Experiment no.: - 04

➢ CREATE TABLE USING DDL (DATA DEFINITION LANGUAGE) COMMANDS

```
mysql> SELECT * FROM School;
+--------------+-----------------+---------+-------+--------+
| Student_Name | Student_Roll_No | Subject | Marks | Result |
+--------------+-----------------+---------+-------+--------+
| Omkar        |              63 | DBMS    |    12 | Fail   |
| Vishal       |              60 | SEPM    |    10 | Fail   |
| Gautam       |              52 | WD      |    15 | Pass   |
| Gunjan       |              20 | EEIM    |    13 | Pass   |
| Kunal        |              62 | IA      |    15 | Pass   |
+--------------+-----------------+---------+-------+--------+
5 rows in set (0.00 sec)

mysql> SELECT Student_Name FROM School ORDERBY DESC;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'D
ESC' at line 1
mysql> DELETE FROM School WHERE Student_Roll-No = 63;
ERROR 1054 (42S22): Unknown column 'Student_Roll' in 'where clause'
mysql> DELETE FROM School WHERE Student_Roll_No = 63;
Query OK, 1 row affected (0.01 sec)

mysql> SELECT * FROM School;
+--------------+-----------------+---------+-------+--------+
| Student_Name | Student_Roll_No | Subject | Marks | Result |
+--------------+-----------------+---------+-------+--------+
| Vishal       |              60 | SEPM    |    10 | Fail   |
| Gautam       |              52 | WD      |    15 | Pass   |
| Gunjan       |              20 | EEIM    |    13 | Pass   |
| Kunal        |              62 | IA      |    15 | Pass   |
+--------------+-----------------+---------+-------+--------+
4 rows in set (0.00 sec)

mysql> SELECT * FROM School ORDER BY Student_Roll_No DESC;
+--------------+-----------------+---------+-------+--------+
| Student_Name | Student_Roll_No | Subject | Marks | Result |
+--------------+-----------------+---------+-------+--------+
| Kunal        |              62 | IA      |    15 | Pass   |
| Vishal       |              60 | SEPM    |    10 | Fail   |
| Gautam       |              52 | WD      |    15 | Pass   |
| Gunjan       |              20 | EEIM    |    13 | Pass   |
+--------------+-----------------+---------+-------+--------+
```

```
mysql> SELECT * FROM School;
+--------------+-----------------+---------+-------+--------+
| Student_Name | Student_Roll_No | Subject | Marks | Result |
+--------------+-----------------+---------+-------+--------+
| Vishal       |              60 | SEPM    |    10 | Fail   |
| Gautam       |              52 | WD      |    15 | Pass   |
| Gunjan       |              20 | EEIM    |    13 | Pass   |
| Kunal        |              62 | IA      |    15 | Pass   |
+--------------+-----------------+---------+-------+--------+
4 rows in set (0.00 sec)

mysql> SELECT * FROM School ORDER BY Student_Roll_No DESC;
+--------------+-----------------+---------+-------+--------+
| Student_Name | Student_Roll_No | Subject | Marks | Result |
+--------------+-----------------+---------+-------+--------+
| Kunal        |              62 | IA      |    15 | Pass   |
| Vishal       |              60 | SEPM    |    10 | Fail   |
| Gautam       |              52 | WD      |    15 | Pass   |
| Gunjan       |              20 | EEIM    |    13 | Pass   |
+--------------+-----------------+---------+-------+--------+
4 rows in set (0.01 sec)

mysql> SELECT * FROM School ORDER BY Student_Roll_No ASC;
+--------------+-----------------+---------+-------+--------+
| Student_Name | Student_Roll_No | Subject | Marks | Result |
+--------------+-----------------+---------+-------+--------+
| Gunjan       |              20 | EEIM    |    13 | Pass   |
| Gautam       |              52 | WD      |    15 | Pass   |
| Vishal       |              60 | SEPM    |    10 | Fail   |
| Kunal        |              62 | IA      |    15 | Pass   |
+--------------+-----------------+---------+-------+--------+
4 rows in set (0.00 sec)

mysql> DROP TABLE School;
Query OK, 0 rows affected (0.03 sec)

mysql> SELECT * FROM School;
ERROR 1146 (42S02): Table 'studdb.school' doesn't exist
mysql>
```

➢ CREATE VIEW


```
Windows PowerShell
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PS C:\Users\sapka> mysql -u root -p
Enter password: ************
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 30
Server version: 8.0.33 MySQL Community Server - GPL

