Lab 1: SQL_Assignment_1– DDL, SQL Query

Lab – 1 6-Aug-2024	SQL_Assignment_1– DDL, SQL Query
IT615 Database Management System, Autumn'2024; Instructor: minal_bhise@daiict	

Objectives: I) Create Database

II) Create Schema.

III) Create Table and Load data into tables.

Submission: Each student needs to upload a single .pdf file which will contain the following things for all the queries listed in your specific section's lab file.

1. English query and SQL Query in the given sequence.
2. Screenshot of results.
3. Count of tuples in the results.

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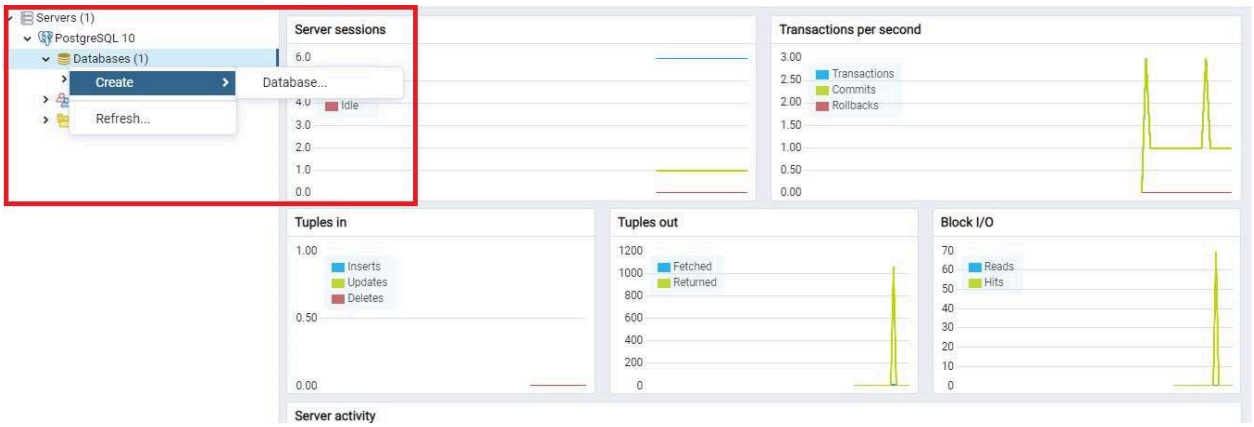
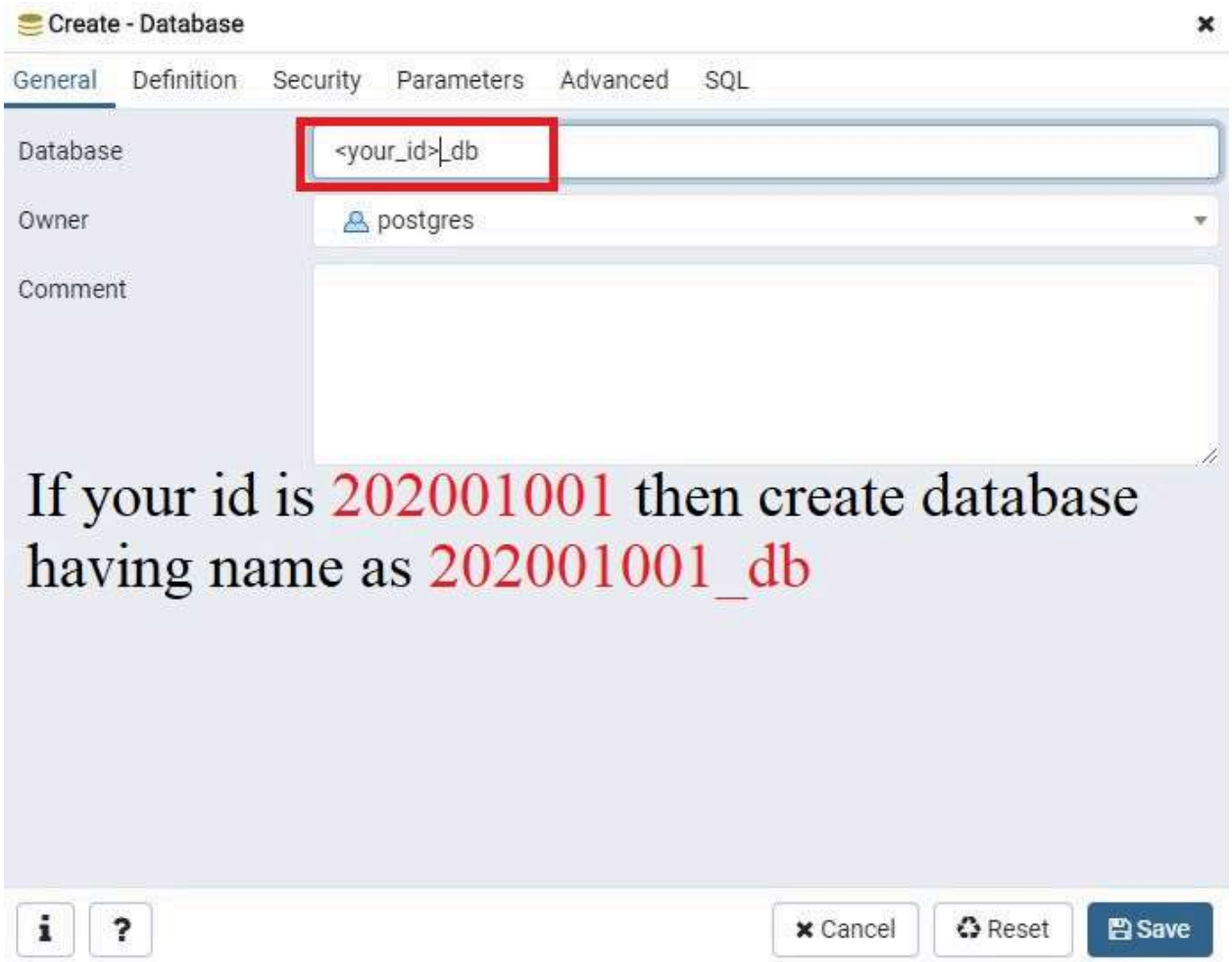
1. **CREATE DATABASE:**

