

What are the additional operations in relational algebra ?

Set Intersection Operation ($\cap$):

- This operation returns a relation with tuples that exist in both input relations.
- Written as $r \cap s = r - (r - s)$, where $-$ represents set difference.
- In simpler terms, it gives you common elements between two sets.

Natural Join Operation ($\bowtie$):

- Combines two relations based on matching attributes.
- Forms a cartesian product, applies a selection on common attributes, and removes duplicates.
- Denoted by the join symbol $\bowtie$.
- In simpler terms, it's like combining two sets where certain attributes are equal.

Division Operation ($\div$):

- Denoted by the symbol $\div$.
- Given two relations, $r \div s$ produces a relation on the schema $R - S$.
- A tuple is in the result if it satisfies specific conditions related to projection and matching attributes.
- Essentially, it represents a kind of filtering or extracting operation based on certain conditions.

Assignment Operation ($\leftarrow$):

- Denoted by the symbol $\leftarrow$.
- Similar to assignment in programming languages, it allows you to store the result of a relational algebra expression into a variable.

What are the additional operations in relational algebra ?

- Useful for simplifying complex expressions and improving readability.

These operations provide a way to manipulate and combine relations in a relational database, helping to express more complex queries and operations.

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 administrator.
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.
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.

What are the additional operations in relational algebra ?

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. What do you mean by a key to the relation ? Explain the differences between super key, candidate key and primary key.
20. Explain generalization, specialization and aggregation. OR Compare generalization, specialization and aggregation with suitable examples.
21. What is Unified Modeling Language ? Explain different types of UML.
22. What is relational model ? Explain with example.
23. Explain constraints and its types.
24. Consider the following relations:
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