.diagrams.net/ for making ERDs and EERDs**
- **No grades will be awarded to the one who cheats and same for the one who helps in cheating**

Q1: Develop an ER model for the following situation, A laboratory has several chemists who work on one or more projects. Chemists also may use certain kinds of equipment on each project. Attributes of CHEMIST include Employee ID (identifier), Name, and Phone No. Attributes of PROJECT include Project ID (identifier) and Start Date. Attributes of EQUIPMENT include Serial No and Cost. The organization wishes to record Assign Date—that is, the date when a given equipment item was assigned to a particular chemist working on a specified project. A chemist must be assigned to at least one project and one equipment item. A given equipment item need not be assigned, and a given project need not be assigned either a chemist or an equipment item.

Q2: Develop an EER model for the following situation, A person may be employed by one or more organizations, and each organization may be the employer of one or more persons. An organization can be an internal organizational unit or an external organization. For persons and organizations, we want to know their ID, name, address, and phone number. For persons, we want to know their birth date, and for organizations, we want to know their budget number. For each employment, we want to know the employment date, termination date, and bonus. Employment of a person by an organization may result in the person holding many positions over time. For each position, we want to know its title, and each time someone holds that position, we need to know the start date and termination date and salary. An organization is responsible for each position. It is possible for a person to be employed by one organization and hold a position for which another organization is responsible.

Best of Luck 😉

Instructor: Teacher Assistant:

FARHAN AHMAD CH.   **Junaid Alam BCSF19A545**