Relational Database Design

1. What is the key principle of the data-structured centered design paradigm?
2. Describe the key functions of a data base management system.
3. What is a relational data base management system?
4. What is SQL?
5. Explain what elements the designer identifies in an Entity Relationship Diagram (ERD).
6. Explain what each element of a Class Diagram corresponds to in a relational data-structured centered design.

1. Structure the system around the database so the data can be easily accessed. Designs around HOW data is accessed.
2. Defines the structures of the database, along with the fields, tables and relationships. It allows for data manipulation like inserting deleting, and updating. Data Storage and retrieval to manage how the data is stored and accessed. Data security which controls access through authentication. Data integrity which ensures validation. Lastly, Data backup and recovery which provides systems for restoring and backing up data.
3. Organizes data into tables with rows and columns using SQL. Establishes relations between tables. and connects data between tables.
4. SQL is a query language that is used widely commercially. Uses commands to define the structure and manipulate the data received
5. .
    1. Entities: Each block of data tables
    2. Attributes: The details that describe an entity. Fields of each table
    3. Relationships: Attributes that link one entity to another.

6. Classes → Entities(Tables) Attributes → Datatypes(Attributes) Methods → Stored procedures → Relationships(Association, composition etc.) → Relationships