Laboratory Activity
Web Systems and Technology
Midterm

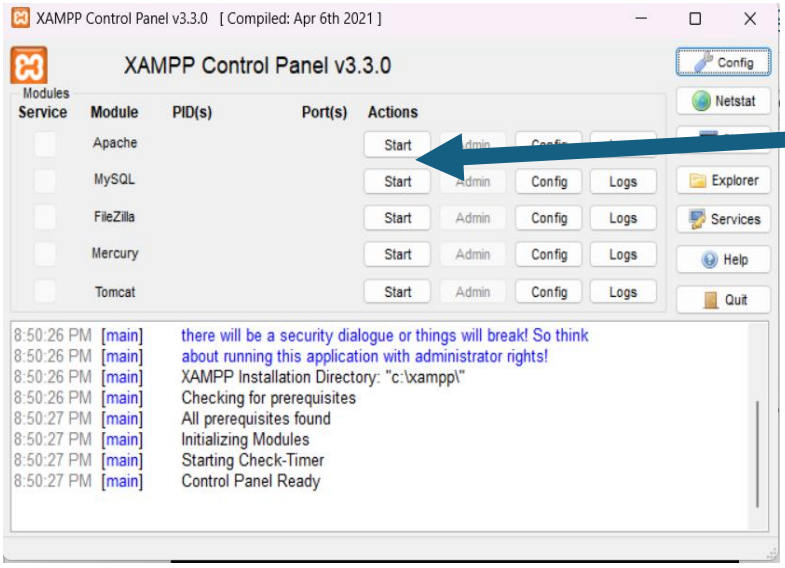
Procedure:

Step 1: Install a local server environment
Since phpMyAdmin requires a web server (Apache), a database server (MariaDB/MySQL), and PHP to run, you will need to install a bundled software package.
Popular options include:

- **XAMPP:** Works on Windows, macOS, and Linux.
- **WAMP:** For Windows users.
- **MAMP:** For macOS users.

Step 2: Start the required services
After installing your server environment, you need to open its control panel and manually start the services.
For XAMPP, this means:

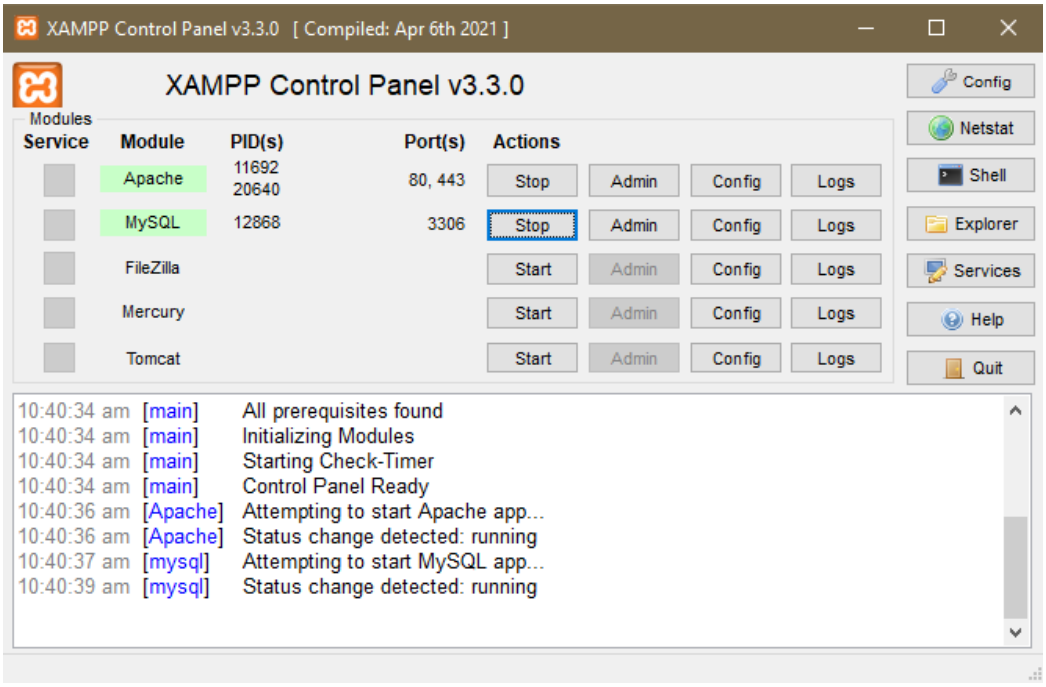
1. Open the **XAMPP Control Panel**.
2. Click the **Start** button next to **Apache**.
3. Click the **Start** button next to **MySQL**.
4. Ensure that both modules are running successfully.

