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## SQL IMP Questions

① Diff B/w DBMS & RDBMS

### DBMS

- ① It is a Software which is used to maintain & manage the database.
- ② DBMS Provides 2 main features Security & Authorization
- ③ we use Query language
- ④ DBMS Stores Data in file format

### RDBMS

- ① RDBMS is a Type of DBMS Software which is used to maintain & manage the database.
- ② RDBMS Provides 2 main features Security & Authorization
- ③ we use Structured Query language
- ④ RDBMS Stores Data in Table format

② Diff B/w PRIMARY Key & FOREIGN Key

### PRIMARY Key

- ① It will not accept Repeated Values
- ② It will not accept null
- ③ It is a Combination of unique & Not Null
- ④ We can have only One Primary Key in a table

### FOREIGN Key

- ① It will accept Repeated Values.
- ② It will accept null.
- ③ It is not a Combination of unique & Not Null
- ④ we can have more than one foreign Key in a table

### 3. Joins & Types of Joins.

2

⇒ Join :- It is used to Retrieve the data from multiple tables simultaneously.

#### ① Types of Joins

1. CARTESIAN JOIN / CROSS JOIN :- A Record from Table one will be mixed with All the Records of table 2.

2. INNER JOIN :- It is used to obtain only Matching Records.

3. OUTER JOIN :- It is used to obtain unmatched Records.

(i) Left outer Join :- ~~A Record from table 1 will~~  
It is used to obtain unmatched Record from left table along with matching Records.

(ii) Right Outer Join :-  
It is used to obtain unmatched Record from Right ~~outer~~ table along with matching Records.

(iii) Full Outer Join :-  
It is used to obtain unmatched Records from Both Tables along with matching Records.

(iv) NATURAL JOIN :- It is a Combination of Inner Join & Cartesian Join.

(v) SELF JOIN :- It is used to Join the table by itself.



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# STATEMENTS

## ① DATA DEFINITION LANGUAGE (DDL) :-

⇒ It is used to create a table or Modify or Delete the table from the database.

We have 5 Statements

- ① **CREATE** :- Used to create the table in database.
- ② **RENAME** :- Used to change the tablename
- ③ **ALTER** :- used to Modify the table.
- ④ **TRUNCATE** :- It is used to Remove all Records from table.
- ⑤ **DROP** :- Used to Delete the table from database.

## ② DATA MANIPULATION LANGUAGE

⇒ It is used to manipulate the table such as insertion, updation, or deleting the table.

We have 3 Statements

- ① **INSERT** :- used to Insert the Record in table.
- ② **UPDATE** :- Used to modify the Records in table
- ③ **DELETE** :- Used to Delete the Records from the table.

(4)

~~TRANSACTION~~

## (3) TRANSACTION CONTROL LANGUAGE (TCL):-

⇒ It is used to Perform Some Action on DML operations.

We have 3 Statements

1. COMMIT: Used to Save the transaction into the database.

2. Rollback: used to get back to the latest saved location.

3. SavePoint: Used to mark the positions for Records or Checkpoints.

## (4) DATA CONTROL LANGUAGE (DCL):-

⇒ It is used to Control the flow of data between the users.

We have 2 Statements.

① GRANT: Used to Give Permission to users.

② Revoke: Used to take back the Permission from the users.



5

## ⑤ NORMALIZATION:

It is used to Reduce the larger table into several smaller table in order to Remove the Redundancy & Anomalies to identify their functional Dependencies.

### Levels of Normalization

#### 1. FIRST NORMAL FORM (1NF):

- ① Table should not have Duplicated Values.
- ② In a Table, Cell should not contain multivalued data.

#### 2. SECOND NORMAL FORM (2NF):

- ① Table should be in 1<sup>st</sup> NF.
- ② Table should not have Partial functional dependency.

#### 3. THIRD NORMAL FORM (3NF):

- ① Table should be in 2NF.
- ② Table should not have Transitive functional dependency.

#### 4. BOYCE CODD NORMAL FORM (BCNF) (or) (3.5NF):

- ① It is a updated version of 3<sup>rd</sup> Normal form.

6

④ Subquery: A query written inside another query, such that outer query is dependent on inner query.

⑤ Nested Subquery: A subquery written inside another subquery is known as nested subquery.

⑥ Co-Related Subquery: A query written inside another query, such that inner query & outer query both are dependent on each other.

⑦ DATABASE: It is a place or medium which is used to store the data in systematic & organized manner.

⇒ The basic operation we perform on database that is 'CRUD' operation.

C → CREATE / INSERT

R → READ / RETRIEVE

U → UPDATE / MODIFY

D → DELETE / DROP