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C334-IT

Laboratory Activity
Web Systems and Technology
Midterm

Procedure:

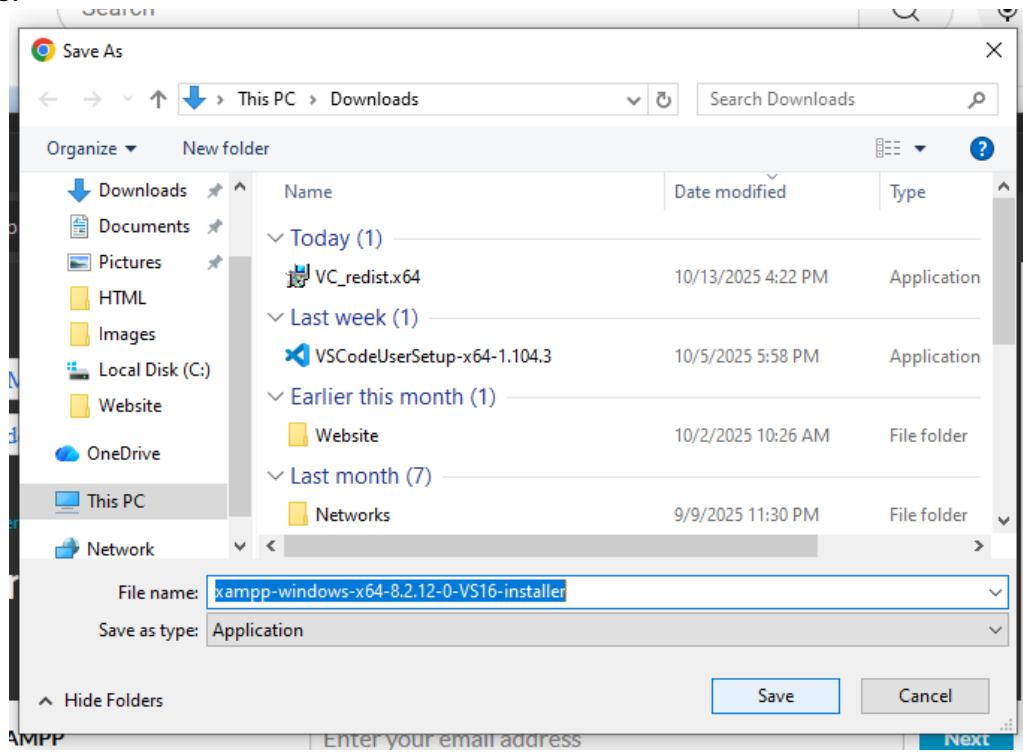
Step 1: Install a local server environment