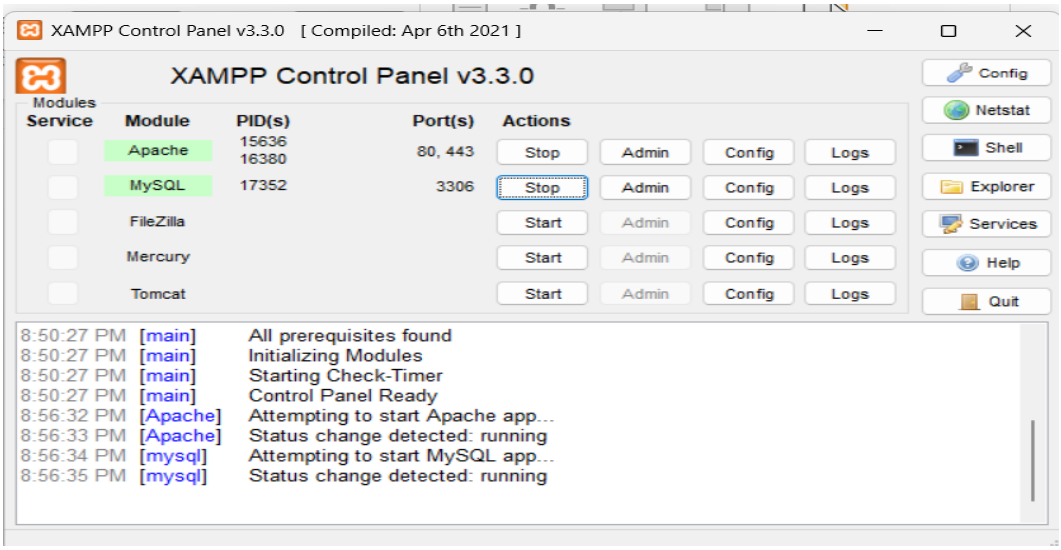


Make sure to click the Start button to open the Apache and MySQL

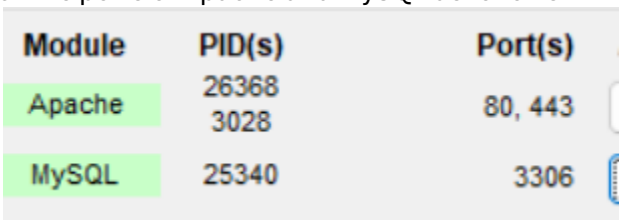
- Once it green your server is now running

Answer:





- Make sure to check the ports of Apache and MySQL as follows

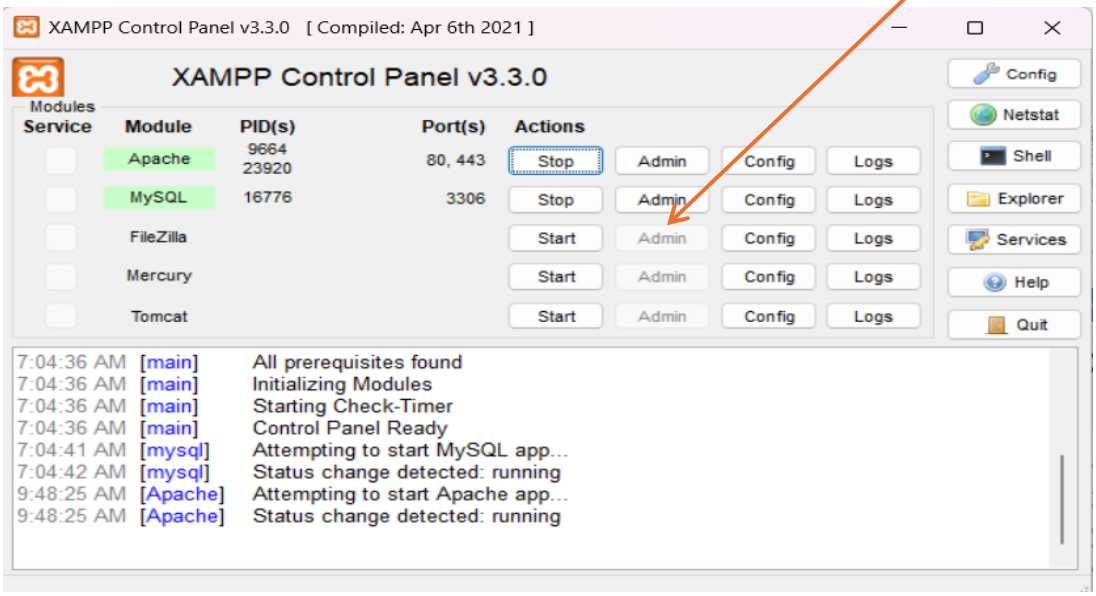


- Your now ready to test your server

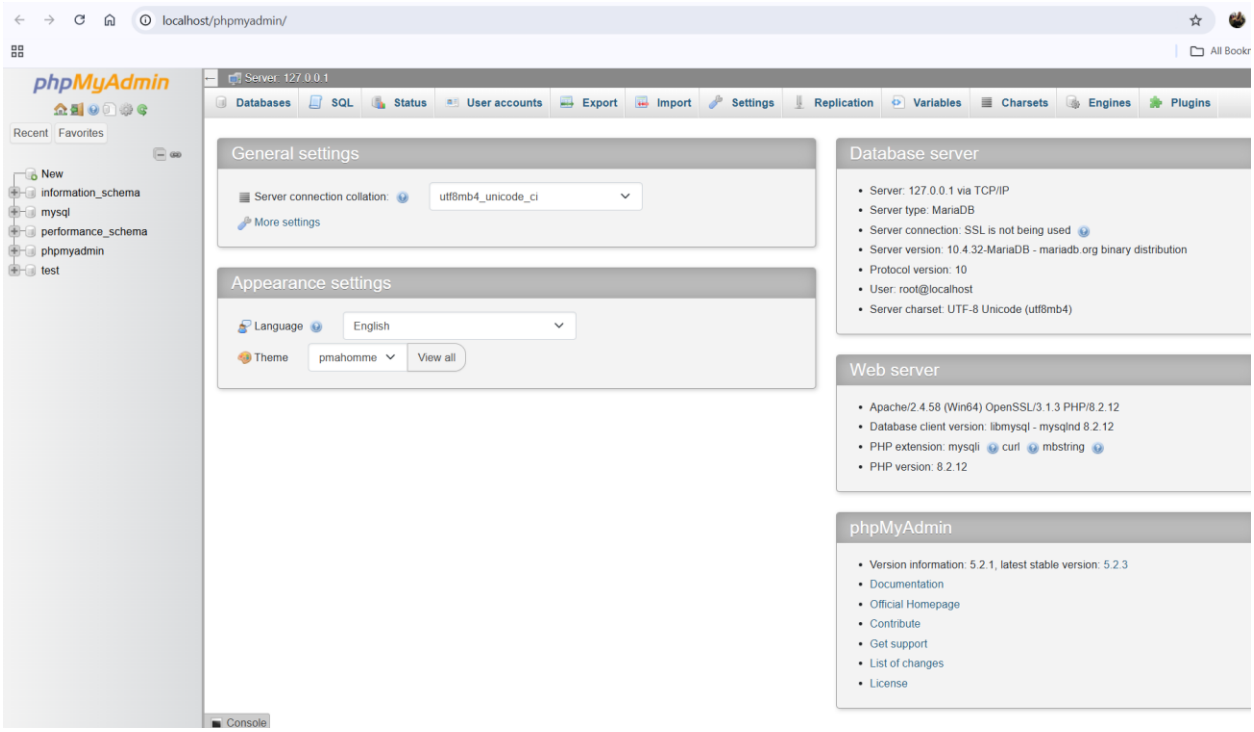
Step 3: Access phpMyAdmin

Once your servers are running, you can access the phpMyAdmin interface through your web browser.

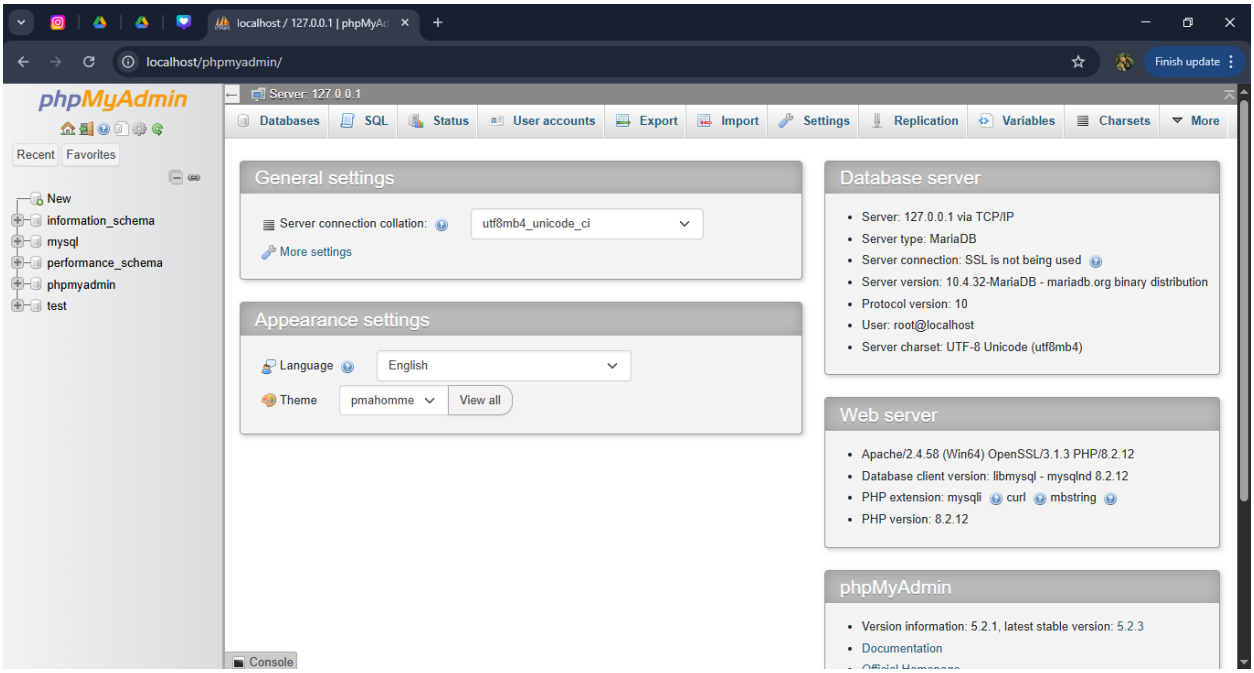
1. Open your web browser.
2. Type http://localhost/phpmyadmin in the address bar and press Enter.
3. Log in with your credentials. If you are using a new installation, the default username is often **root** with **no password**.



Then it will redirect you to the admin panel



Answer:



Step 4: Plan your database schema

Before creating your database, consider what information you need to store and how it should be organized. Proper planning helps avoid structural problems later on.

