Deploying a PHP Registration Form

Introduction

This project demonstrates a **PHP-based Registration Form** deployed on an AWS EC2 instance named student-app.
It is powered by the **LAMP stack** (Linux, Apache, MariaDB, PHP) and allows users to register through an HTML form, with their details stored in a database.

Features

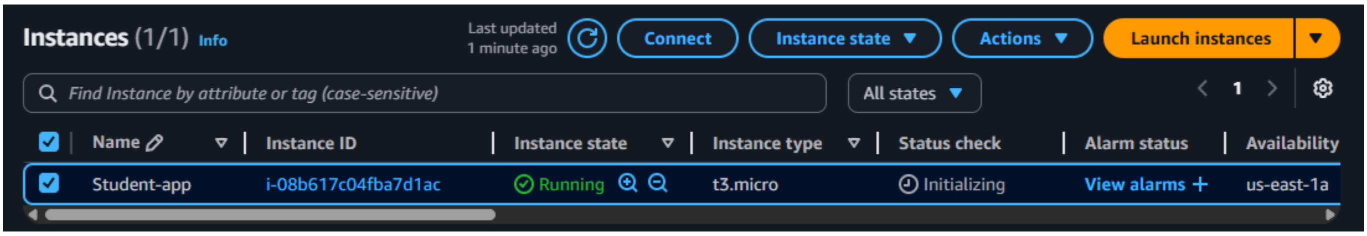
- **signup.html** → Collects user input (Name, Email, Website, Comment, Gender).
- **submit.php** → Processes the form submission, inserts data into the database, and displays the result.
- **LAMP.sh** → Shell script used to automate installation of Apache, MariaDB, and PHP.

Prerequisites

- AWS EC2 instance (Amazon Linux) – Instance name: student-app
- Apache (httpd)
- PHP ≥ 8.4 (version)
- MariaDB (MySQL)
- PHP-MySQL connector
- Security Group Rules:
  - **80 (HTTP)** → Open for public access
  - **22 (SSH)** → For secure admin access

Steps to Deploy

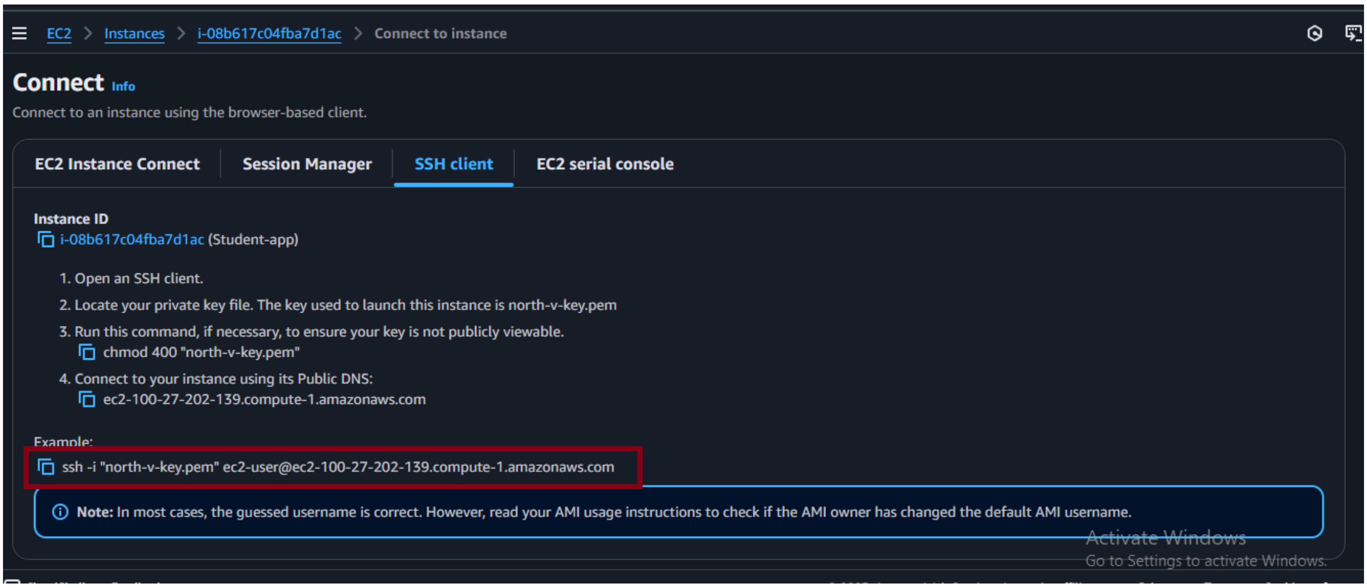
Step 1: Launching an EC2 instance.



☑	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability
☑	Student-app	i-08b617c04fba7d1ac	Running	t3.micro	Initializing	View alarms +	us-east-1a

Step 2: Connect to your EC2 instance copy ssh coomand and paste it in git bash.

1.



Connect Info

Connect to an instance using the browser-based client.

Instance ID
i-08b617c04fba7d1ac (Student-app)

