

Assignment No. 05

Aim: Execute DDL statements which demonstrate the use of views and Indexing. Try to update the base table using its corresponding view. Also consider restrictions on updatable views and perform view creation from multiple tables.

Objective:

- To study and implement views and Indexing in DDL.

Theory :

In MySQL, View is a virtual table created by a query by joining one or more tables.

MySQL Create VIEW

A VIEW is created by SELECT statements. SELECT statements are used to take data from the source table to make a VIEW.

Syntax:

```
CREATE [OR REPLACE] VIEW view_name AS
SELECT columns
FROM tables
[WHERE conditions];
```

Parameters:

OR REPLACE: It is optional. It is used when a VIEW already exist. If you do not specify this clause and the VIEW already exists, the CREATE VIEW statement will return an error.

view_name: It specifies the name of the VIEW that you want to create in MySQL.

WHERE conditions: It is also optional. It specifies the conditions that must be met for the records to be included in the VIEW.

The following example will create a VIEW name "trainer". This is a virtual table made by taking data from the table "courses".

```
CREATE VIEW trainer AS
SELECT course_name, course_trainer
FROM courses;
```

To see the created VIEW:

Syntax:

```
SELECT * FROM view_name;
```

Let's see how it looks the created VIEW:

```
SELECT * FROM trainer;
```

MySQL Update VIEW

In MYSQL, the ALTER VIEW statement is used to modify or update the already created VIEW without dropping it.

Syntax:

```
ALTER VIEW view_name AS  
SELECT columns  
  
FROM table  
WHERE conditions;
```

Example: The following example will alter the already created VIEW name "trainer" by adding a new column.

```
ALTER VIEW trainer AS  
  
SELECT course_name, course_trainer, course_id  
FROM courses;
```

To see the altered VIEW:

```
SELECT*FROM trainer;
```

MySQL Drop VIEW

You can drop the VIEW by using the DROP VIEW statement.

Syntax:

```
DROP VIEW [IF EXISTS] view_name;
```

Parameters:

view_name: It specifies the name of the VIEW that you want to drop.

IF EXISTS: It is optional. If you do not specify this clause and the VIEW doesn't exist, the DROP VIEW statement will return an error.

Example:

```
DROP VIEW trainer;
```

Index

Indexes are used to retrieve data from the database more quickly than otherwise. The users cannot see the indexes, they are just used to speed up searches/queries

CREATE INDEX Syntax

CREATE INDEX index_name ON table_name (column1, column2, ...);

Example:

CREATE INDEX idx_lastname ON Persons (LastName);[Simple Indexing]

CREATE INDEX idx_pname ON Persons (LastName, FirstName);[Composite Indexing]

DROP INDEX Statement

ALTER TABLE *table_name* DROP INDEX *index_name*;

Conclusion:-