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**Subject: Database Systems**

**Q: Answer the following Short Question in maximum 2 to 3 lines.**

**Q1)**

**Ans)** The candidate key is ID and the cell phone attribute because its unique we cannot add more data to it.

**Q2)**

**Ans) Data Redundancy:**

Data redundancy is the repetition or superfluity of data. This data repetition may occur either if a field is repeated in two or more tables or if the field is repeated within the table.

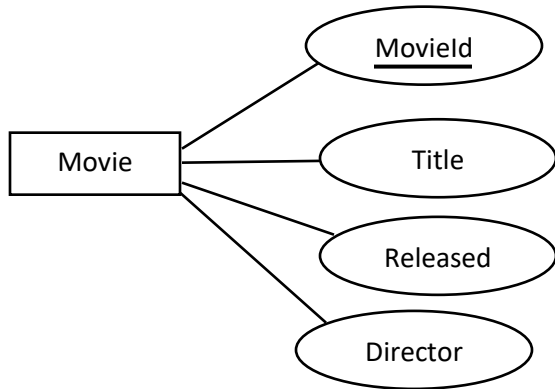
**Data Integrity:**

The term data integrity refers to the accuracy and consistency of data. When creating databases, attention needs to be given to data integrity and how to maintain it. Maintaining data integrity means making sure the data remains intact and unchanged throughout its entire life cycle.

**Q3)**

**Ans) Composite Attributes:** Attribute Divided into sub parts. E.g. Name (First name, Middle Name, last name)

**Multivalued Attributes:** Attribute having more than one values. E.g. Phone Number



So, Movie is multivalued composite attribute

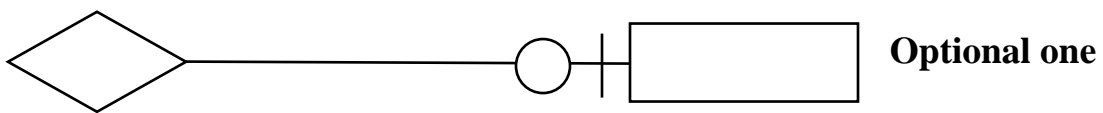
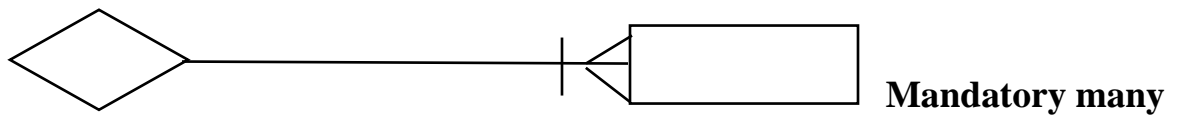
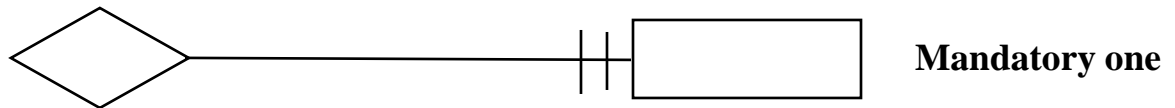
**Q4)**

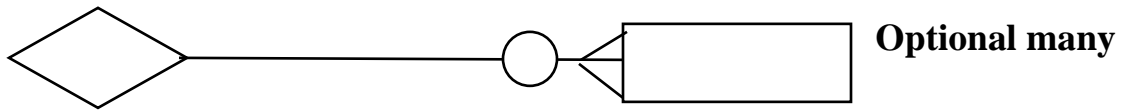
**Ans) Reduced maintenance:**

- By re-factoring the database properly without downtime.
- By logging all the error messages effectively.
- By not exposing the database tables to the users.
- By avoiding deadlock avoidance in the database.

**Q5)**

**Ans)**



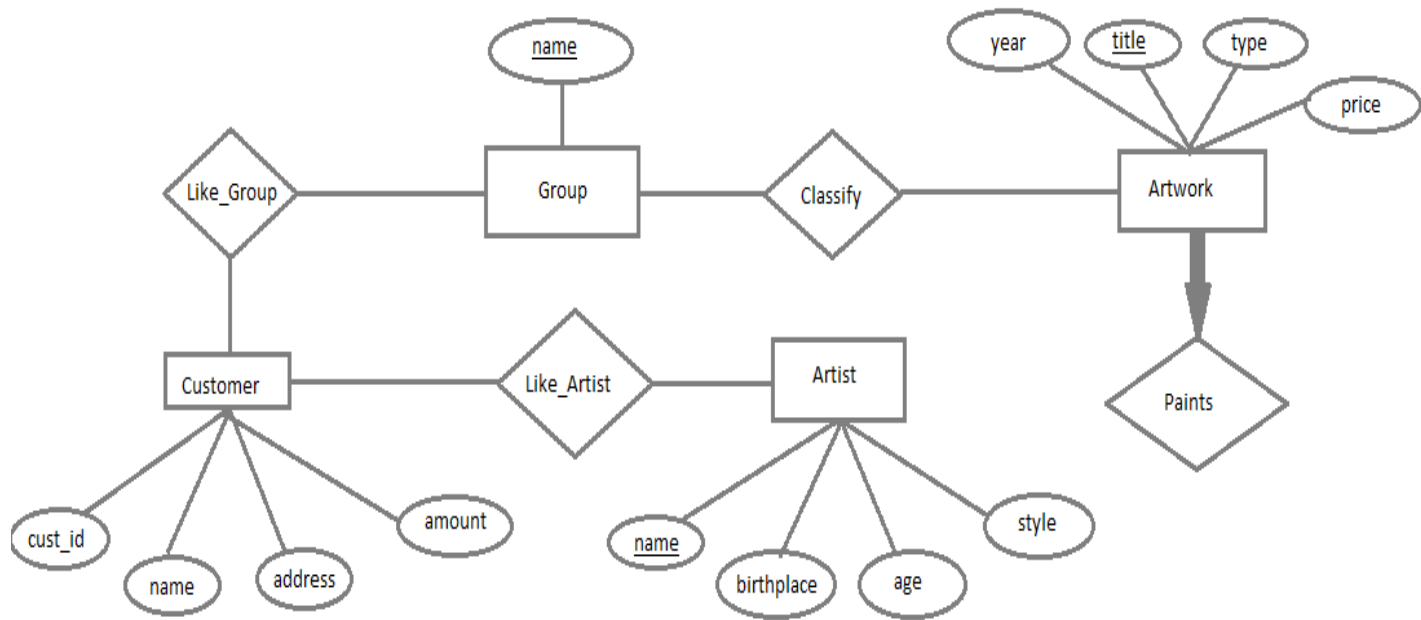


**Q6)**

**Ans)** The explicit need of backup in database approach is because for a centralized shared database to be accurate and available all times, comprehensive procedure is required to be developed and used for providing backup copies of data and for restoring a database when damage occurs.

**Q2) ER Diagram:**

**Ans)**



A relational schema corresponding to the above ER diagram is given below.

artist (a name:string(10), birthplace:string(22), age:int, style:string)

artwork (title:string(10), year:int(10), type:string(10), price:real(50), a name:string(10)

customer (cust id:string(10), c name:string(25), address:string(100), amount:real(10)

a group ( g name:string)(10)

classify (title:string(50), g name:string(10)

like group (cust id:string(10), g name:string(10)

like artist (cust id:string(10), a name:string(10)

**Q3)**

**Ans)**