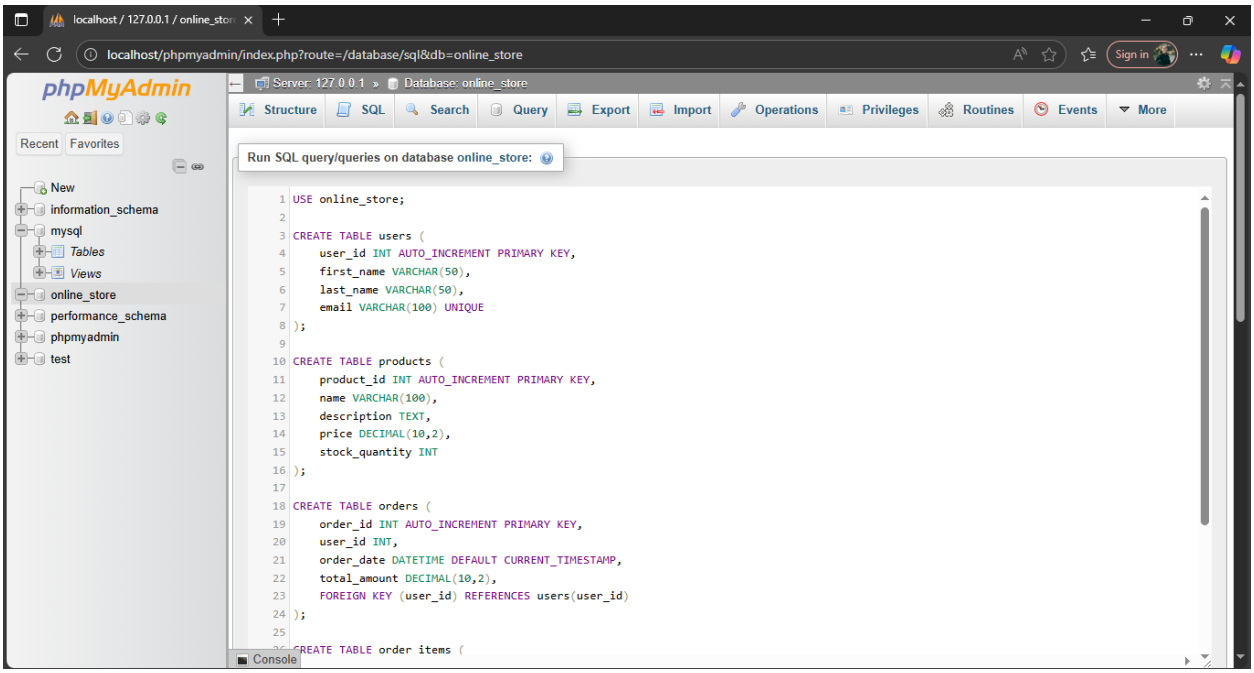
A simple planning process involves:

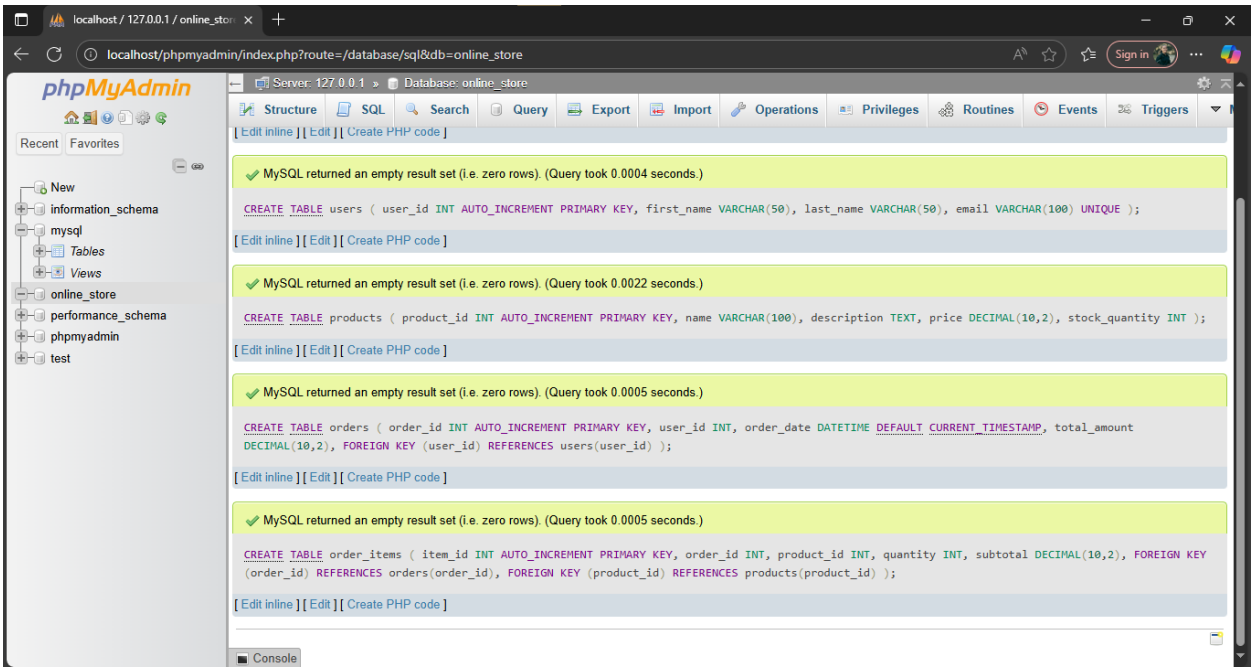
- **Identifying entities:** Figure out the main "things" your database needs to track, like Users, Products, or Orders.
- **Defining attributes:** Decide on the specific data points for each entity. For a Users table, this might include first_name, last_name, and email.
- **Specifying primary keys:** Choose a unique identifier for each table, such as a user ID. This is typically an auto-incrementing integer.
- **Establishing relationships:** Determine how your tables will connect to each other. For example, the Orders table might link to a Users table.

