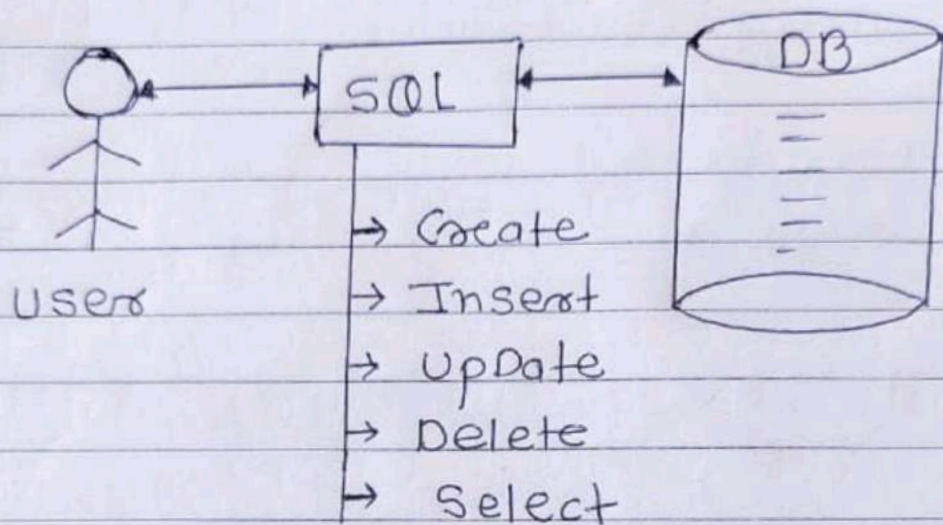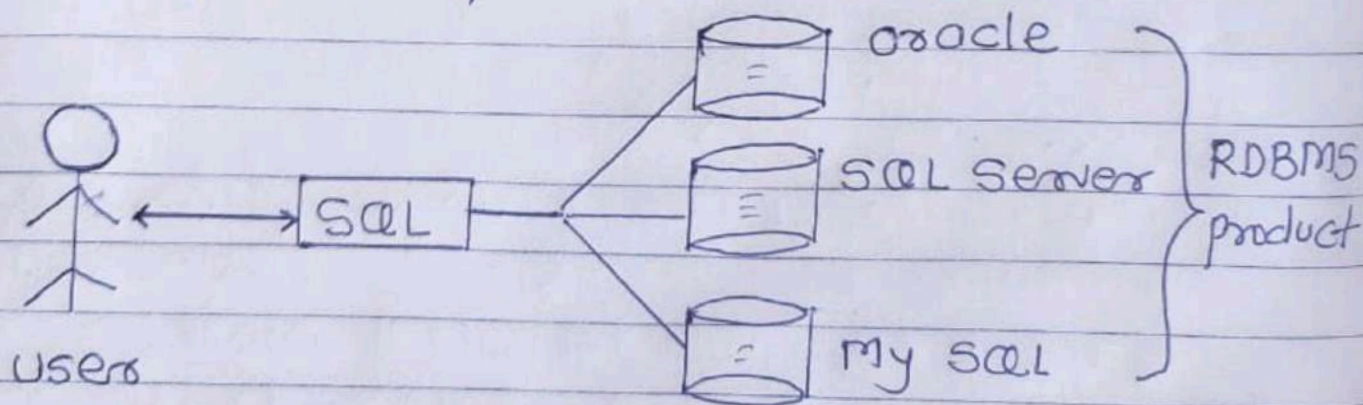# Courseova

SQL

HANDWRITTEN NOTES

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SQL (Structured Query Language)

SQL :- SQL is a non procedural language. which was introduced by the IBM in 1970's. Which is used to communicate with database

User → SQL

→ Create
→ Insert
→ Update
→ Delete
→ Select

DB

- SQL is also Called as sequeal of CLI language (Common Language Interface). This is only the language which Can use to Communicate with any RDBMS product.

User → SQL

oracle

SQL Server

my SQL

RDBMS product

SQL is not Case Sensitive language that we Can write SQL predefined queries or syntaxe's in any Case charracter's. (either upper or lower)

- Every SQL statement should ends with a semicolon but it is optional in SQL server.

Sublanguages of SQL

① Data Defination Language (DDL)
- Create
- Alter
- Sp_Rename
- Truncate
- Drop

② Data Manupulation Language (DML)
- Insert
- Update
- Delete

③ Data Query Language (DQL)
- Select

④ Transaction Control Language (TCL)
- Commit
- RollBack
- Savepoint

⑤ Data Control Language (DCL)
- Grant
- Revoke

① DDL (Data Defination Language)

This language Commands are using to define, modify & Drop an object of database from SQL server.