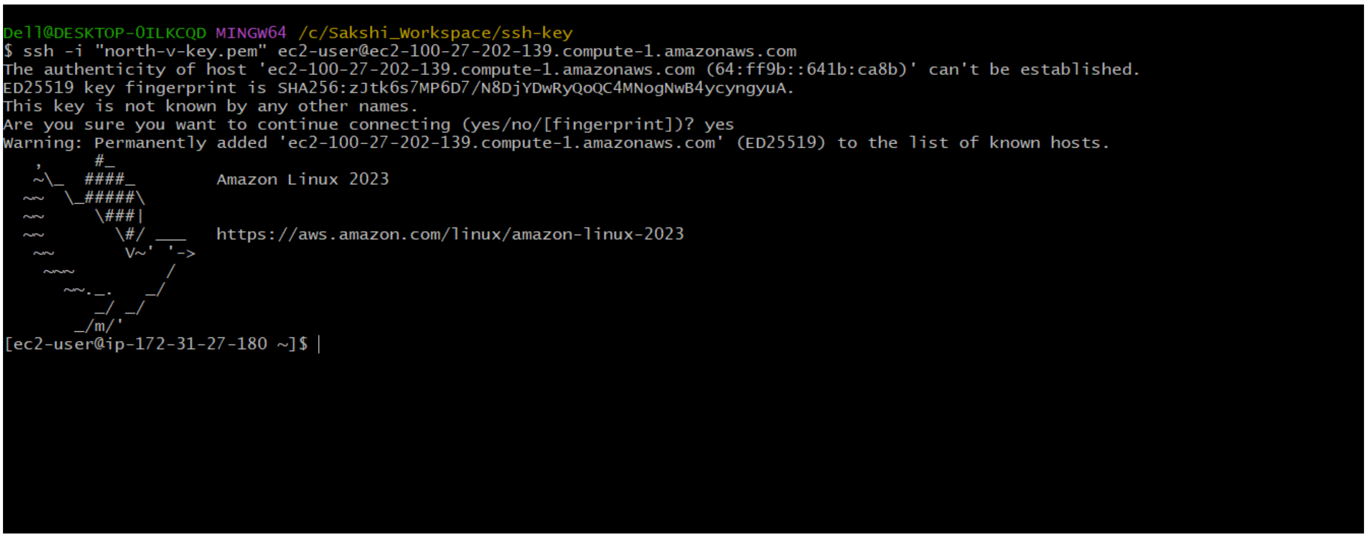
1. Open an SSH client.
2. Locate your private key file. The key used to launch this instance is north-v-key.pem
3. Run this command, if necessary, to ensure your key is not publicly viewable.
   chmod 400 "north-v-key.pem"
4. Connect to your instance using its Public DNS:
   ec2-100-27-202-139.compute-1.amazonaws.com

Example:

```
ssh -i "north-v-key.pem" ec2-user@ec2-100-27-202-139.compute-1.amazonaws.com
```

Note: In most cases, the guessed username is correct. However, read your AMI usage instructions to check if the AMI owner has changed the default AMI username.

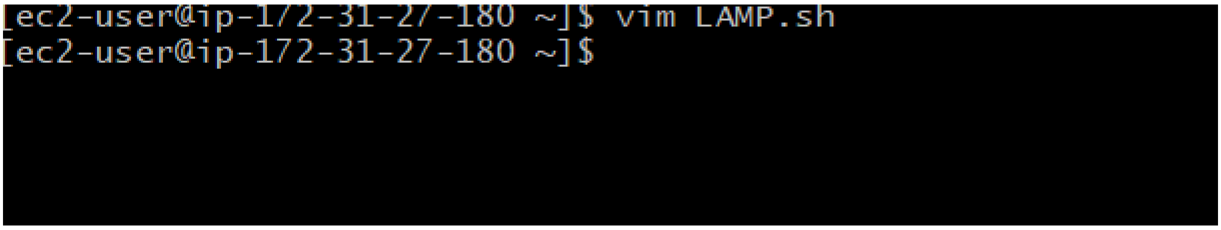
2.



```
Dell@DESKTOP-OILKCQD MINGW64 /c/Sakshi_Workspace/ssh-key
$ ssh -i "north-v-key.pem" ec2-user@ec2-100-27-202-139.compute-1.amazonaws.com
The authenticity of host 'ec2-100-27-202-139.compute-1.amazonaws.com (64:ff9b::641b:ca8b)' can't be established.
ED25519 key fingerprint is SHA256:zJtk6s7MP6D7/N8DjYDwRyQoQC4MNogNwB4ycyngyuA.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'ec2-100-27-202-139.compute-1.amazonaws.com' (ED25519) to the list of known hosts.
   ,     #_
   ~\_  ####_        Amazon Linux 2023
  ~~  \_#####\
  ~~     \###|
  ~~       \#/ ___   https://aws.amazon.com/linux/amazon-linux-2023
   ~~       V~' '->
    ~~~         /
      ~~._.   _/
         _/ _/
       _/m/'
[ec2-user@ip-172-31-27-180 ~]$ |
```

Step 3: Automating the LAMP stack installation with LAMP.sh script.

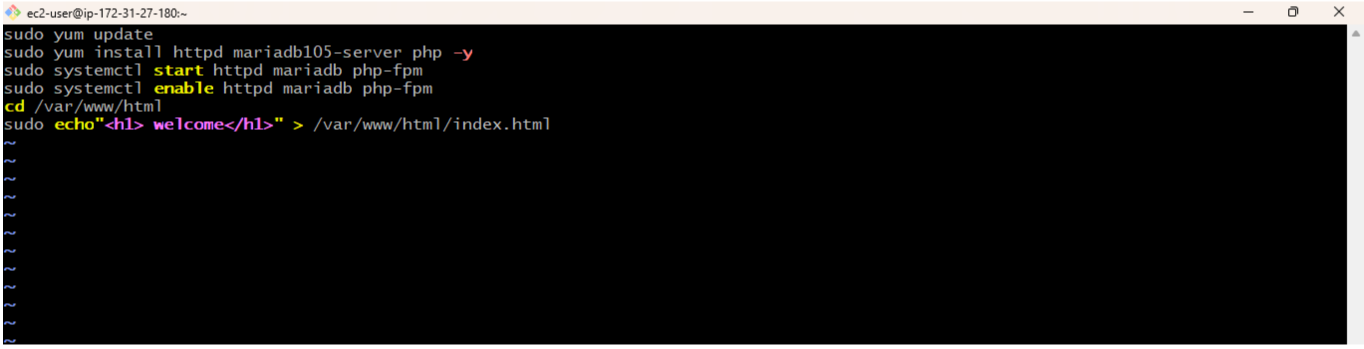
1.Create Lamp.sh



```
[ec2-user@ip-172-31-27-180 ~]$ vim LAMP.sh
[ec2-user@ip-172-31-27-180 ~]$
```