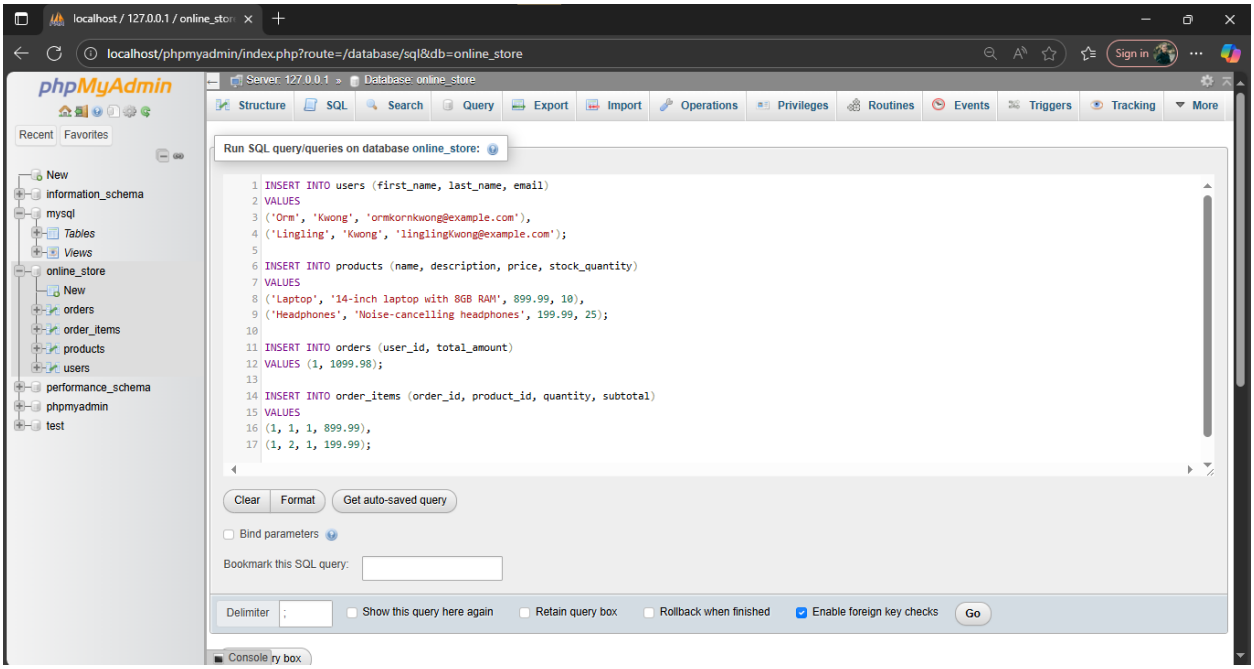
  This time:

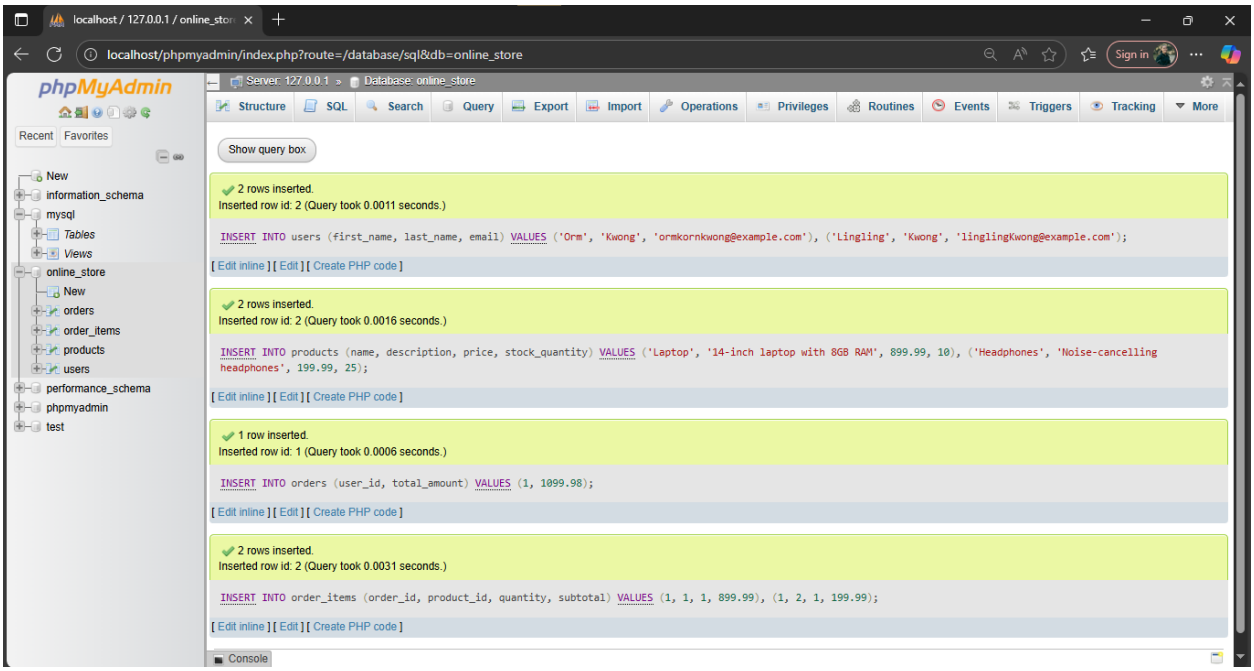
  - I want you to explore or try to create a sample database as your activity for today without connecting it to php (or to your website)
  - Name it on the desired table name.
  - Screenshot all your works and output in this document and sent it through your github (filename: Activity 3 -10/30) this is a different filename from your Activity 2.

