Course: COSC457.101 – Database Management Systems

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Room: YR- 304

Quiz #1

Date: March 5, 2020

Student Name:

**Question 1 (***40 points***)**

Please draw an ERD from following description:

Draw an ERD for a small private airport database that is used to keep track of airplanes, their owners, airport employees, and pilots.

From the requirements for this database, the following information was collected: Each airplane has a registration number, is of a particular plane type, and is stored in a particular hangar. Each plane\_type has a model number, a capacity, and a weight.

Each hangar has a number, a capacity, and a location. The database also keeps track of the owners of each plane and the employees who have maintained the plane.

Each relationship instance in owns relates an airplane to an owner and includes the purchase date. Each relationship instance in maintain relates to an employee to a service record service.

Each plane undergoes service many times; hence, it is related to a number of service records. A service record includes as attributes the date of maintenance Date, the number of hours spent on the work, and the type of work done.

The airplane registration number is used to identify a service record.

Each pilot has specific attributes license number and restrictions; each employee has specific attributes salary and shift. All person entities in the database have data kept on their social security number, name, address, and telephone number. For corporation entities, the data kept includes name, address, and telephone number.

The database also keeps track of the types of planes each pilot is authorized to fly and the types of planes each employee can do maintenance work on

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**Question 2 (***40 points***)**

Write appropriate SQL DDL statements for declaring the LIBRARY relational database

schema of Figure 4.6. Specify the keys and referential triggered actions.

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