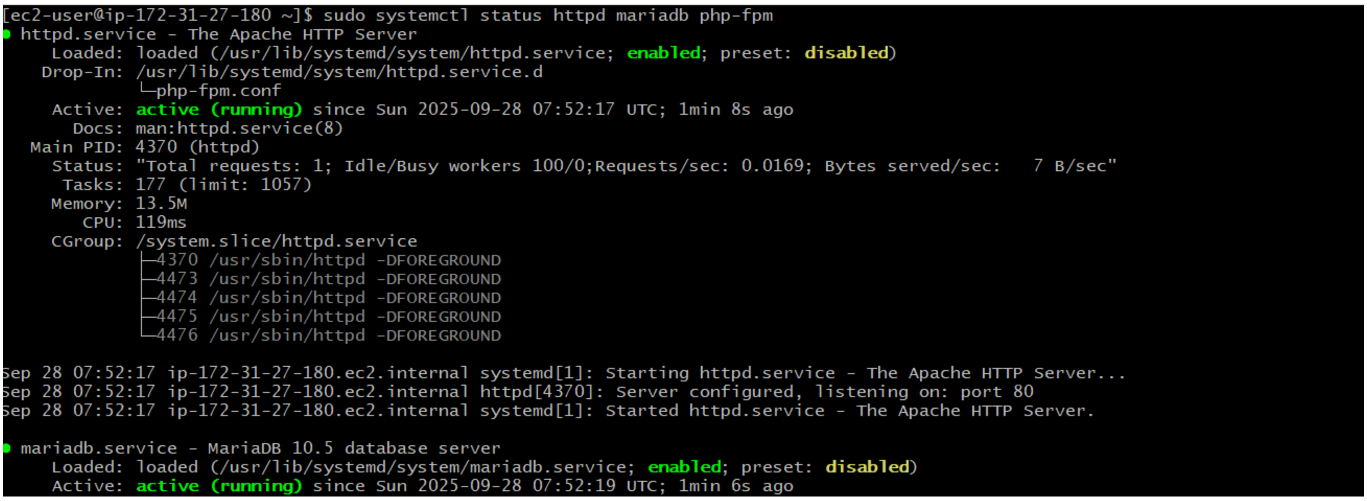
2. Insert the code for installing apache, mysql and php (LAMP)

```
sudo yum update
sudo yum install httpd mariadb105-server php-y
sudo systemctl start httpd mariadb php-fpm
sudo systemctl enable httpd mariadb php-fpm
sudo echo"<h1>welcome</h1>"
/var/www/html/index.html
```



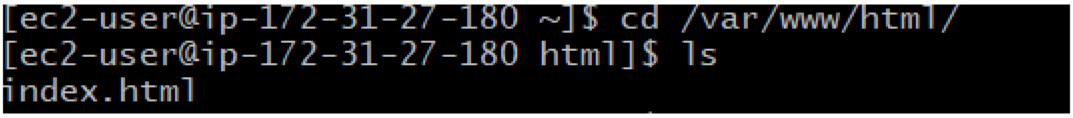
```
sudo yum update
sudo yum install httpd mariadb105-server php -y
sudo systemctl start httpd mariadb php-fpm
sudo systemctl enable httpd mariadb php-fpm
cd /var/www/html
sudo echo"<h1> welcome</h1>" > /var/www/html/index.html
~
~
~
~
~
~
~
~
~
~
~
~
```

3. Check the status of apache, mysql and php



```
[ec2-user@ip-172-31-27-180 ~]$ sudo systemctl status httpd mariadb php-fpm
● httpd.service - The Apache HTTP Server
     Loaded: loaded (/usr/lib/systemd/system/httpd.service; enabled; preset: disabled)
    Drop-In: /usr/lib/systemd/system/httpd.service.d
             └─php-fpm.conf
     Active: active (running) since Sun 2025-09-28 07:52:17 UTC; 1min 8s ago
       Docs: man:httpd.service(8)
   Main PID: 4370 (httpd)
     Status: "Total requests: 1; Idle/Busy workers 100/0;Requests/sec: 0.0169; Bytes served/sec:   7 B/sec"
      Tasks: 177 (limit: 1057)
     Memory: 13.5M
        CPU: 119ms
     CGroup: /system.slice/httpd.service
             ├─4370 /usr/sbin/httpd -DFOREGROUND
             ├─4473 /usr/sbin/httpd -DFOREGROUND
             ├─4474 /usr/sbin/httpd -DFOREGROUND
             ├─4475 /usr/sbin/httpd -DFOREGROUND
             └─4476 /usr/sbin/httpd -DFOREGROUND

Sep 28 07:52:17 ip-172-31-27-180.ec2.internal systemd[1]: Starting httpd.service - The Apache HTTP Server...
Sep 28 07:52:17 ip-172-31-27-180.ec2.internal httpd[4370]: Server configured, listening on: port 80
Sep 28 07:52:17 ip-172-31-27-180.ec2.internal systemd[1]: Started httpd.service - The Apache HTTP Server.

● mariadb.service - MariaDB 10.5 database server
     Loaded: loaded (/usr/lib/systemd/system/mariadb.service; enabled; preset: disabled)
     Active: active (running) since Sun 2025-09-28 07:52:19 UTC; 1min 6s ago
```

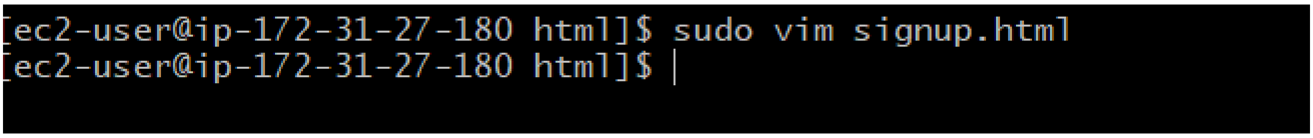
4. Change directory to Default directory



```
[ec2-user@ip-172-31-27-180 ~]$ cd /var/www/html/
[ec2-user@ip-172-31-27-180 html]$ ls
index.html
```