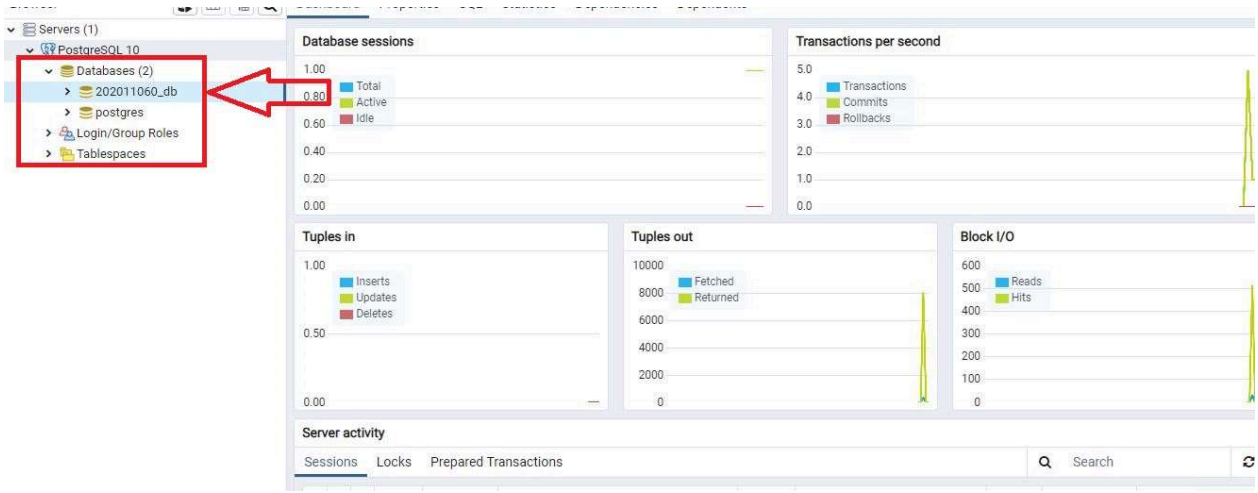
- Right-click on the Databases to create a new database, as shown below.



