What do you mean by a key to the relation ? Explain the differences between super key, candidate key and primary key.

The context of databases and relational database management systems (RDBMS), a “key” in a relation refers to a set of one or more attributes (columns) that can uniquely identify a tuple (row) in that relation. Keys play a crucial role in maintaining the integrity and structure of a relational database.

Difference between Super key, Candidate key and Primary key:

Feature	Super Key	Candidate Key	Primary Key
Definition	An attribute or set of attributes that uniquely identifies all attributes in a relation.	A minimal set of super key.	A minimal set of attributes that uniquely identifies rows in a relation.
All are Super Keys	Yes	Yes	No
Null Values	Can be null	Can be null	Cannot be null
Number of Keys	Any number of super keys can exist.	Number of candidate keys is less than super keys.	Number of primary keys is less than candidate keys.
Example (from Fig. 1.23.1)	(Registration), (Vehicle_id), (Registration, Vehicle_id), (Registration, Vehicle_id, Make), etc.	(Registration, Vehicle_id)	(Registration)

Diagram:

Related posts:

1. What is database management system (DBMS) ? What are the tasks performed by users in DBMS ?

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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. 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. Explain the primary key, super key, foreign key and candidate key with example. OR Define key. Explain various types of keys.
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.

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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