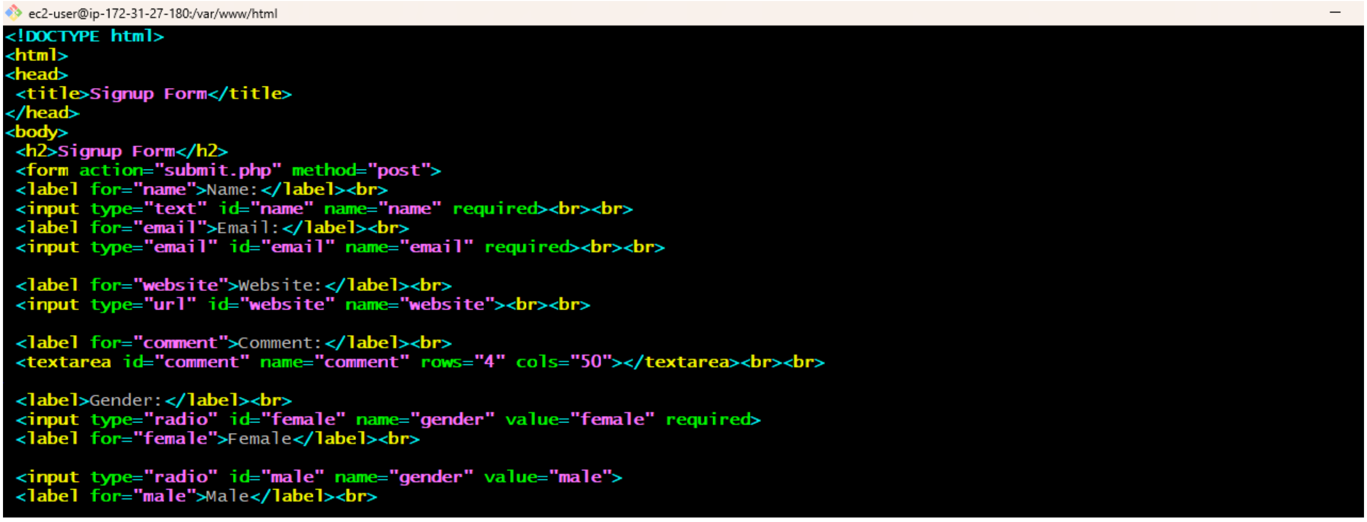
Step 4: Creating Signup Page

```
sudo vim signup.html
```



```
[ec2-user@ip-172-31-27-180 html]$ sudo vim signup.html
[ec2-user@ip-172-31-27-180 html]$ |
```

- Code of Signup.html



ec2-user@ip-172-31-27-180:/var/www/html

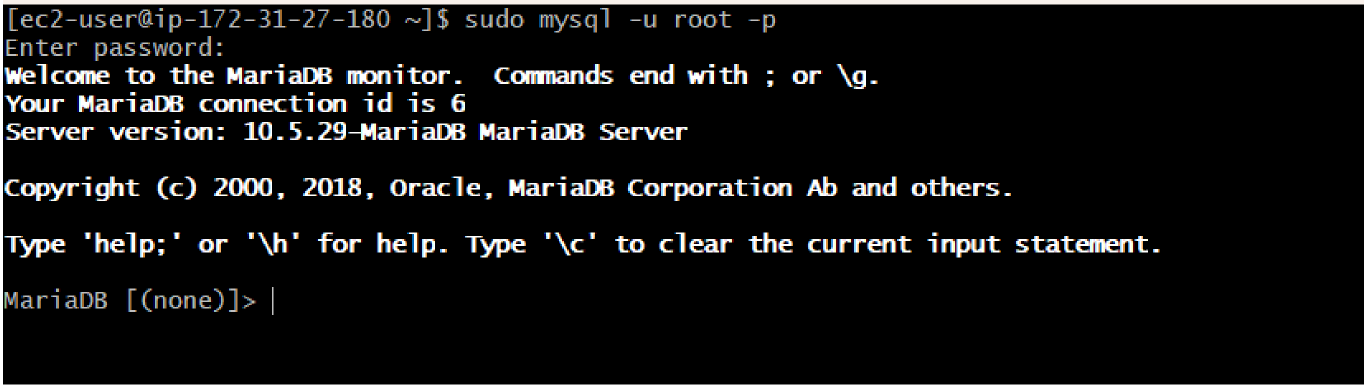
```
<!DOCTYPE html>
<html>
<head>
 <title>Signup Form</title>
</head>
<body>
 <h2>Signup Form</h2>
 <form action="submit.php" method="post">
 <label for="name">Name:</label><br>
 <input type="text" id="name" name="name" required><br><br>
 <label for="email">Email:</label><br>
 <input type="email" id="email" name="email" required><br><br>

 <label for="website">Website:</label><br>
 <input type="url" id="website" name="website"><br><br>

 <label for="comment">Comment:</label><br>
 <textarea id="comment" name="comment" rows="4" cols="50"></textarea><br><br>

 <label>Gender:</label><br>
 <input type="radio" id="female" name="gender" value="female" required>
 <label for="female">Female</label><br>

 <input type="radio" id="male" name="gender" value="male">
 <label for="male">Male</label><br>
```

Step 5: Configure the Database (MariaDB)

1.Generate the Username and Password.

```
sudo mysql
alter user root@localhost identified by'root';
```

