WEEK 2

VIEWS AND INDEXES

```
mysql> CREATE DATABASE index_view_db;
Query OK, 1 row affected (0.03 sec)

mysql> USE index_view_db;
Database changed
mysql> CREATE TABLE citizen_users (
    ->     user_id INT PRIMARY KEY AUTO_INCREMENT,
    ->     username VARCHAR(50),
    ->     email VARCHAR(100),
    ->     aadhar VARCHAR(12),
    ->     status VARCHAR(20),
    ->     created_at DATETIME
    -> );
Query OK, 0 rows affected (0.04 sec)
```

TASK 1

```
mysql> CREATE INDEX idx_email
    -> ON citizen_users(email);
Query OK, 0 rows affected (0.07 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> SELECT * FROM citizen_users WHERE email = 'abc@gmail.com';
Empty set (0.02 sec)
```

TASK 2

```
mysql> CREATE UNIQUE INDEX idx_unique_username
    -> ON citizen_users(username);
Query OK, 0 rows affected (0.04 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

TASK 3

```
mysql> SHOW INDEX FROM citizen_users;
+--------------+------------+---------------------+--------------+-------------+-----------+-------------+----------+--------+------+------------+---------+---------------+---------+------------+
| Table        | Non_unique | Key_name            | Seq_in_index | Column_name | Collation | Cardinality | Sub_part | Packed | Null | Index_type | Comment | Index_comment | Visible | Expression |
+--------------+------------+---------------------+--------------+-------------+-----------+-------------+----------+--------+------+------------+---------+---------------+---------+------------+
| citizen_users |          0 | PRIMARY             |            1 | user_id     | A         |           0 |     NULL |   NULL |      | BTREE      |         |               | YES     | NULL       |
| citizen_users |          0 | idx_unique_username |            1 | username    | A         |           0 |     NULL |   NULL | YES  | BTREE      |         |               | YES     | NULL       |
| citizen_users |          1 | idx_email           |            1 | email       | A         |           0 |     NULL |   NULL | YES  | BTREE      |         |               | YES     | NULL       |
+--------------+------------+---------------------+--------------+-------------+-----------+-------------+----------+--------+------+------------+---------+---------------+---------+------------+
3 rows in set (0.06 sec)
```

```
mysql> DROP INDEX idx_email ON citizen_users;
Query OK, 0 rows affected (0.04 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

TASK 4

```
mysql> SELECT * FROM citizen_users WHERE aadhar = '123456789012';
Empty set (0.00 sec)

mysql> CREATE INDEX idx_aadhar
    -> ON citizen_users(aadhar);
Query OK, 0 rows affected (0.05 sec)
Records: 0  Duplicates: 0  Warnings: 0
```

TASK 5

```
mysql> CREATE INDEX idx_status_created
    -> ON citizen_users(status, created_at);
Query OK, 0 rows affected (0.05 sec)
Records: 0  Duplicates: 0  Warnings: 0

mysql> SELECT *
    -> FROM citizen_users
    -> WHERE status = 'Active'
    -> ORDER BY created_at DESC;
Empty set (0.00 sec)
```

```
+--------------+------------+---------------------+--------------+-------------+-----------+-------------+----------+--------+------+------------+---------+---------------+---------+------------+
| Table        | Non_unique | Key_name            | Seq_in_index | Column_name | Collation | Cardinality | Sub_part | Packed | Null | Index_type | Comment | Index_comment | Visible | Expression |
+--------------+------------+---------------------+--------------+-------------+-----------+-------------+----------+--------+------+------------+---------+---------------+---------+------------+
| citizen_users |          0 | PRIMARY             |            1 | user_id     | A         |           0 |     NULL |   NULL |      | BTREE      |         |               | YES     | NULL       |
| citizen_users |          0 | idx_unique_username |            1 | username    | A         |           0 |     NULL |   NULL | YES  | BTREE      |         |               | YES     | NULL       |
| citizen_users |          1 | idx_email           |            1 | email       | A         |           0 |     NULL |   NULL | YES  | BTREE      |         |               | YES     | NULL       |
+--------------+------------+---------------------+--------------+-------------+-----------+-------------+----------+--------+------+------------+---------+---------------+---------+------------+
```