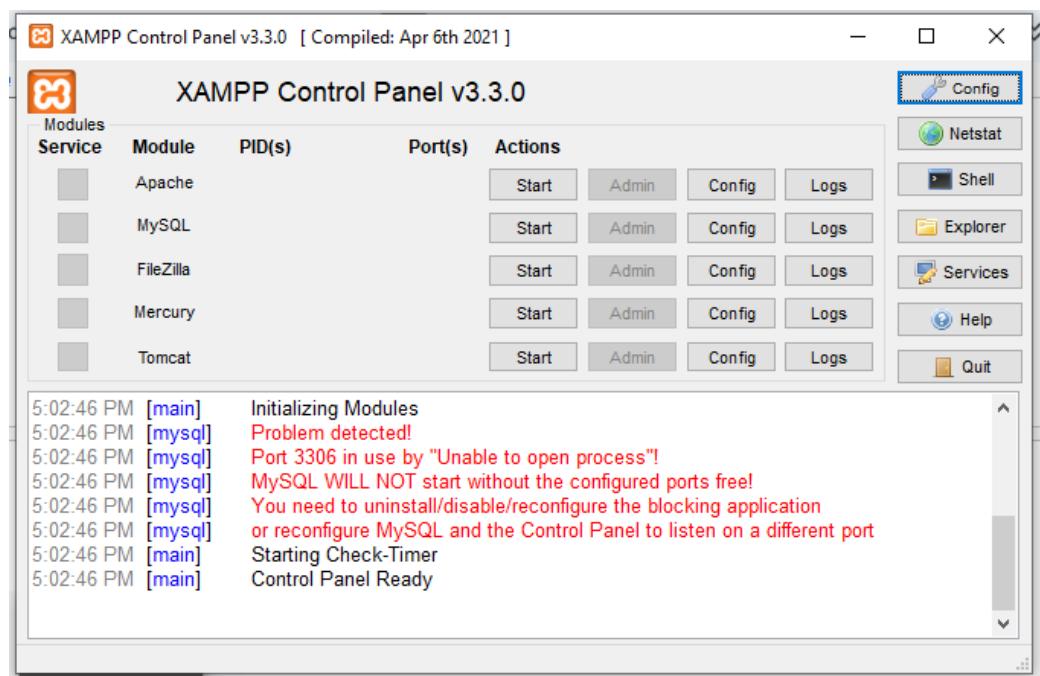
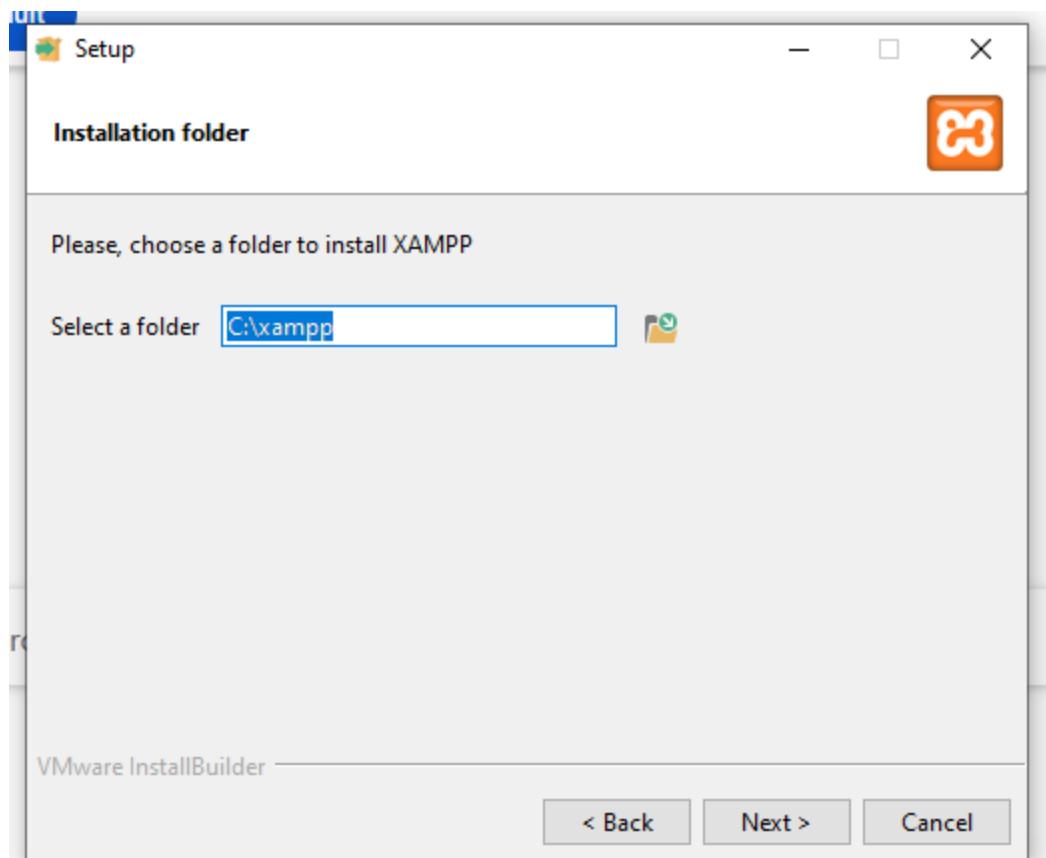
Since phpMyAdmin requires a web server (Apache), a database server (MariaDB/MySQL), and PHP to run, you will need to install a bundled software package.

Popular options include:

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

Answers:



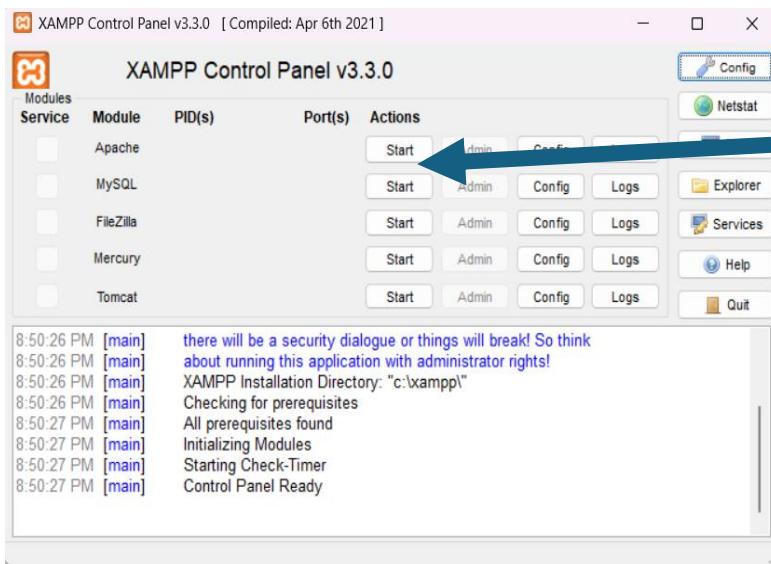


Step 2: Start the required services

After installing your server environment, you need to open its control panel and manually start the services.