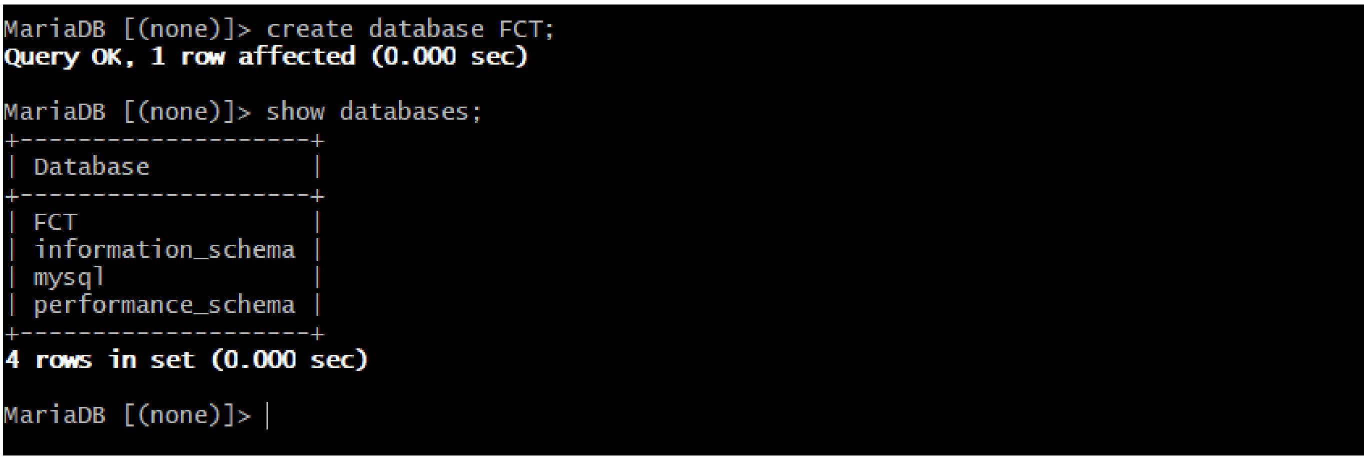
2.Login to Mysql (mariadb105-server) sudo mysql -u root -p



```
[ec2-user@ip-172-31-27-180 ~]$ sudo mysql -u root -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 6
Server version: 10.5.29-MariaDB MariaDB Server

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]> |
```

3.Create Database

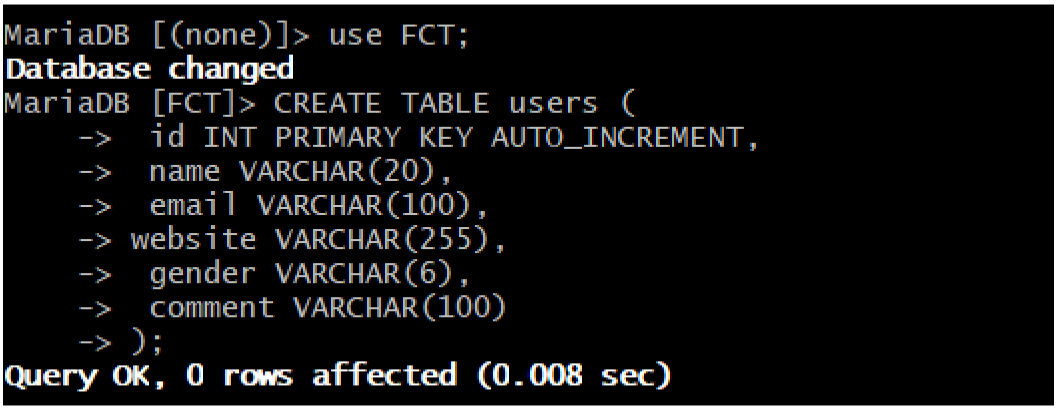
```
  # to create database
  create database FCT;
  # to see all databases
  show databases;
  # to use that database
  use FCT;
```



```
MariaDB [(none)]> create database FCT;
Query OK, 1 row affected (0.000 sec)

MariaDB [(none)]> show databases;
+--------------------+
| Database           |
+--------------------+
| FCT                |
| information_schema |
| mysql              |
| performance_schema |
+--------------------+
4 rows in set (0.000 sec)

MariaDB [(none)]> |
```

4.Creating table according to the signup form

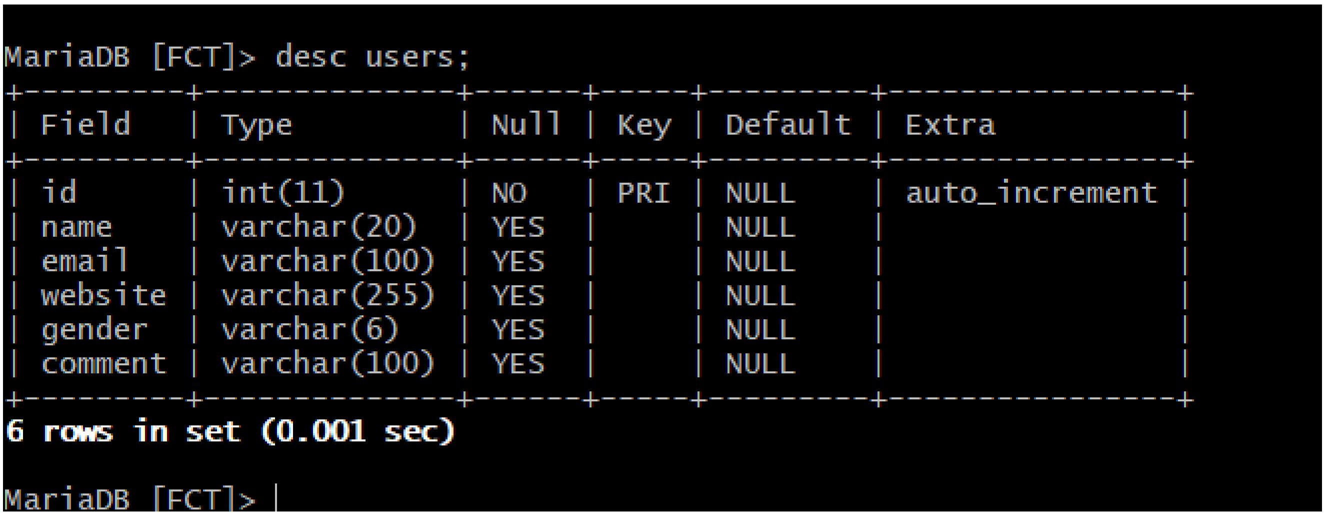
```
CREATE TABLE users (
id INT PRIMARY KEY AUTO_INCREMENT,
name VARCHAR(20),
email VARCHAR(100),
website VARCHAR(255),
gender VARCHAR(6),
comment VARCHAR(100));
```



```
MariaDB [(none)]> use FCT;
Database changed
MariaDB [FCT]> CREATE TABLE users (
    ->  id INT PRIMARY KEY AUTO_INCREMENT,
    ->  name VARCHAR(20),
    ->  email VARCHAR(100),
    -> website VARCHAR(255),
    ->  gender VARCHAR(6),
    ->  comment VARCHAR(100)
    -> );
Query OK, 0 rows affected (0.008 sec)
```