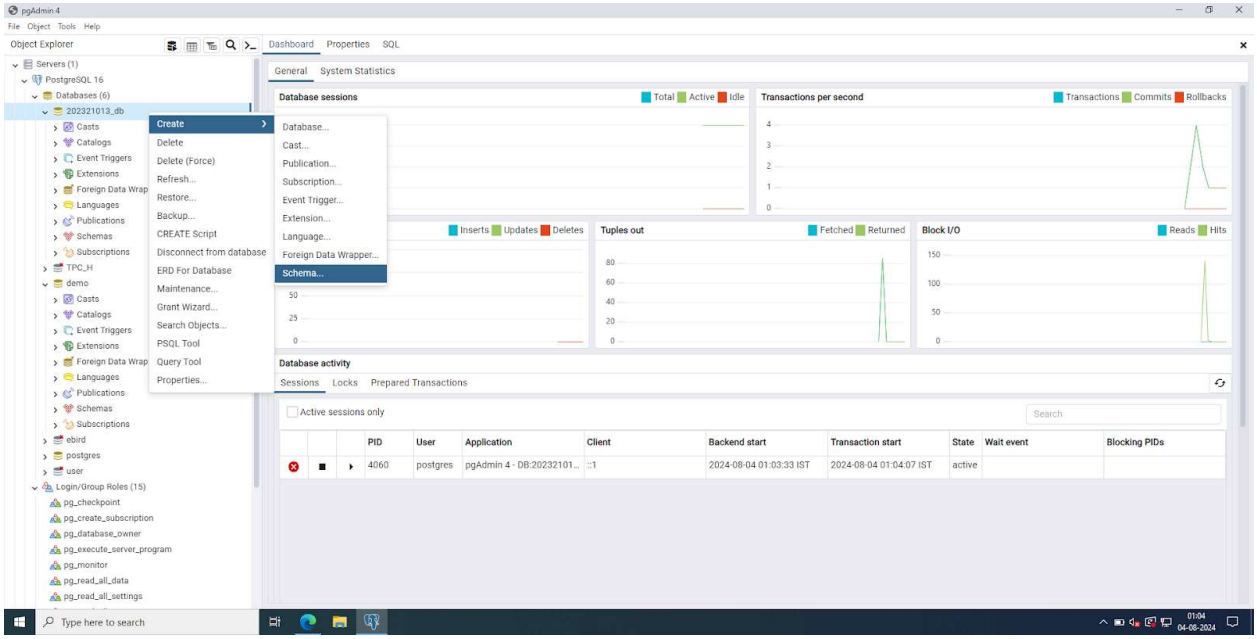
- Create database with the name as <your_id>_db



