Page

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3IT A2

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DBMS Assignment-1 (2003031082033)

* Ans the MCQ Quiz.

1. A) Entity
2. A) Record
3. b) Program
4. c) Both of them
5. c) foreign key
6. c) candidate
7. c) Update s set city = kenpur where SNO = S1
8. A) Oval ; an oval with an underlined attribute.
9) B) composition attribute.
10) D) None of the mentioned.

* Fill in the blanks

1) constraints
2) tuple
3) Relations
4) Relational integrity
5) Mapping cardinality

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6) Database
7) Data isolation
8) Data
9) Metadata
10) Physical data independence.

* Ans the Que.

Q-1 Define E-R Data modal.

→ It is based on the view of real world entities and relationships among them.

While expressing real-world scenario into the database model, the ER model creates entity set, relationship sets, general attributes and constraints.

- ER modal mainly focuses on Entities and their attributes and Relationships among entities.

- It uses various types of symbols to represent object of database.

Q-2 Define, Primary key.

Sol: It is a specific choice of a minimal set of attributes that uniquely a tuple in a relation.

Q-3 →

Q-4 →

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Q.3 Define weak Entity set.
→ An Entity set that does not have a primary key is known as weak Entity set, this entity is known as Identifying Entity.

Q.4 What is generalization?
→ Generalization is a process of creating group from several entities. It determines the common features of multiple entities to create a new entity.
It is like union two or more lower level entity sets to create higher entity set.

Q.5 What is constraints?
→ Constraints are the rules enforced on the data columns of a table. These are used to limit the type of data that can go into a table. Constraints are normally divided in two types: a) Disjoint Constraints
b) Participation Constraints

Q.6 What is mapping cardinality?
Sol^n It defines numbers of times an entity of another entity set participate in a relationship set.

Q.7 What is data abstraction?

Sol^n Database system are made up of complex data structures. To ease the user interaction with database. The developers hide internal irrelevant details from users. This process of hiding irrelevant details from uses is called data abstraction.

Q.8 Define Naive Users (End Users)

→ Unsophisticated users who have zero knowledge of data base system. End user interacts to database sophisticated software or tools.

Q.9 Define SQL

→ SQL stands for structured Query language.
SQL lets you access and manipulate databases.

Q.10 What is information?

→ When data is processed organized, structured or presented in a given context so to make it useful, it is called information.

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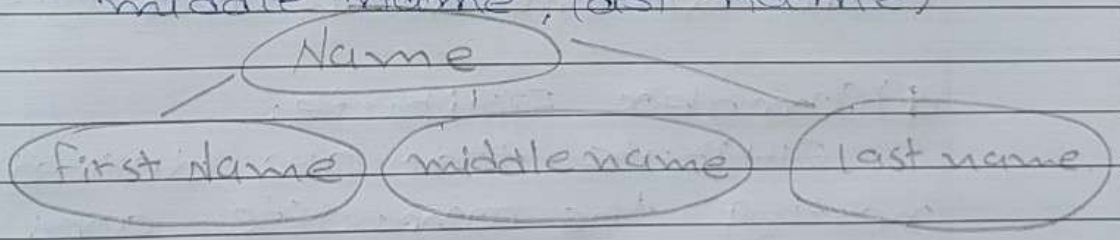
Long Questions:

Q-1 Explain different types of attribut
→ a) Simple Attribute and composite Attribute.

⇒ Simple Attribute:
It cannot be divided further in more subparts.
It is like ~~undivided~~ undivided atomic value.
Example: year, Emno, CPI

⇒ Composite Attribute:
It can be divided further in more subparts.
It is an attributes composed of many other attributes.
Example: Name (first name, middle name, last name)



b) Single valued and multi-valued attributes.

⇒ Single - valued Attribute:
As name suggests it has single value only Comample: Emno, Birthdate.

⇒ Multi valued Attribute:
It has multiple/more than one values.
Example: phone no [Person may have multiple phone numbers.

c) Stored attribute and Derived attributes:
→ Stored attribute:
In this attribute value needs to be stored / defined manually.

Example: Birthdate, Height

⇒ Derived Attribute:
Derived attribute value can be calculated or derived from other attributes.
Example: Age (can be derived from current date and birth date)

d) Complex Attribute:
Attribute that are derived by nesting the composite and multivalued attributes are called complex Attributes.

Address - phone (phone), address (H.no, city, state))
Complex Attribute — MV Attribute — Composite Attribute

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E) Key attribute:

Attribute which uniquely identifies each entity in the entity set is called key attribute.

For example, Roll no will be unique for each student.
It is denoted by an oval with underlying lines.
Example - Rollno

F) Descriptive attributes:
If any relationship has a attribute like entity then it is known as descriptive attributes.

Q.2 Explain Extended E-R features:
→ Generalization:
It determines the common features of multiple entities to create a new entity.
It is a process of creating group from several entities.
It follows a bottom-up approach.

Specialization:
It divides entity to make multiple that inherits some features of spliting entity.

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It is a process of creating subgroups within entities.
It follows a top-down approach.