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> USE stud2db;
Database changed
mysql> CREATE TABLE Student10(Name char(50), Roll_No int, Subject char(50), Marks float, Result char(50));
Query OK, 0 rows affected (0.05 sec)

mysql> INSERT INTO Student10 VALUES('Omkar',63,'DBMS',12,'Fail');
Query OK, 1 row affected (0.02 sec)

mysql> INSERT INTO Student10 VALUES('Vishal',60,'SEPM',10,'Fail');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO Student10 VALUES('Gautam',52,'WD',15,'Pass');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO Student10 VALUES('Gunjan',20,'EEIM',13,'Pass');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO Student10 VALUES('Kunal',62,'IA',15,'Pass');
Query OK, 1 row affected (0.01 sec)

mysql> SELECT * FROM Student10;
```



```
mysql> SELECT * FROM Student10;
+--------+---------+---------+-------+--------+
| Name   | Roll_No | Subject | Marks | Result |
+--------+---------+---------+-------+--------+
| Omkar  |      63 | DBMS    |    12 | Fail   |
| Vishal |      60 | SEPM    |    10 | Fail   |
| Gautam |      52 | WD      |    15 | Pass   |
| Gunjan |      20 | EEIM    |    13 | Pass   |
| Kunal  |      62 | IA      |    15 | Pass   |
+--------+---------+---------+-------+--------+
5 rows in set (0.00 sec)

mysql> CREATE VIEW Student_Info AS SELECT Name, Roll_No FROM Student10;
Query OK, 0 rows affected (0.03 sec)

mysql> SELECT * FROM Student-Info;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near '-
Info' at line 1
mysql> SELECT * FROM Student_Info;
+--------+---------+
| Name   | Roll_No |
+--------+---------+
| Omkar  |      63 |
| Vishal |      60 |
| Gautam |      52 |
| Gunjan |      20 |
| Kunal  |      62 |
+--------+---------+
5 rows in set (0.01 sec)

mysql> ALTER VIEW Student_Info AS
    -> SELECT Name, Roll_No, Result FROM Student10;
Query OK, 0 rows affected (0.02 sec)

mysql> SELECT * FROM Student_Info;
+--------+---------+--------+
| Name   | Roll_No | Result |
+--------+---------+--------+
| Omkar  |      63 | Fail   |
```

```
mysql> SELECT * FROM Student-Info;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near '-
Info' at line 1
mysql> SELECT * FROM Student_Info;
+--------+---------+
| Name   | Roll_No |
+--------+---------+
| Omkar  |      63 |
| Vishal |      60 |
| Gautam |      52 |
| Gunjan |      20 |
| Kunal  |      62 |
+--------+---------+
5 rows in set (0.01 sec)

mysql> ALTER VIEW Student_Info AS
    -> SELECT Name, Roll_No, Result FROM Student10;
Query OK, 0 rows affected (0.02 sec)

mysql> SELECT * FROM Student_Info;
+--------+---------+--------+
| Name   | Roll_No | Result |
+--------+---------+--------+
| Omkar  |      63 | Fail   |
| Vishal |      60 | Fail   |
| Gautam |      52 | Pass   |
| Gunjan |      20 | Pass   |
| Kunal  |      62 | Pass   |
+--------+---------+--------+
5 rows in set (0.00 sec)

mysql> DROP VIEW Student_Info;
Query OK, 0 rows affected (0.01 sec)

mysql> SELECT * FROM Student_Info;
ERROR 1146 (42S02): Table 'stud2db.student_info' doesn't exist
mysql>
```

➢ CREATE INDEX

```
Windows PowerShell
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PS C:\Users\sapka> mysql -u root -p
Enter password: *************
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 31
Server version: 8.0.33 MySQL Community Server - GPL

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owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql> USE stud2db;
Database changed
mysql> CREATE TABLE Student10(Name char(50), Roll_No int, Subject char(50), Marks float, Result char(50));
ERROR 1050 (42S01): Table 'student10' already exists
mysql> CREATE TABLE Student9(Name char(50), Roll_No int, Subject char(50), Marks float, Result char(50));
Query OK, 0 rows affected (0.04 sec)

mysql> INSERT INTO Student9 VALUES('Omkar',63,'DBMS',12,'Fail');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO Student9 VALUES('Vishal',60,'SEPM',10,'Fail');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO Student9 VALUES('Gautam',52,'WD',15,'Pass');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO Student9 VALUES('Gunjan',20,'EEIM',13,'Pass');
Query OK, 1 row affected (0.01 sec)

mysql> INSERT INTO Student9 VALUES('Kunal',62,'IA',15,'Pass');
Query OK, 1 row affected (0.01 sec)
```

```