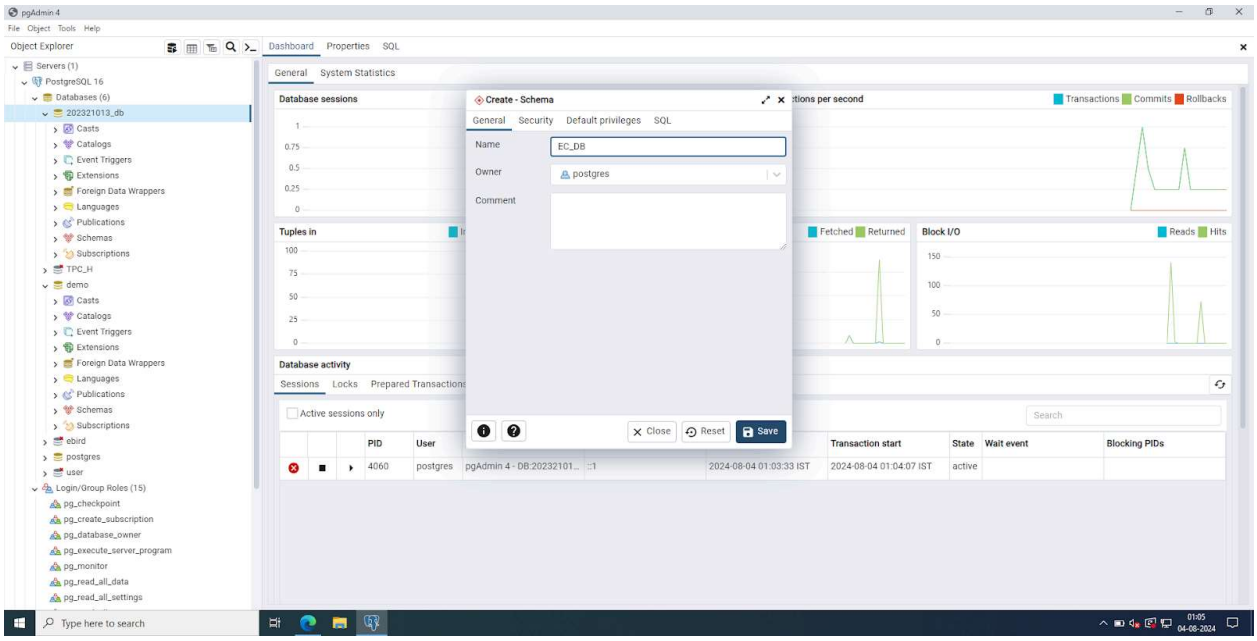
- You can see the created database here.



2. **CREATE SCHEMA:**
    - Go to Schema => Right Click => Create => Schema



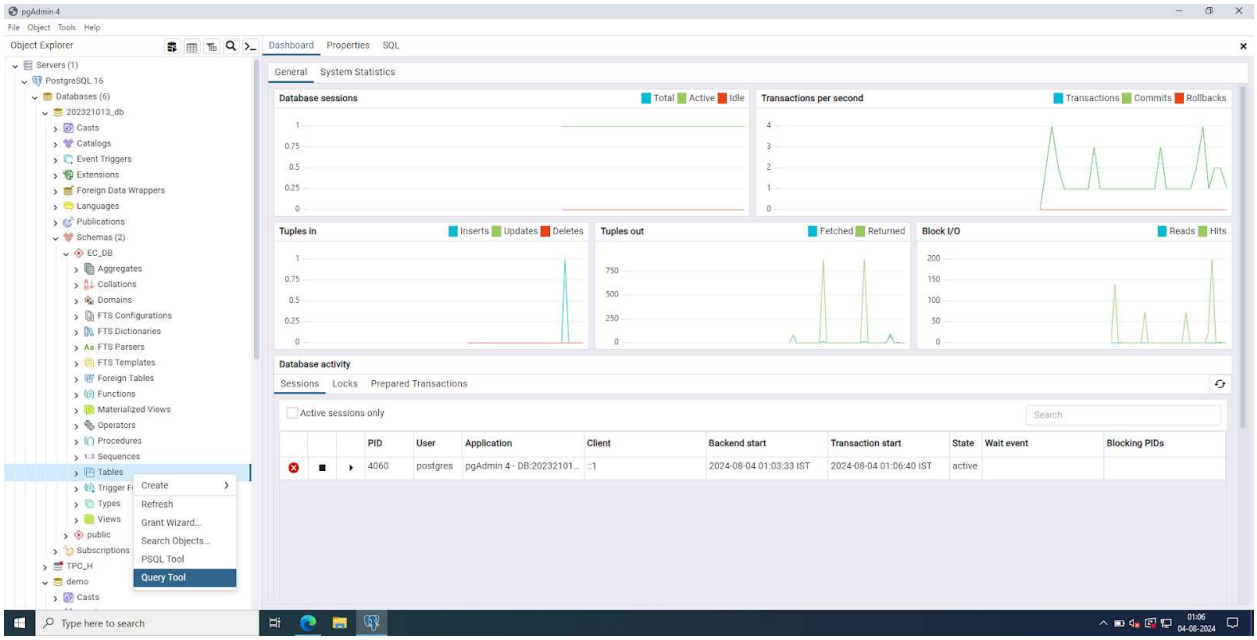
- Name it => EC_DB
- Press **Save**.