5.Describe the table

```
desc users;
```

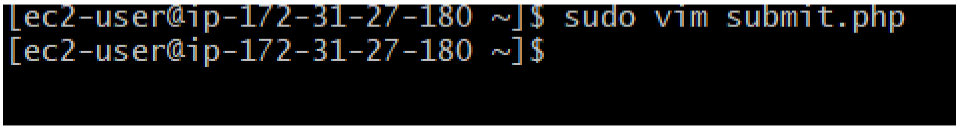


```
MariaDB [FCT]> desc users;
+---------+--------------+------+-----+---------+----------------+
| Field   | Type         | Null | Key | Default | Extra          |
+---------+--------------+------+-----+---------+----------------+
| id      | int(11)      | NO   | PRI | NULL    | auto_increment |
| name    | varchar(20)  | YES  |     | NULL    |                |
| email   | varchar(100) | YES  |     | NULL    |                |
| website | varchar(255) | YES  |     | NULL    |                |
| gender  | varchar(6)   | YES  |     | NULL    |                |
| comment | varchar(100) | YES  |     | NULL    |                |
+---------+--------------+------+-----+---------+----------------+
6 rows in set (0.001 sec)

MariaDB [FCT]> |
```

Step 6: Connect Form to Database with submit.php

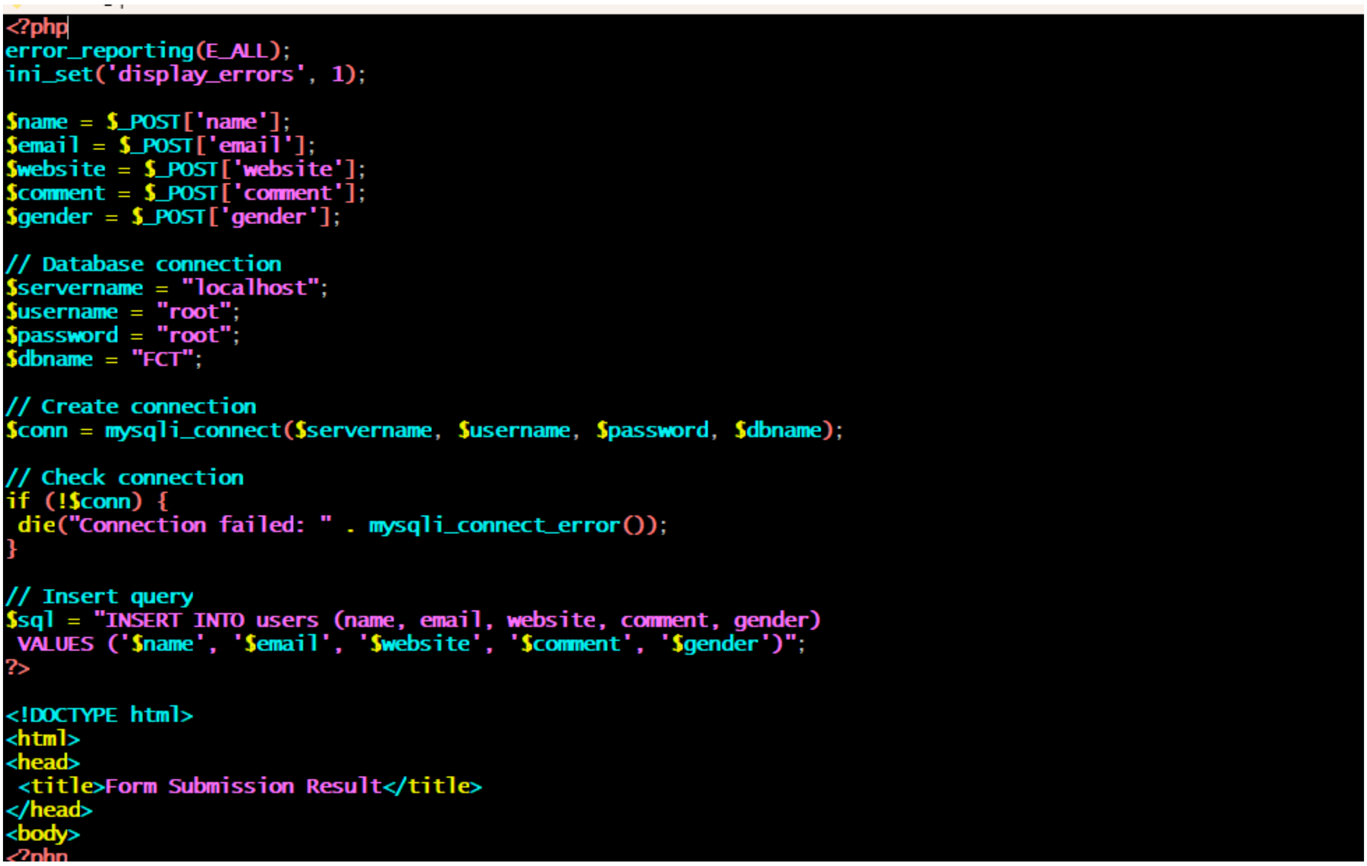
1. Create the file submit.php

```
sudo vim submit.php
```



```
[ec2-user@ip-172-31-27-180 ~]$ sudo vim submit.php
[ec2-user@ip-172-31-27-180 ~]$
```

