What do you understand by attributes and domain ?Explain various types of attributes used in conceptual data model.

Attributes:

1. Definition: Attributes are properties used to represent entities. In a data model, entities are like the nouns, and attributes are like the adjectives describing those nouns.
2. Values: All attributes have values. For example, a student entity may have attributes like name, class, and age, each with specific values.
3. Domain: There is a domain or range of values that can be assigned to attributes. This sets constraints on what kind of values an attribute can have. For instance, a student's name must be alphabetic, and age cannot be negative.

Domain:

1. Definition: A domain is an attribute constraint that determines the type of data values allowed for that attribute. It defines the acceptable range or set of values for an attribute.
2. Size: Attribute domains can vary in size, meaning they can be broad or narrow depending on the requirements.

Types of Attributes in a Conceptual Data Model:

1. Simple Attribute:
    - Description: Atomic values that cannot be further divided.
    - Example: Student's phone number with 10 digits.
2. Composite Attribute:
    - Description: Made up of more than one simple attribute.
    - Example: Student's complete name composed of first_name and last_name.
3. Derived Attribute:

- Description: Values are not physically stored but derived from other attributes.
- Example: Calculating average_salary in a department based on individual salaries.

4. Single-Value Attribute:
    - Description: Contains a single value.
    - Example: Social Security Number for an individual.
5. Multi-Value Attribute:
    - Description: Can contain more than one value.
    - Example: A person can have multiple phone numbers or email addresses.

Related posts:

1. What is database management system (DBMS) ? What are the tasks performed by users in DBMS ?
2. What are the advantages and disadvantages of DBMS ?
3. What do you understand by database users ? Describe the different types of database users.
4. Who are data administrators ? What are the functions of database administrator ?OR Discuss the role of database adinistrator.
5. What is data abstraction ? Explain different levels ofabstraction.
6. Explain the differences between physical level,conceptual level and view level of data abstraction.
7. Explain the difference between database management system (DBMS) and file system.
8. Discuss the architecture of DBMS. What are the types of DBMS architecture ?
9. What are data models ? Briefly explain different types of data models.
10. Describe data schema and instances.
11. Describe data independence with its types

12. Describe the classification of database language. Which type of language is SQL ?
13. Explain DBMS interfaces. What are the various DBMS interfaces ?
14. What is ER model ? What are the elements of ER model ? What are the notations of ER diagram ?
15. Construct an ER diagram for University system.
16. Construct an ER diagram for the registrar’s office
17. Explain the primary key, super key, foreign key and candidate key with example. OR Define key. Explain various types of keys.
18. What do you mean by a key to the relation ? Explain the differences between super key, candidate key and primary key.
19. Explain generalization, specialization and aggregation. OR Compare generalization, specialization and aggregation with suitable examples.
20. What is Unified Modeling Language ? Explain different types of UML.
21. What is relational model ? Explain with example.
22. Explain constraints and its types.
23. Consider the following relations:
24. What are the additional operations in relational algebra ?
25. Explain integrity constraints.
26. Explain the following constraints : i. Entity integrity constraint. ii. Referential integrity constraint. iii. Domain constraint.
27. Describe mapping constraints with its types.
28. Explain how a database is modified in SQL. OR Explain database modification.
29. Discuss join and types with suitable example. Define join. Explain different types of join.
30. Describe the SQL set operations