mysql> SELECT * FROM Student9;
+--------+---------+---------+-------+--------+
| Name   | Roll_No | Subject | Marks | Result |
+--------+---------+---------+-------+--------+
| Omkar  |      63 | DBMS    |    12 | Fail   |
| Vishal |      60 | SEPM    |    10 | Fail   |
| Gautam |      52 | WD      |    15 | Pass   |
| Gunjan |      20 | EEIM    |    13 | Pass   |
| Kunal  |      62 | IA      |    15 | Pass   |
+--------+---------+---------+-------+--------+
5 rows in set (0.04 sec)

mysql> SELECT Name, Roll_No FROM Student9 WHERE Result = 'Pass';
+--------+---------+
| Name   | Roll_No |
+--------+---------+
| Gautam |      52 |
| Gunjan |      20 |
| Kunal  |      62 |
+--------+---------+
3 rows in set (0.01 sec)

mysql> EXPLAIN SELECT Name, Roll_No FROM Student9 WHERE Result = 'Pass';
+----+-------------+----------+------------+------+---------------+------+---------+------+------+----------+-------------+
| id | select_type | table    | partitions | type | possible_keys | key  | key_len | ref  | rows | filtered | Extra       |
+----+-------------+----------+------------+------+---------------+------+---------+------+------+----------+-------------+
|  1 | SIMPLE      | Student9 | NULL       | ALL  | NULL          | NULL | NULL    | NULL |    5 |    20.00 | Using where |
+----+-------------+----------+------------+------+---------------+------+---------+------+------+----------+-------------+
1 row in set, 1 warning (0.01 sec)

mysql> CREATE INDEX Result ON Student9(Result);
Query OK, 0 rows affected (0.11 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> EXPLAIN SELECT Name, Roll_No FROM Student9 WHERE Result = 'Pass';
+----+-------------+----------+------------+------+---------------+--------+---------+-------+------+----------+----------------------+
| id | select_type | table    | partitions | type | possible_keys | key    | key_len | ref   | rows | filtered | Extra                |
+----+-------------+----------+------------+------+---------------+--------+---------+-------+------+----------+----------------------+
|  1 | SIMPLE      | Student9 | NULL       | ref  | Result        | Result | 201     | const |    3 |   100.00 | Using index condition |
+----+-------------+----------+------------+------+---------------+--------+---------+-------+------+----------+----------------------+
```

```
1 row in set, 1 warning (0.01 sec)

mysql> CREATE INDEX Result ON Student9(Result);
Query OK, 0 rows affected (0.11 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> EXPLAIN SELECT Name, Roll_No FROM Student9 WHERE Result = 'Pass';
+----+-------------+----------+------------+------+---------------+--------+---------+-------+------+----------+----------------------+
| id | select_type | table    | partitions | type | possible_keys | key    | key_len | ref   | rows | filtered | Extra                |
+----+-------------+----------+------------+------+---------------+--------+---------+-------+------+----------+----------------------+
|  1 | SIMPLE      | Student9 | NULL       | ref  | Result        | Result | 201     | const |    3 |   100.00 | Using index condition |
+----+-------------+----------+------------+------+---------------+--------+---------+-------+------+----------+----------------------+
1 row in set, 1 warning (0.01 sec)

mysql> SHOW INDEXES FROM Student9;
+----------+------------+----------+--------------+-------------+-----------+-------------+----------+--------+------+------------+---------+---------------+---------+------------+
| Table    | Non_unique | Key_name | Seq_in_index | Column_name | Collation | Cardinality | Sub_part | Packed | Null | Index_type | Comment | Index_comment | Visible | Expression |
+----------+------------+----------+--------------+-------------+-----------+-------------+----------+--------+------+------------+---------+---------------+---------+------------+
| student9 |          1 | Result   |            1 | Result      | A         |           2 |     NULL |   NULL | YES  | BTREE      |         |               | YES     | NULL       |
+----------+------------+----------+--------------+-------------+-----------+-------------+----------+--------+------+------------+---------+---------------+---------+------------+
1 row in set (0.05 sec)

mysql>
```