Other ways to Create Schema and Select that Schema using SQL commands:

Open SQL Tool window from Main menu of PgAdmin after connecting/opening your Database. OR while using SQL Shell and Type following to create Schema.

- GUI - Right Click Tables => Select Query Tool



- #Create Schema needs to be done only once.

```
CREATE SCHEMA EC_DB;
```

- #Set SEARCH_PATH command needs to be run **first** before executing other queries, each time PgAdmin is started. No need to re-run it before every query for that session.

```
SET SEARCH_PATH TO EC_DB;
```

3. **Create following tables for your database using Create Table Statements provided in the Appendix A and load the data from the zip file (ecommerce database) available on moodle.**
    - **CREATE TABLE**

CREATE TABLE "EC_DB".**users** (

user_id SERIAL PRIMARY KEY,

username VARCHAR(50) NOT NULL UNIQUE,

email VARCHAR(100) NOT NULL UNIQUE,

password VARCHAR(255) NOT NULL,

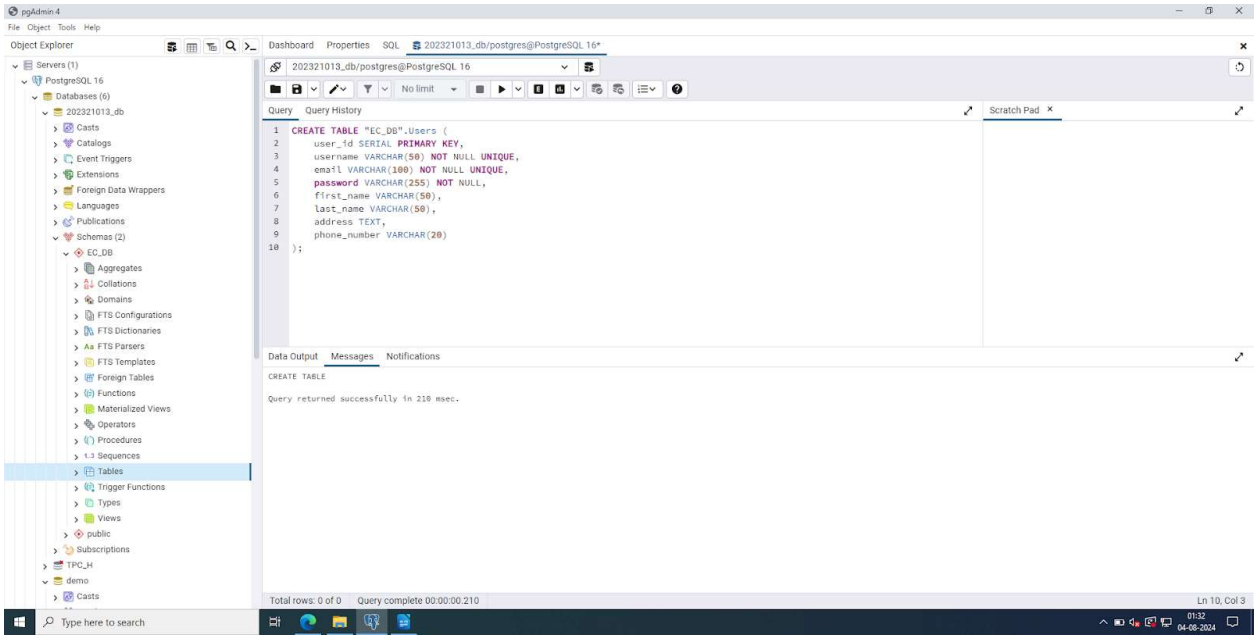
first_name VARCHAR(50),

last_name VARCHAR(50),

address TEXT,

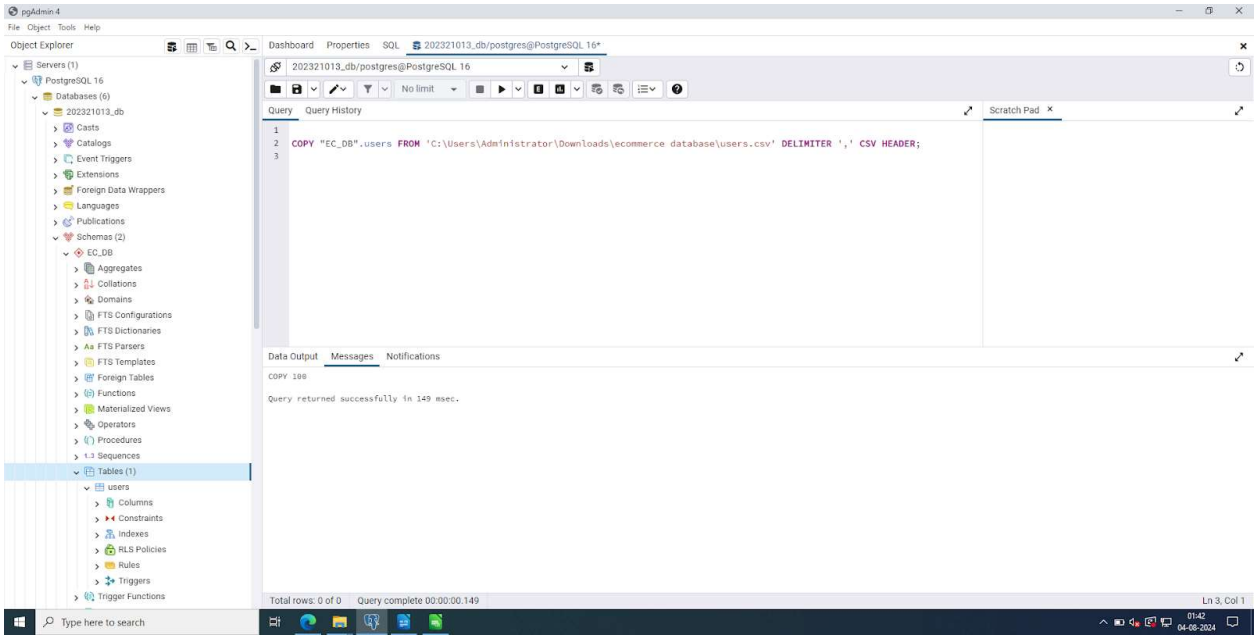
phone_number VARCHAR(20)

);