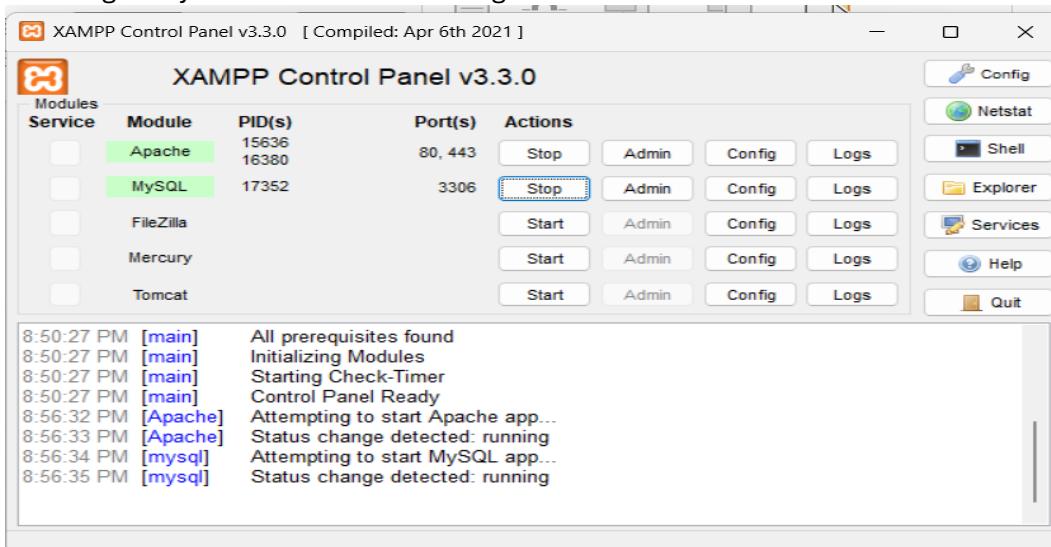
For XAMPP, this means:

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

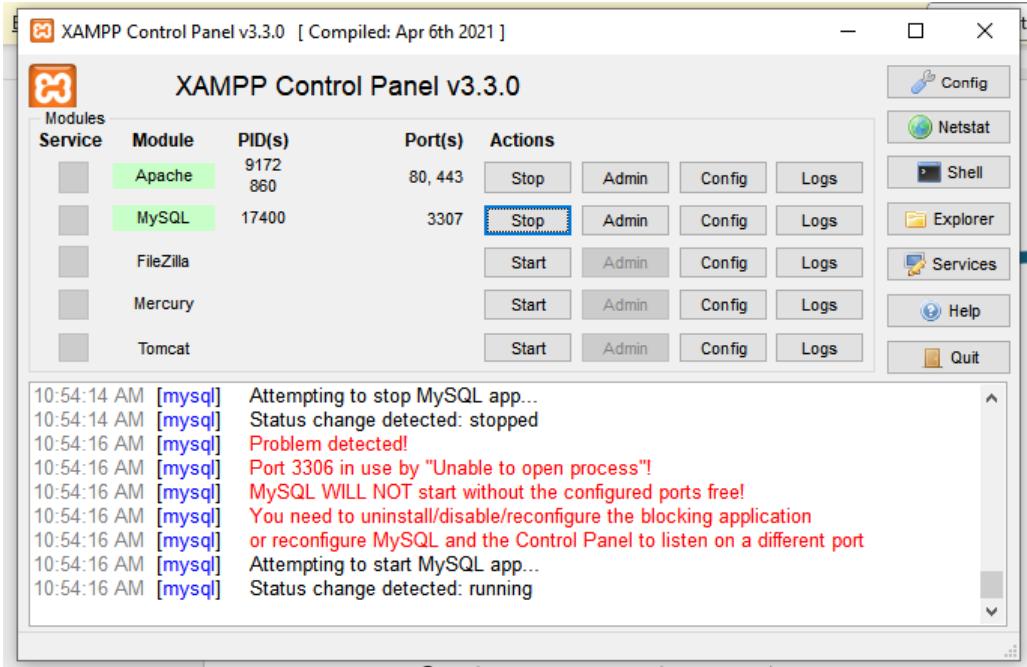


- Make sure to check the ports of Apache and MySQL as follows

Module	PID(s)	Port(s)
Apache	26368 3028	80, 443
MySQL	25340	3306

- You are now ready to test your server

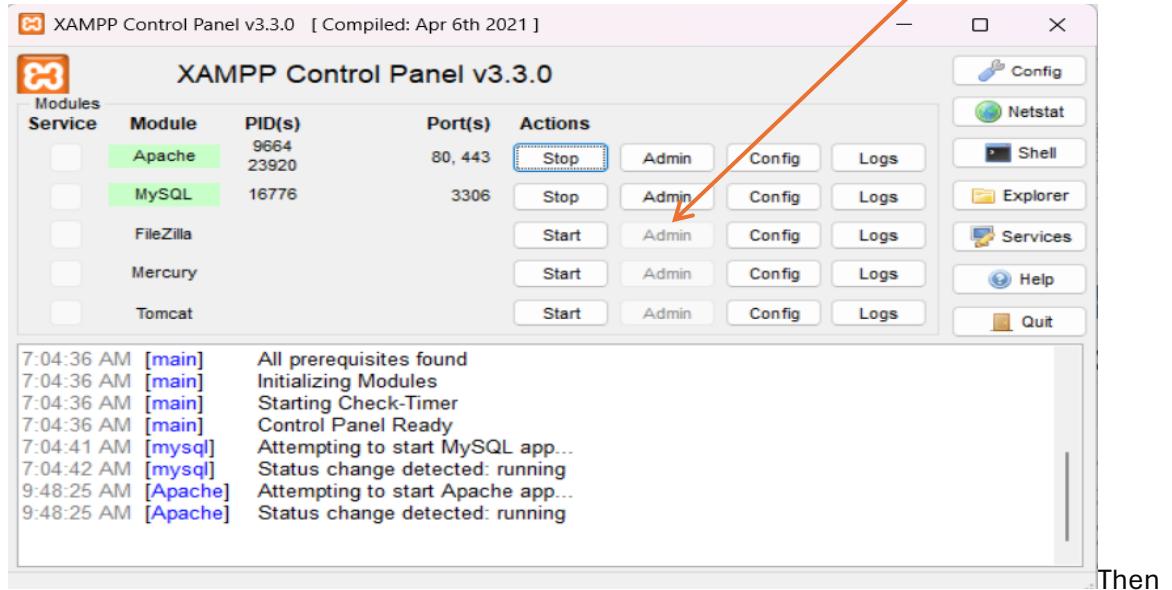
Answer:



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

The screenshot shows the phpMyAdmin interface. On the left is a sidebar with database links: New, information_schema, mysql, performance_schema, phpmyadmin, and test. The main area has several tabs at the top: Databases, SQL, Status, User accounts, Export, Import, Settings, Replication, Variables,Charsets, Engines, and Plugins. The 'Status' tab is active. It displays sections for General settings, Appearance settings, Database server, Web server, and phpMyAdmin. The Database server section lists the server configuration. The Web server section lists the PHP and Apache versions. The phpMyAdmin section lists version information and links.

- General settings: Server connection collation: utf8mb4_unicode_ci
- Appearance settings: Language: English, Theme: pmahomme
- Database server:
 - Server: 127.0.0.1 via TCP/IP
 - Server type: MariaDB
 - Server connection: SSL is not being used
 - Server version: 10.4.32-MariaDB - mariadb.org binary distribution
 - Protocol version: 10
 - User: root@localhost
 - Server charset: UTF-8 Unicode (utf8mb4)
- Web server:
 - Apache/2.4.58 (Win64) OpenSSL/3.1.3 PHP/8.2.12
 - Database client version: libmysql - mysqlnd 8.2.12
 - PHP extension: mysqli curl mbstring
 - PHP version: 8.2.12
- phpMyAdmin:
 - Version information: 5.2.1, latest stable version: 5.2.3
 - Documentation
 - Official Homepage
 - Contribute
 - Get support
 - List of changes
 - License

Answer:

The screenshot shows the phpMyAdmin interface at `localhost/127.0.0.1 | phpMyAdmin`. The left sidebar lists databases: New, information_schema, mysql, performance_schema, phpmyadmin, and test. The main area has tabs for General settings, Appearance settings, Database server, Web server, and phpMyAdmin. The General settings tab shows 'Server connection collation' as utf8mb4_unicode_ci. The Appearance settings tab shows 'Language' as English and 'Theme' as pmahomme. The Database server tab lists the server as 127.0.0.1 via TCP/IP, MariaDB, SSL not being used, version 10.4.32-MariaDB, protocol 10, user root@localhost, and charset UTF-8 Unicode (utf8mb4). The Web server tab lists Apache/2.4.58, OpenSSL/3.1.3, PHP/8.2.12, libmysql 8.2.12, MySQL 8.2.12, curl 8.2.12, mbstring 8.2.12, and PHP version 8.2.12. The phpMyAdmin tab lists version 5.2.1, latest stable 5.2.3, documentation, and official homepage.