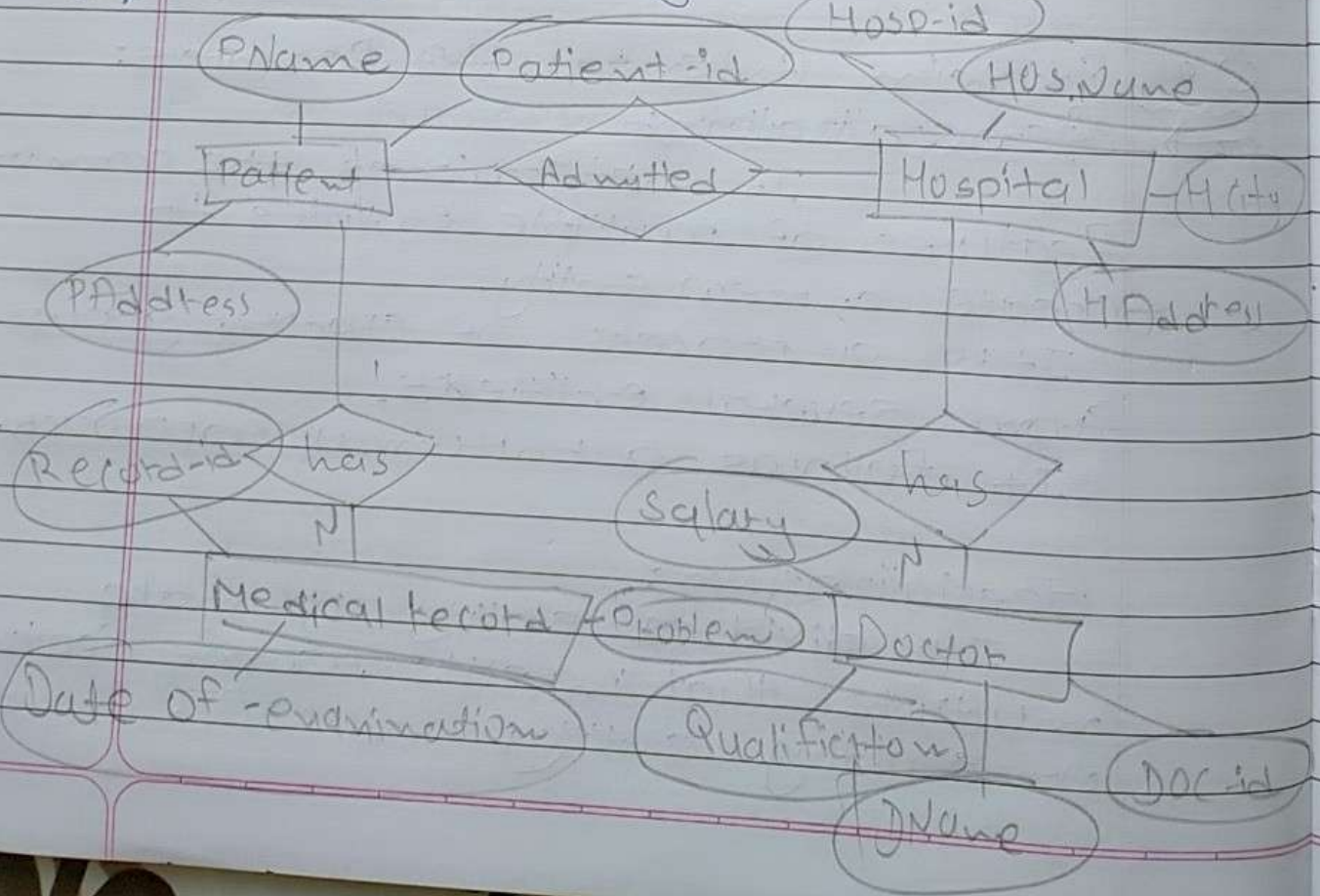
Q-4 →

Aggregation:

Aggregation is kind of abstraction which treats relationships as entities.
It is process of creating single entity by combining components and relationships between two entity of ER model.

Q-3 Explain E-R diagram of Hospital management system.

→



Q-5 →

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Q.4 Explain advantages of DBMS over file management system.

→ a) Data Redundancy and inconsistency.

b) Data sharing:

File system does not allow sharing of data or sharing is too complex.

Where in DBMS, data can be shared easily due to centralized system.

c) Data inconsistency

Data redundancy leads to data inconsistency, lets take the same.

d) Data Integrity:

There may be cases when some constraints need to be applied on the data before inserting it is database.

- The file system close not provide any procedure to check these constraints automatically

Q.5 explain the Role of DBA.

→ Schema definition:

- DBA defines the logic

Se schema of the database.
- Storage structure and access method definition.
DBA decides how the data is to be represented in the database how to access it.
- Defining security and integrity constraints. DBA decides on various security and integrity constraints.
- Assisting application programmer DBA provides assistance to application programmers to develop application programs.
- Monitoring performance:
DBA that better performance is maintained by making a change in the physical or logical schema it required.
- Backup and recovers.