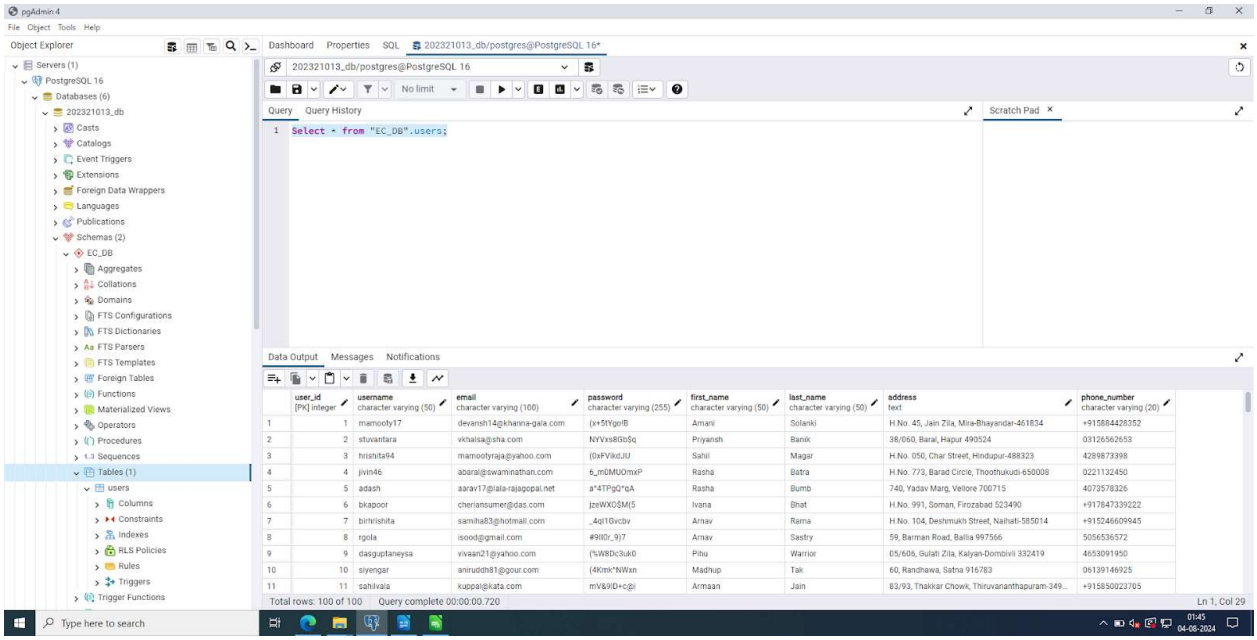
- **LOAD DATA**

COPY "EC_DB".**users** FROM 'C:\Users\Administrator\Downloads\ecommerce database**users**.csv' DELIMITER ',' CSV HEADER;



- **RUN QUERIES**

Select * from "EC_DB".**users**;



1. Select all users with the first name "Rahul".
2. Select all products that cost more than 5000.
3. Select all orders that are in the "Shipped" status.
4. Select all reviews with a rating of 5.
5. Select all categories that have "Books" in their name.
6. Select all products that belong to category ID 3.
7. Select all users whose last name starts with "Singh".
8. Select all orders placed by user ID 10.
9. Select all products that have less than 10 items in stock.
10. Select all reviews written in the year 2024.
11. Select all users with email addresses from "gmail.com".
12. Select all products with the name "Laptop".
13. Select all orders with a total amount greater than 10000.
14. Select all order details where the quantity ordered is greater than 5.
15. Select all users who live in "Mumbai".
16. Select all categories with descriptions containing the word "technology".
17. Select all products that belong to the "Electronics" category.
18. Select all orders placed on "2024-01-01".
19. Select all reviews with the comment containing the word "excellent".
20. Select all users whose phone number starts with "+91".

Appendix A: DDL Scripts to create tables.