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.

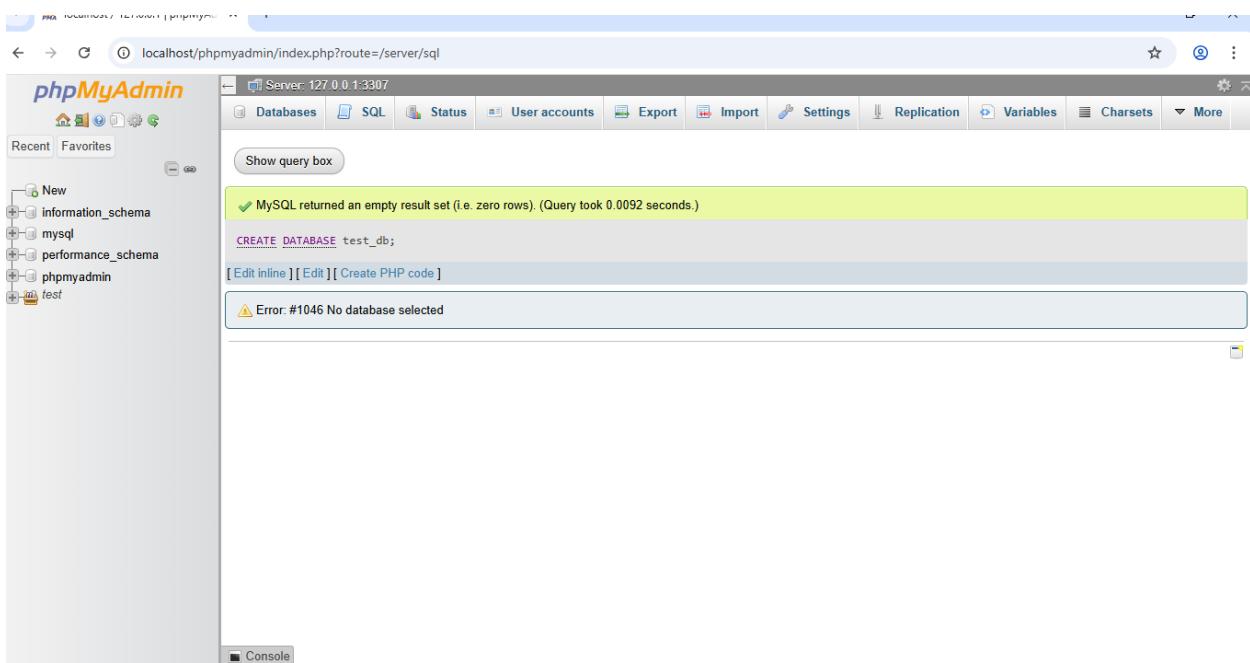
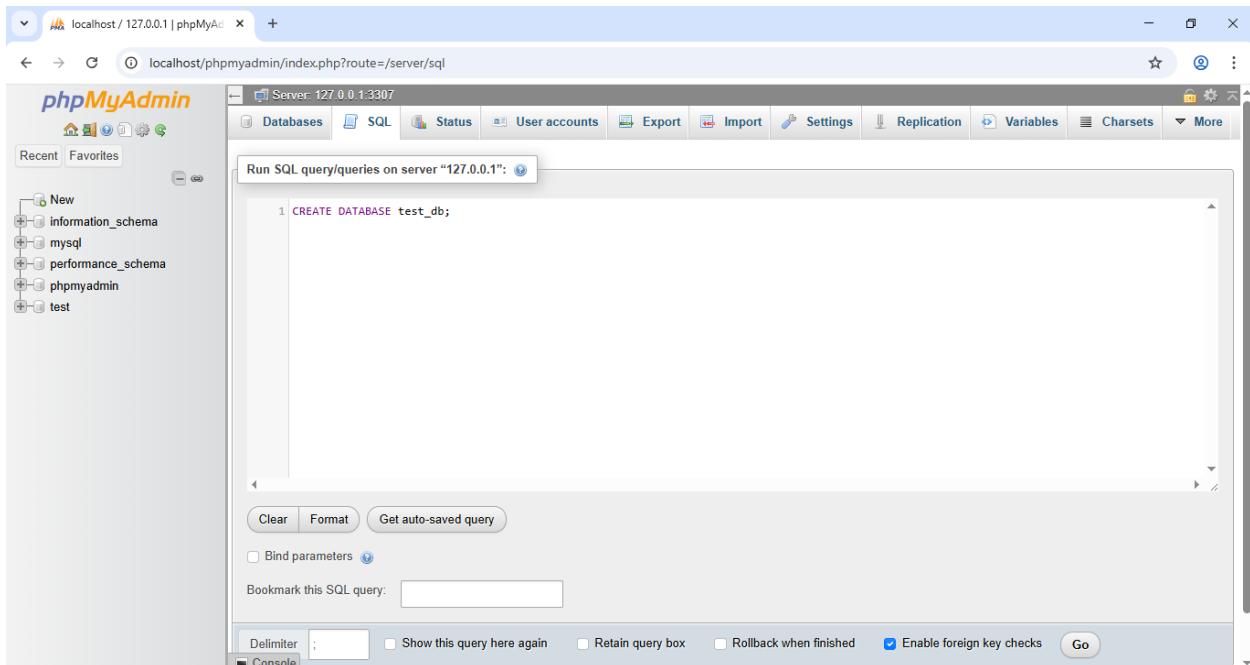
A simple planning process involves:

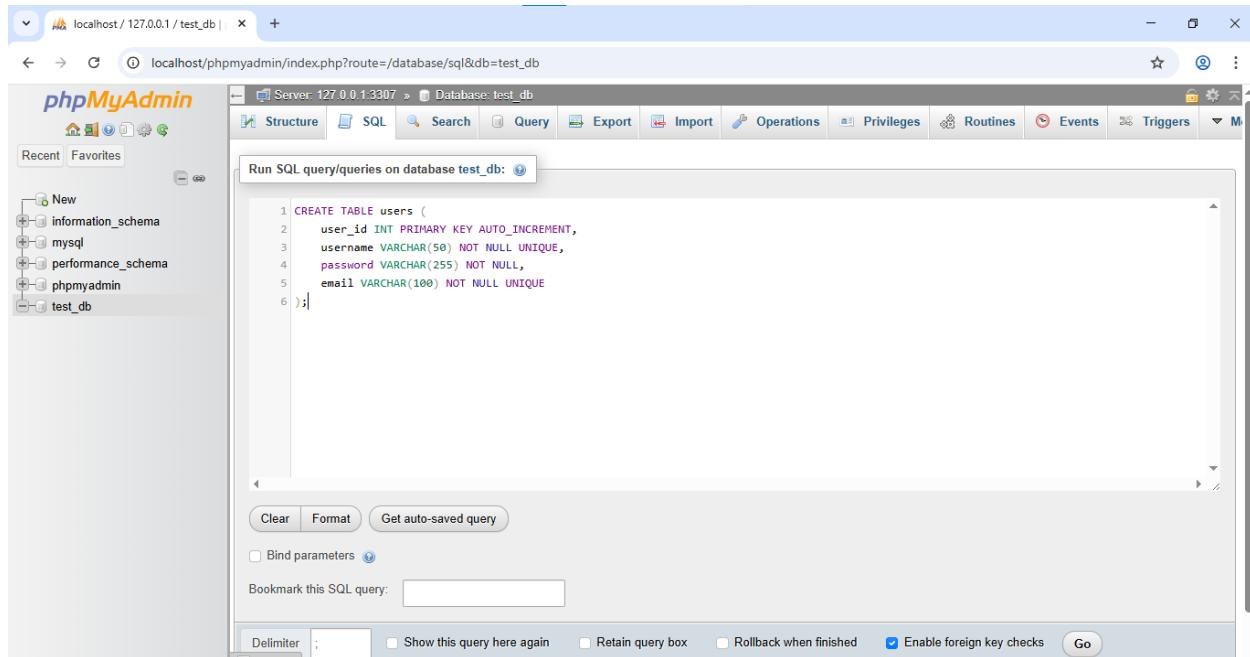
- **Identifying entities:** Figure out the main "things" your database needs to track, like Users, Products, or Orders.
- **Defining attributes:** Decide on the specific data points for each entity. For a Users table, this might include first_name, last_name, and email.
- **Specifying primary keys:** 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.