① Create :- Creating a new database or new table in SQL Server

Step 1 :- Create a new database in SQL server

Syntax :- Create database < DB NAME >;

Ex :- Create database MYDB;

Step 2 :- Select The required database from SQL server.

Syntax :- USE < DB Name >;

Ex :- USE MYDB;

Step 3 :- Create new table in database

syntax :- Create table < Table Name >
(< Column Name 1 > < DT > [size], < Column Name 2 >
< DT > [size] ----); -- 1000 Columns

Ex :- Create Table Student (sid Int,
Sname char (10), Sfee Decimal (6, 2),
AGE Tinyint);

Step 4 :- To view the Structure of table

Syntax :- SP_HELP < Table Name >;

Ex :- SP_HELP Student;

Sp-HELP is predefined stoared prosdu procedure.

② ALTER :- To change or modify the structure of a table or a database.
by using the Alter command we can perform a following four operations on existing table.
- To perform these operations we required subcommands of alter.

    i> Alter - Alter Column
    ii> Alter - Add
    iii> Sp - Rename
    iv> ALTER - Droop

i) Alter - Alter Column :- To change datatype & also size of the datatype of a perticular column.
Syntax :-
Alter table <TN> Alter Column < Column Name>
<NewDT> [New Size];

Ex :- Alter table Student Alter Column SName
    Varchar (50);

ii> Alter - Add :- Adding o new column to add existing table.
Syntax :- Alter table <TN> ADD <New Column Name> <DT> [Size];
Ex :- Alter Table Student ADD SAddress
    Varchar (30)

iii) Sp-Rename :- To change a Column name or a table name in database.

A) Syntax to change a Column Name in table :

Sp- Rename < Table Name >.<OLD Column Name>, '<New Column Name>' ;

Ex :- Sp-Rename 'student.5Name', 'Student Names' ;

B) Syntax to change a table name in database

Sp-Rename '<old table Name>', '< New table Name>' ;

Ex :- Sp-Rename 'student', 'Studentdetails'

OR

Sp-Rename 'studentdetails', 'student'

iv) ALTER -Drop :- Droping a Column from the table

Syntax :- Alter table < Table Name > Drop Column < Column Name > ;

Ex :- Alter table Student Drop Column AGE

③ Truncate :- Deleting rows from the table, but not structure of the table. by using truncate command we can not delete a specific row from the table because it dosen't support 'where' clause condition.

Syntax :- Truncate table < Table Name >;
Ex :- Truncate table Student

④ Drop :- Dropping a table from a database permanently
Syntax :- Drop table < Table Name >;
Ex :- Drop table student;

② DML :- (Data Manupulation Language)
This Language commands are used to change of manipulate data in database table
1) Insert :- Inserting a new row into a table. There are two methods to insert row's into a table
    i) Implicit Method :- Inserting all value's for all column's into a table (without left any column)
Syntax :- Insert [into] < Table Name > Values
(value 1, value 2, value 3 - - - -);

Ex:- Create table student (STID int, SName varchar (40), sfee decimal (6, 2), Age tinyint)

Ex:-

Insert into student values (101, 'SAI', 2500, 21)

OR

Insert student values (102, 'JAMES', 4500, 23)

ii) Explicit method :- Inserting values for required columns only (with left any column in the table)

Syntax :-

Insert [INTO] <TableName> (Required Column Names) values (103 'ALLEN')

How to Insert Multiple rows into a table

Syntax for implicit :-

Insert [INTO] <TableName> Values (ROW1 values), (ROW2 values) ... - ?

Ex:-

Insert into student values (104, 'Scott', 1800, 22), (105, 'Ward', 1000, 25)

Syntax for Explicit :-

Insert [INTO] <TableName> (Required Column Names) Values ((ROW1 values), (ROW2 values),

Ex:- Insert Student (STID) values (106), (107)
(108)

② update :- updating all rows data in a
table at a time or a specific row data
in a table by using 'Where' Condition.
Syntax :-
Update < Table Name > SET < Column Name 1>
= <value 1>, < Column Name 2> = <value 2>
---. [Where Condition];

Ex:- Write a query to update employee job as
HR, Salary as 14,000 @ who's employee
Number is 7788
update emp set Job = 'HR', Salary = 14000
where EmpNo = 7788

Ex:- Write a query to update all employee
Commition as 500
update Emp set COMM = 500

③ Delete :- Deleting all rows from the
table ot a time or a specific row from
the table by using where clause Condition
Syntax :-
Delete from < Table Name> [Where <Condition>];