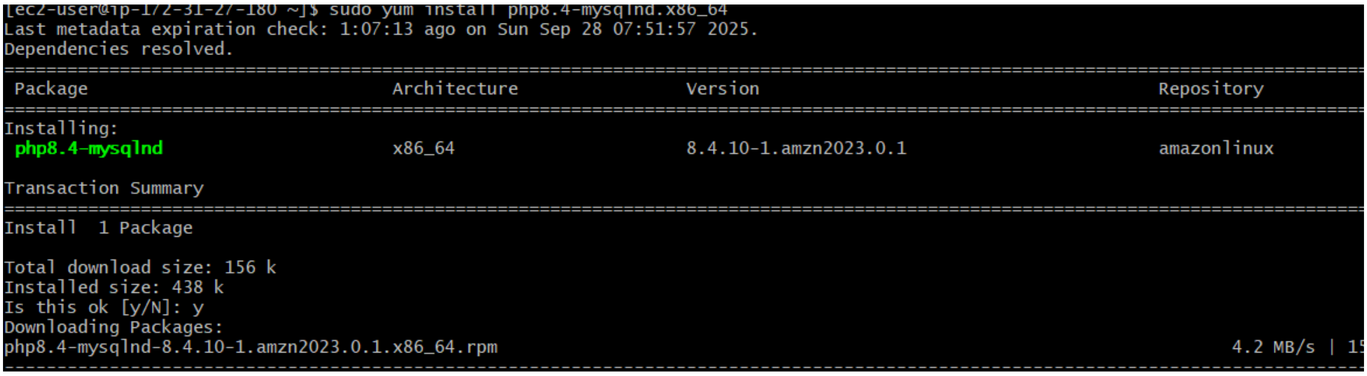
2.Code of submit.php



```
<?php
error_reporting(E_ALL);
ini_set('display_errors', 1);

$name = $_POST['name'];
$email = $_POST['email'];
$website = $_POST['website'];
$comment = $_POST['comment'];
$gender = $_POST['gender'];

// Database connection
$servername = "localhost";
$username = "root";
$password = "root";
$dbname = "FCT";

// Create connection
$conn = mysqli_connect($servername, $username, $password, $dbname);

// Check connection
if (!$conn) {
 die("Connection failed: " . mysqli_connect_error());
}

// Insert query
$sql = "INSERT INTO users (name, email, website, comment, gender)
 VALUES ('$name', '$email', '$website', '$comment', '$gender')";
?>

<!DOCTYPE html>
<html>
<head>
 <title>Form Submission Result</title>
</head>
<body>
<?php
```

Step 7: Install PHP-MSQL Connector

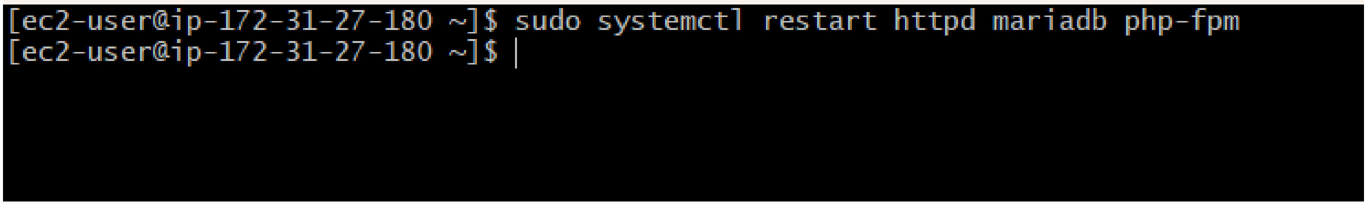
```
sudo yum install php8.4-mysqlnd.x86_64
```



```
[ec2-user@ip-172-31-27-180 ~]$ sudo yum install php8.4-mysqlnd.x86_64
Last metadata expiration check: 1:07:13 ago on Sun Sep 28 07:51:57 2025.
Dependencies resolved.
================================================================================================================================
 Package                              Architecture           Version                                   Repository
================================================================================================================================
Installing:
 php8.4-mysqlnd                       x86_64                 8.4.10-1.amzn2023.0.1                     amazonlinux

Transaction Summary
================================================================================================================================
Install  1 Package

Total download size: 156 k
Installed size: 438 k
Is this ok [y/N]: y
Downloading Packages:
php8.4-mysqlnd-8.4.10-1.amzn2023.0.1.x86_64.rpm                                                            4.2 MB/s | 15
--------------------------------------------------------------------------------------------------------------------------------
```

Step 8: Restart the Services

```
sudo systemctl restart httpd mariadb php-fpm
```