Answers:

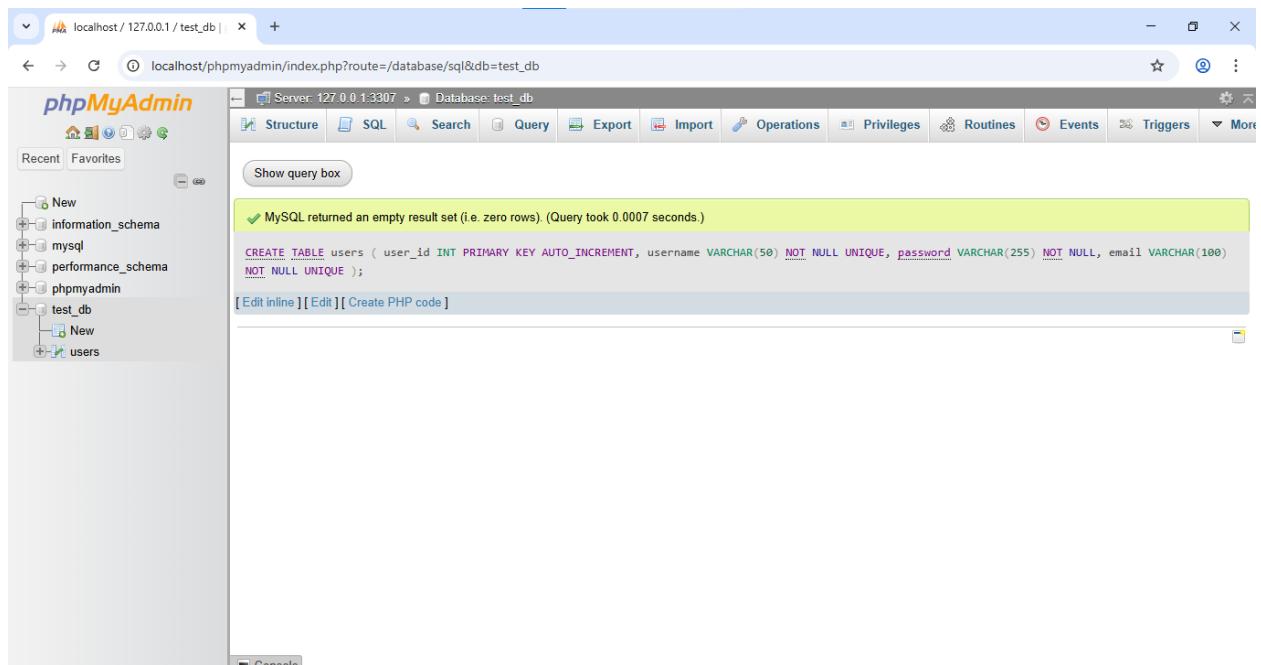




The screenshot shows the phpMyAdmin interface for the database 'test_db'. In the left sidebar, under the 'test_db' section, there is a 'New' folder icon. The main area contains a SQL query editor with the following code:

```
1 CREATE TABLE users (
2     user_id INT PRIMARY KEY AUTO_INCREMENT,
3     username VARCHAR(50) NOT NULL UNIQUE,
4     password VARCHAR(255) NOT NULL,
5     email VARCHAR(100) NOT NULL UNIQUE
6 );
```

Below the code, there are several buttons: 'Clear', 'Format', 'Get auto-saved query', 'Bind parameters', 'Bookmark this SQL query:', 'Delimiter :', and checkboxes for 'Show this query here again', 'Retain query box', 'Rollback when finished', and 'Enable foreign key checks'. A 'Go' button is also present.



The screenshot shows the phpMyAdmin interface after the SQL query has been run. The left sidebar now includes a 'users' entry under the 'test_db' section. The main area displays a message: 'MySQL returned an empty result set (i.e. zero rows). (Query took 0.0007 seconds.)' Below this message is the same CREATE TABLE statement. At the bottom of the screen, there is a 'Console' tab.

localhost/127.0.0.1/test_db

localhost/phpmyadmin/index.php?route=/sql&db=test_db&table=users&pos=0

phpMyAdmin

Server: 127.0.0.1:3307 > Database: test_db > Table: users

Browse Structure SQL Search Insert Export Import Privileges Operations Tracking Triggers

Showing rows 0 - 1 (total: 2). Query took 0.0003 seconds.