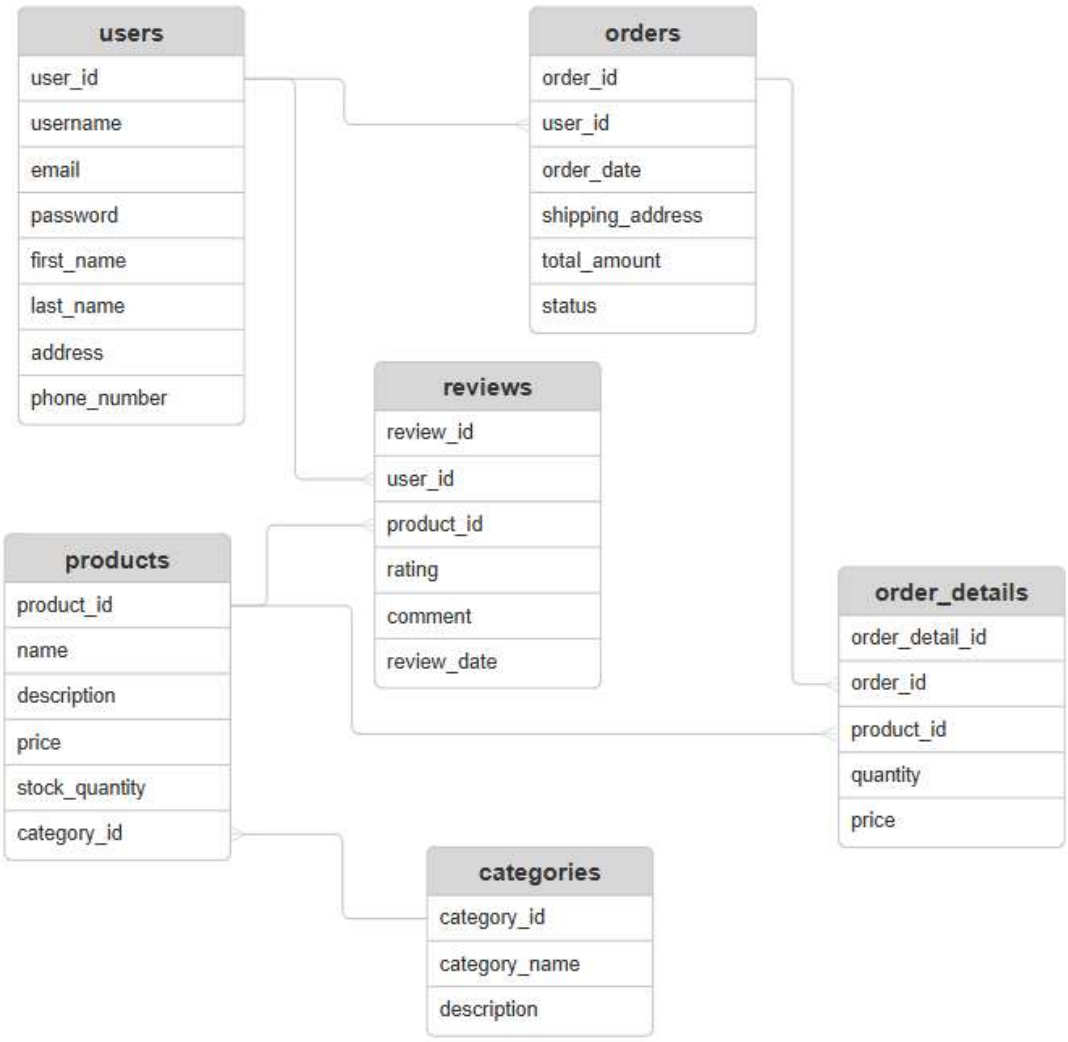
CREATE TABLE “EC_DB”.**categories** (category_id INT PRIMARY KEY AUTO_INCREMENT, category_name VARCHAR(100) NOT NULL UNIQUE, description TEXT);

CREATE TABLE “EC_DB”.**products** (product_id INT PRIMARY KEY AUTO_INCREMENT, name VARCHAR(100) NOT NULL, description TEXT, price DECIMAL(10, 2) NOT NULL, stock_quantity INT NOT NULL, category_id INT, FOREIGN KEY (category_id) REFERENCES Categories(category_id));

CREATE TABLE “EC_DB”.**orders** (order_id INT PRIMARY KEY AUTO_INCREMENT, user_id INT, order_date DATETIME NOT NULL, shipping_address TEXT, total_amount DECIMAL(10, 2) NOT NULL, status VARCHAR(50), FOREIGN KEY (user_id) REFERENCES Users(user_id));

CREATE TABLE “EC_DB”.**order_details** (order_detail_id INT PRIMARY KEY AUTO_INCREMENT, order_id INT, product_id INT, quantity INT NOT NULL, price DECIMAL(10, 2) NOT NULL, FOREIGN KEY (order_id) REFERENCES Orders(order_id), FOREIGN KEY (product_id) REFERENCES Products(product_id));

CREATE TABLE “EC_DB”.**reviews** (review_id INT PRIMARY KEY AUTO_INCREMENT, user_id INT, product_id INT, rating INT CHECK (rating >= 1 AND rating <= 5), comment TEXT, review_date DATETIME NOT NULL, FOREIGN KEY (user_id) REFERENCES Users(user_id), FOREIGN KEY (product_id) REFERENCES Products(product_id));


users
user_id
username
email
password
first_name
last_name
address
phone_number
orders
order_id
user_id
order_date
shipping_address
total_amount
status
reviews
review_id
user_id
product_id
rating
comment
review_date
products
product_id
name
description
price
stock_quantity
category_id
order_details
order_detail_id
order_id
product_id
quantity
price
categories
category_id
category_name
description