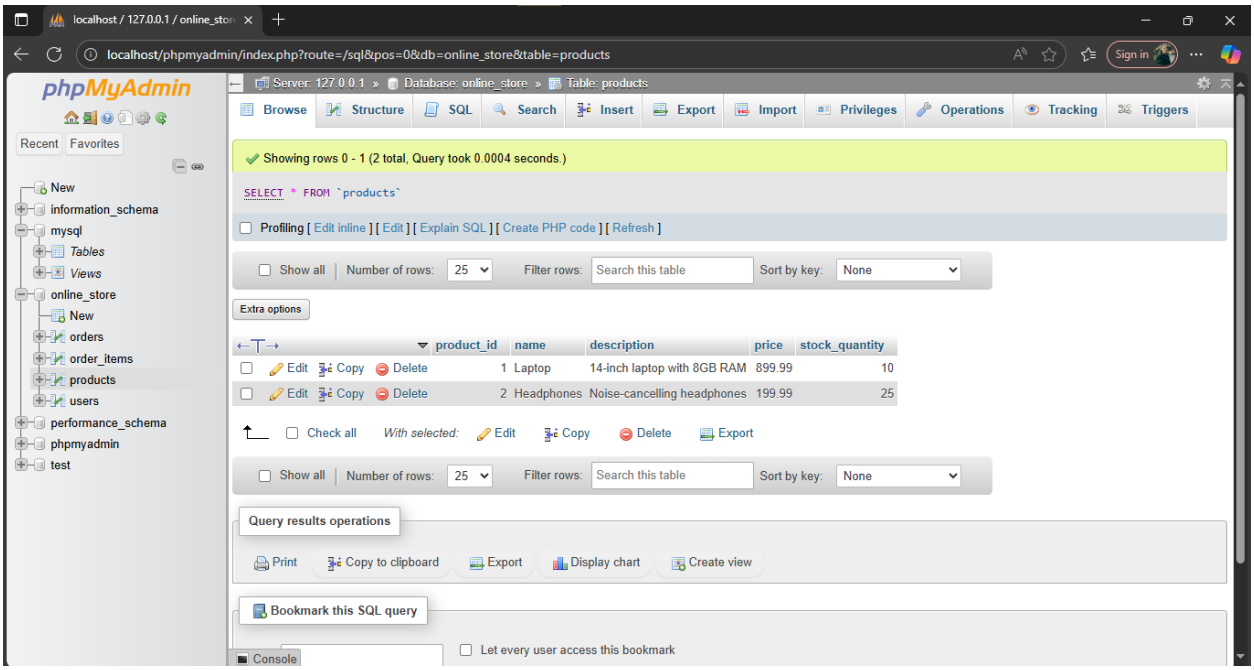
Answer:

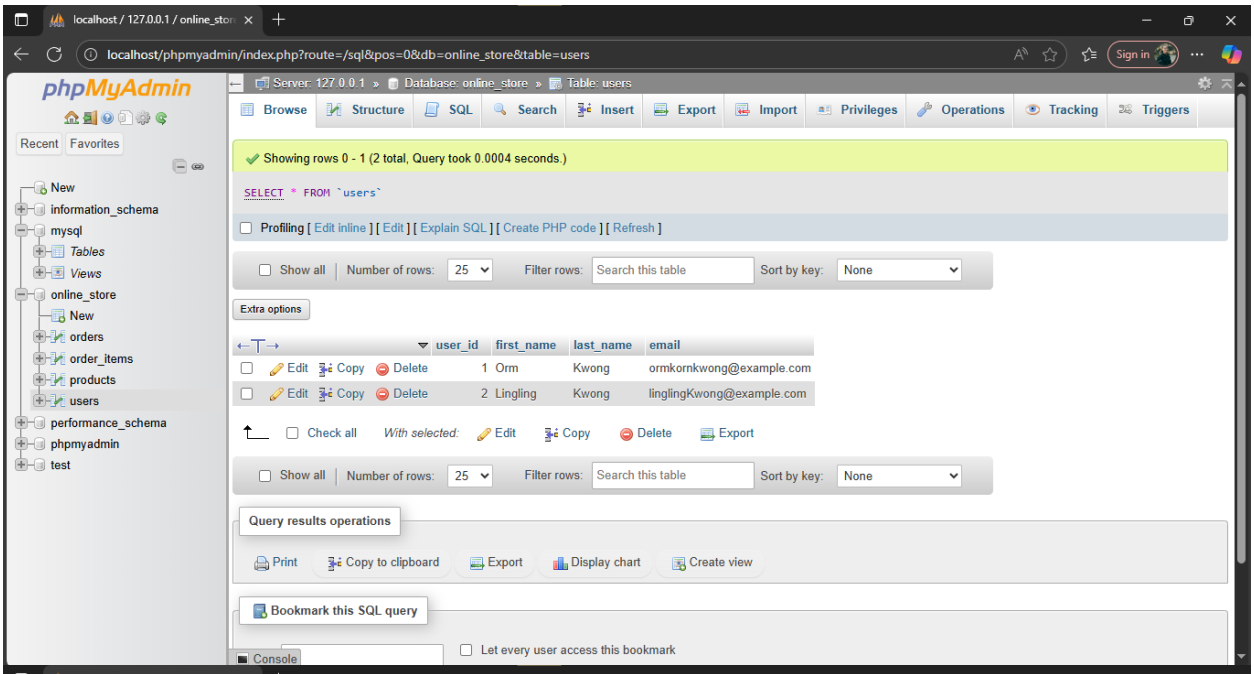

localhost / 127.0.0.1 / online_stor
localhost/phpmyadmin/index.php?route=/database/sql&db=online_store
phpMyAdmin
Recent
Favorites
New
information_schema
mysql
Tables
Views
online_store
performance_schema
phpmyadmin
test
Server: 127.0.0.1 » Database: online_store
Structure
SQL
Search
Query
Export
Import
Operations
Privileges
Routines
Events
More
Run SQL query/queries on database online_store:
USE online_store;
CREATE TABLE users (
user_id INT AUTO_INCREMENT PRIMARY KEY,
first_name VARCHAR(50),
last_name VARCHAR(50),
email VARCHAR(100) UNIQUE
);
CREATE TABLE products (
product_id INT AUTO_INCREMENT PRIMARY KEY,
name VARCHAR(100),
description TEXT,
price DECIMAL(10,2),
stock_quantity INT
);
CREATE TABLE orders (
order_id INT AUTO_INCREMENT PRIMARY KEY,
user_id INT,
order_date DATETIME DEFAULT CURRENT_TIMESTAMP,
total_amount DECIMAL(10,2),
FOREIGN KEY (user_id) REFERENCES users(user_id)
);
CREATE TABLE order items (
Console

