In the context of a Database Management System (DBMS), a "key" refers to a field or combination of fields that is used to uniquely identify a record in a database table. Keys play a crucial role in organizing and managing data within a database. There are different types of keys in a DBMS, and each serves a specific purpose:

Primary Key:

- Definition: Uniquely identifies each record in a table.
- Example (Employee Table): Choose either Employee ID or SSN as a primary key.
- Note: Must be unique and cannot be null.

Super Key:

- Definition: A set of one or more attributes whose combined value uniquely identifies an entity.
- Example (Employee Table): (Employee ID, Full Name) or (Employee ID, Full Name, Dept ID) can be a super key.

Candidate Key:

- Definition: A column or set of columns that can uniquely identify any record in a table.
- Example (Employee Table): Employee ID and SSN are candidate keys.
- Note: Minimal super keys are called candidate keys.

Composite Key:

- Definition: A combination of two or more columns used to uniquely identify each row.
- Example (Employee Table): A primary key made by the combination of more than one attribute.

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Alternate Key:

- Definition: Candidate keys not chosen as the primary key.
- Example (Employee Table): If Employee ID is the primary key, then SSN could be the alternate key.

Foreign Key:

- Definition: Represents a relationship between tables, ensuring referential integrity.
- Example (Employee and Project Tables):
 - Employee ID in the Project table points to the Employee ID in Employee table.
 - Employee ID in Project is a foreign key.
 - Employee ID in Employee is the primary key.

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 of abstraction.
- 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.

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- 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. What do you understand by attributes and domain ?Explain various types of attributes used in conceptual data model.
- 16. Construct an ER diagram for University system.
- 17. Construct an ER diagram for the registrar's office
- 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

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