SELECT * FROM `users`

Profile [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	username	password	email
<input type="checkbox"/>	1	ANewUser_test	12345	tester@gmail.com
<input type="checkbox"/>	2	Player2	67890	player@yahoo.com

Check all With selected: Edit Copy Delete

Show all Number of rows: 25 Filter rows: Search this table Sort by key: None

Query results operations

Print Copy to clipboard Export Display chart Create view

Bookmark this SQL query

Console Let every user access this bookmark

The screenshot shows the phpMyAdmin interface for the 'users' table in the 'test_db'. The table has four columns: user_id, username, password, and email. There are two rows: one with user_id 1, username 'ANewUser_test', password '12345', and email 'tester@gmail.com'; and another with user_id 2, username 'Player2', password '67890', and email 'player@yahoo.com'. The interface includes navigation buttons like 'Edit', 'Copy', and 'Delete', and various operations like 'Print', 'Export', and 'Create view'.

localhost/127.0.0.1/test_db

localhost/phpmyadmin/index.php?route=/database/sql&db=test_db

phpMyAdmin

Server: 127.0.0.1:3307 > Database: test_db

Structure SQL Search Query Export Import Operations Privileges Routines Events Triggers

Run SQL query/queries on database test_db:

```
1 CREATE TABLE user_profile (
2     profile_id INT PRIMARY KEY AUTO_INCREMENT,
3     user_id INT NOT NULL,
4     first_name VARCHAR(50),
5     last_name VARCHAR(50),
6     date_of_birth DATE,
7     FOREIGN KEY (user_id) REFERENCES users(user_id)
8         ON DELETE CASCADE
9         ON UPDATE CASCADE
10 );
```

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

The screenshot shows the phpMyAdmin interface in the SQL tab, displaying a CREATE TABLE statement for 'user_profile'. The statement creates a table with columns: profile_id (primary key, auto-increment), user_id (not null), first_name, last_name, and date_of_birth. It includes a FOREIGN KEY constraint linking user_id to the users table. The interface includes buttons for 'Clear', 'Format', 'Get auto-saved query', 'Bind parameters', 'Bookmark this SQL query', and various execution options like 'Show this query here again', 'Retain query box', 'Rollback when finished', 'Enable foreign key checks', and a 'Go' button.

Screenshot of the phpMyAdmin interface showing the SQL tab for the test_db database.

The left sidebar shows the database structure:

- New
- information_schema
- mysql
- performance_schema
- phpmyadmin
- test_db
 - New
 - users
 - user_profile

The main area displays the following SQL query and its result:

```
CREATE TABLE user_profile ( profile_id INT PRIMARY KEY AUTO_INCREMENT, user_id INT NOT NULL, first_name VARCHAR(50), last_name VARCHAR(50), date_of_birth DATE, FOREIGN KEY (user_id) REFERENCES users(user_id) ON DELETE CASCADE ON UPDATE CASCADE );
```

MySQL returned an empty result set (i.e. zero rows). (Query took 0.0009 seconds.)

[Edit inline] [Edit] [Create PHP code]

Screenshot of the phpMyAdmin interface showing the SQL tab for the test_db database, specifically for the user_profile table.

The left sidebar shows the database structure:

- New
- information_schema
- mysql
- performance_schema
- phpmyadmin
- test_db
 - New
 - users
 - user_profile

The main area displays the following SQL query and its result:

```
INSERT INTO `user_profile` (`profile_id`, `user_id`, `first_name`, `last_name`, `date_of_birth`) VALUES ('1', '1', 'Sarah', 'Duterte', '1990-10-18'), ('2', '2', 'Bongbong', 'Marcos', NULL);
```

2 rows inserted.

[Edit inline] [Edit] [Create PHP code]

Run SQL query/queries on table test_db.user_profile:

```
1 INSERT INTO `user_profile` (`profile_id`, `user_id`, `first_name`, `last_name`, `date_of_birth`) VALUES ('1', '1', 'Sarah', 'Duterte', '1990-10-18'), ('2', '2', 'Bongbong', 'Marcos', NULL);
```

Profile table structure:

profile_id	user_id	first_name	last_name	date_of_birth
------------	---------	------------	-----------	---------------

localhost / 127.0.0.1 / test_db / +

localhost/phpmyadmin/index.php?route=/sql&db=test_db&table=user_profile&pos=0

phpMyAdmin

Recent Favorites

New information_schema mysql performance_schema phpmyadmin test_db New users user_profile

Server: 127.0.0.1:3307 > Database: test_db > Table: user_profile

Browse Structure SQL Search Insert Export Import Privileges Operations Tracking Triggers

Showing rows 0 - 1 (2 total, Query took 0.0021 seconds.)

SELECT * FROM `user_profile`

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

	profile_id	user_id	first_name	last_name	date_of_birth
<input type="checkbox"/>	1	1	Sarah	Duterte	1990-10-18
<input type="checkbox"/>	2	2	Bongbong	Marcos	NULL

Check all With selected: Edit Copy Delete Export

Show all Number of rows: 25 Filter rows: Search this table Sort by key: None

Query results operations

Print Copy to clipboard Export Display chart Create view

Bookmark this SQL query

Console Let every user access this bookmark