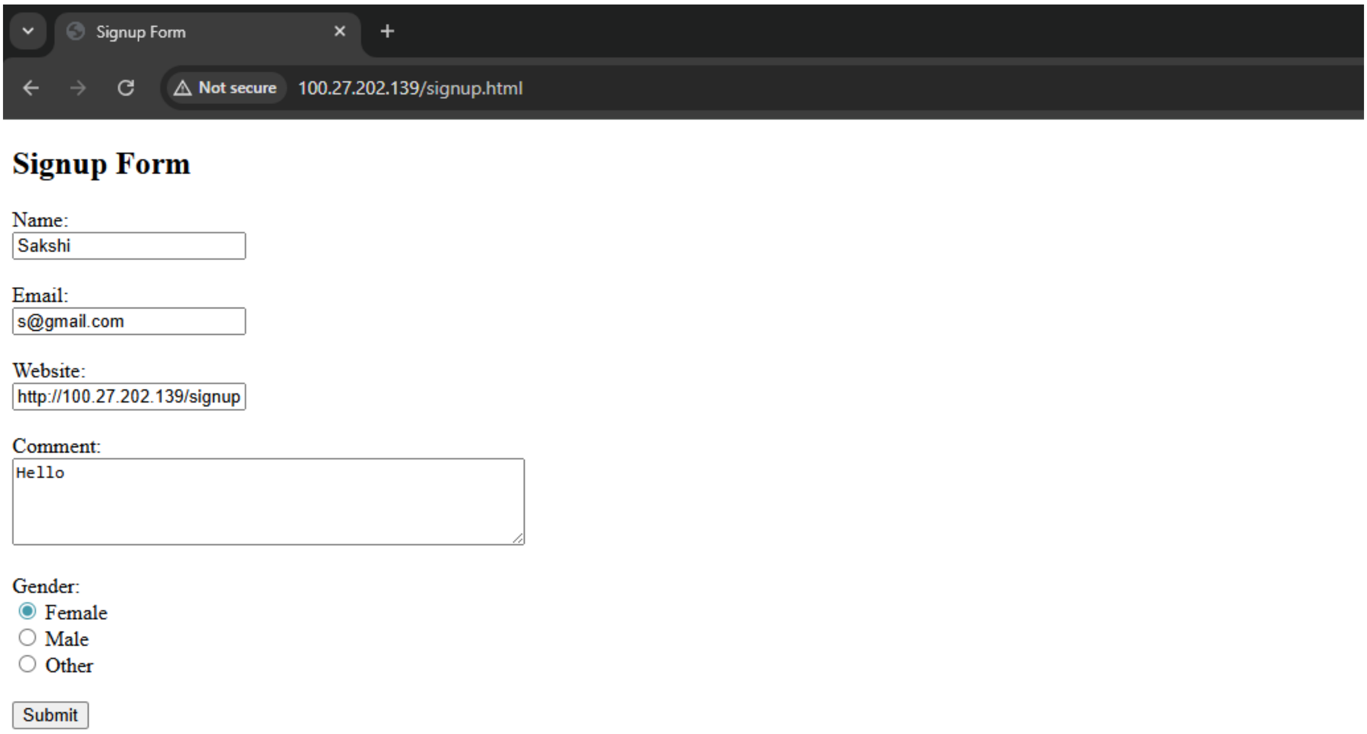


```
[ec2-user@ip-172-31-27-180 ~]$ sudo systemctl restart httpd mariadb php-fpm
[ec2-user@ip-172-31-27-180 ~]$ |
```

Step 8: Deploy and Test the Signup form

- Copy the Public IP and Paste it in any browser.

1.Signup.html



100.27.202.139/signup.html

Signup Form

Name:
Sakshi

Email:
s@gmail.com

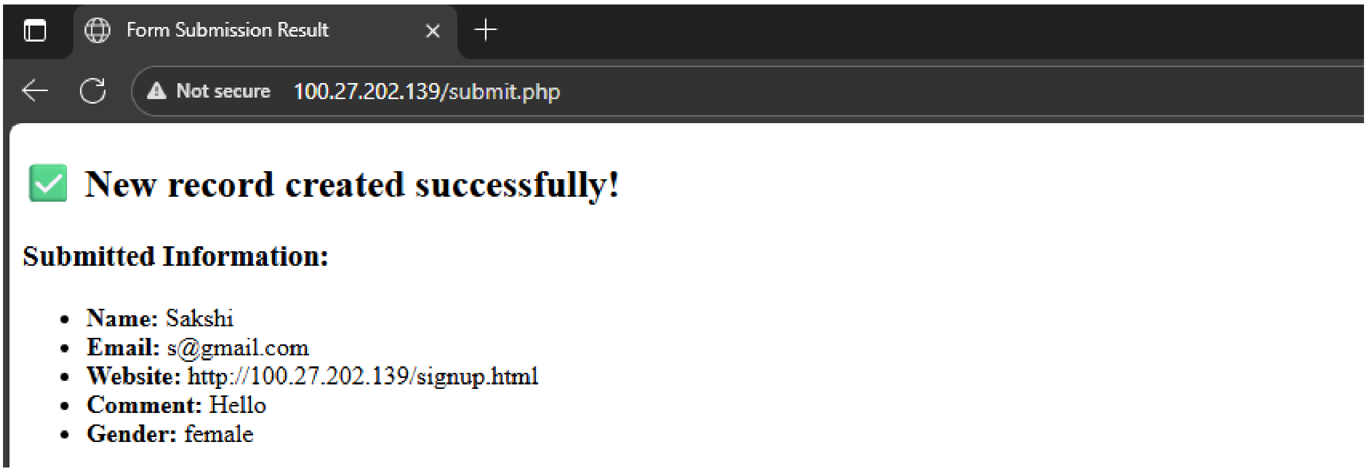
Website:
http://100.27.202.139/signup

Comment:
Hello

Gender:
● Female
○ Male
○ Other

Submit

2.Submit.php



✅ New record created successfully!

Submitted Information:

- Name: Sakshi
- Email: s@gmail.com
- Website: http://100.27.202.139/signup.html
- Comment: Hello
- Gender: female

Summary:

In this project, deployed a PHP-based signup form on an AWS EC2 instance by setting up a complete LAMP stack (Linux, Apache, MariaDB, PHP). Automated the LAMP installation with a custom lamp.sh script, created a signup form (signup.html), and connected it to a MariaDB database using a backend script (submit.php). The PHP-MySQL connector was installed to enable communication between PHP and MariaDB. Finally, tested the application in a browser and verified that user data was successfully stored in the database.