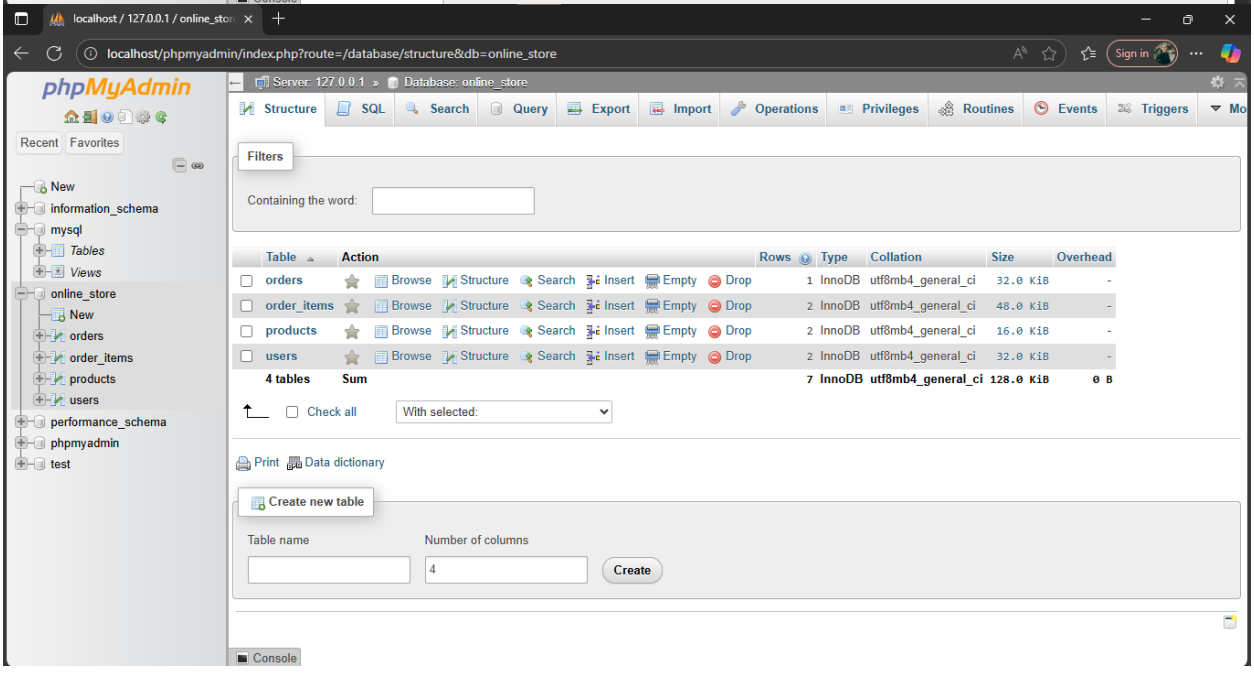

localhost / 127.0.0.1 / online_stor
localhost/phpmyadmin/index.php?route=/database/sql&db=online_store
phpMyAdmin
Recent
Favorites
New
information_schema
mysql
Tables
Views
online_store
performance_schema
phpmyadmin
test
Server: 127.0.0.1 » Database: online_store
Structure
SQL
Search
Query
Export
Import
Operations
Privileges
Routines
Events
Triggers
[Edit inline] [Edit] [Create PHP code]
MySQL returned an empty result set (i.e. zero rows). (Query took 0.0004 seconds.)
CREATE TABLE users (user_id INT AUTO_INCREMENT PRIMARY KEY, first_name VARCHAR(50), last_name VARCHAR(50), email VARCHAR(100) UNIQUE);
[Edit inline] [Edit] [Create PHP code]
MySQL returned an empty result set (i.e. zero rows). (Query took 0.0022 seconds.)
CREATE TABLE products (product_id INT AUTO_INCREMENT PRIMARY KEY, name VARCHAR(100), description TEXT, price DECIMAL(10,2), stock_quantity INT);
[Edit inline] [Edit] [Create PHP code]
MySQL returned an empty result set (i.e. zero rows). (Query took 0.0005 seconds.)
CREATE TABLE orders (order_id INT AUTO_INCREMENT PRIMARY KEY, user_id INT, order_date DATETIME DEFAULT CURRENT_TIMESTAMP, total_amount DECIMAL(10,2), FOREIGN KEY (user_id) REFERENCES users(user_id));
[Edit inline] [Edit] [Create PHP code]
MySQL returned an empty result set (i.e. zero rows). (Query took 0.0005 seconds.)
CREATE TABLE order_items (item_id INT AUTO_INCREMENT PRIMARY KEY, order_id INT, product_id INT, quantity INT, subtotal DECIMAL(10,2), FOREIGN KEY (order_id) REFERENCES orders(order_id), FOREIGN KEY (product_id) REFERENCES products(product_id));
[Edit inline] [Edit] [Create PHP code]
Console


localhost / 127.0.0.1 / online_store
localhost/phpmyadmin/index.php?route=/database/sql&db=online_store
phpMyAdmin
Recent
Favorites
New
information_schema
mysql
Tables
Views
online_store
New
orders
order_items
products
users
performance_schema
phpmyadmin
test
Server: 127.0.0.1 » Database: online_store
Structure
SQL
Search
Query
Export
Import
Operations
Privileges
Routines
Events
Triggers
Tracking
More
Run SQL query/queries on database online_store:
INSERT INTO users (first_name, last_name, email)
VALUES
('Orm', 'Kwong', 'ormkornkwong@example.com'),
('Lingling', 'Kwong', 'linglingKwong@example.com');
INSERT INTO products (name, description, price, stock_quantity)
VALUES
('Laptop', '14-inch laptop with 8GB RAM', 899.99, 10),
('Headphones', 'Noise-cancelling headphones', 199.99, 25);
INSERT INTO orders (user_id, total_amount)
VALUES (1, 1099.98);
INSERT INTO order_items (order_id, product_id, quantity, subtotal)
VALUES
(1, 1, 1, 899.99),
(1, 2, 1, 199.99);
Clear
Format
Get auto-saved query
Bind parameters
Bookmark this SQL query:
Delimiter
Show this query here again
Retain query box
Rollback when finished
Enable foreign key checks
Go
Console


localhost / 127.0.0.1 / online_store
localhost/phpmyadmin/index.php?route=/database/sql&db=online_store
phpMyAdmin
Server: 127.0.0.1 » Database: online_store
Structure
SQL
Search
Query
Export
Import
Operations
Privileges
Routines
Events
Triggers
Tracking
More
Show query box
2 rows inserted.
Inserted row id: 2 (Query took 0.0011 seconds.)
INSERT INTO users (first_name, last_name, email) VALUES ('Orm', 'Kwong', 'ormkornkwong@example.com'), ('Lingling', 'Kwong', 'linglingKwong@example.com');
[Edit inline] [Edit] [Create PHP code]
2 rows inserted.
Inserted row id: 2 (Query took 0.0016 seconds.)
INSERT INTO products (name, description, price, stock_quantity) VALUES ('Laptop', '14-inch laptop with 8GB RAM', 899.99, 10), ('Headphones', 'Noise-cancelling headphones', 199.99, 25);
[Edit inline] [Edit] [Create PHP code]
1 row inserted.
Inserted row id: 1 (Query took 0.0006 seconds.)
INSERT INTO orders (user_id, total_amount) VALUES (1, 1099.98);
[Edit inline] [Edit] [Create PHP code]
2 rows inserted.
Inserted row id: 2 (Query took 0.0031 seconds.)
INSERT INTO order_items (order_id, product_id, quantity, subtotal) VALUES (1, 1, 1, 899.99), (1, 2, 1, 199.99);
[Edit inline] [Edit] [Create PHP code]
Console


localhost / 127.0.0.1 / online_store
localhost/phpmyadmin/index.php?route=/sql&pos=0&db=online_store&table=products
phpMyAdmin
Server: 127.0.0.1 » Database: online_store » Table: products
Browse Structure SQL Search Insert Export Import Privileges Operations Tracking Triggers
Showing rows 0 - 1 (2 total, Query took 0.0004 seconds.)
SELECT * FROM `products`
Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]
Show all | Number of rows: 25 Filter rows: Search this table Sort by key: None
Extra options
product_id name description price stock_quantity
Edit Copy Delete 1 Laptop 14-inch laptop with 8GB RAM 899.99 10
Edit Copy Delete 2 Headphones Noise-cancelling headphones 199.99 25
Check all With selected: Edit Copy Delete Export
Query results operations
Print Copy to clipboard Export Display chart Create view
Bookmark this SQL query
Let every user access this bookmark
Console


localhost / 127.0.0.1 / online_store
localhost/phpmyadmin/index.php?route=/sql&pos=0&db=online_store&table=users
phpMyAdmin
Server: 127.0.0.1 » Database: online_store » Table: users
Browse Structure SQL Search Insert Export Import Privileges Operations Tracking Triggers
Showing rows 0 - 1 (2 total, Query took 0.0004 seconds.)
SELECT * FROM `users`
Profiling [Edit inline] [Edit] [Explain SQL] [Create PHP code] [Refresh]
Show all | Number of rows: 25 Filter rows: Search this table Sort by key: None
Extra options
user_id first_name last_name email
Edit Copy Delete 1 Orm Kwong ormkornkwong@example.com
Edit Copy Delete 2 Lingling Kwong linglingKwong@example.com
Check all With selected: Edit Copy Delete Export
Query results operations
Print Copy to clipboard Export Display chart Create view
Bookmark this SQL query
Let every user access this bookmark
Console


localhost / 127.0.0.1 / online_store
localhost/phpmyadmin/index.php?route=/database/structure&db=online_store
phpMyAdmin
Server: 127.0.0.1 » Database: online_store
Structure SQL Search Query Export Import Operations Privileges Routines Events Triggers
Filters
Containing the word:
Table Action Rows Type Collation Size Overhead
orders Browse Structure Search Insert Empty Drop 1 InnoDB utf8mb4_general_ci 32.0 KiB -
order_items Browse Structure Search Insert Empty Drop 2 InnoDB utf8mb4_general_ci 48.0 KiB -
products Browse Structure Search Insert Empty Drop 2 InnoDB utf8mb4_general_ci 16.0 KiB -
users Browse Structure Search Insert Empty Drop 2 InnoDB utf8mb4_general_ci 32.0 KiB -
4 tables Sum 7 InnoDB utf8mb4_general_ci 128.0 KiB 0 B
Check all With selected:
Print Data dictionary
Create new table
Table name
Number of columns
4
Create
Console