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signup.html	add	2 minutes ago
submit.php	add	2 minutes ago

README.md

Registration Form Deployment using Nginx, PHP & MariaDB (LEMP Stack)

Project Overview

This project demonstrates the deployment of a **web-based registration form** using the **LEMP stack** (Linux, Nginx, MariaDB, PHP).
Users can submit their details through a signup form, and the data is securely stored in a MariaDB database using PHP backend logic.

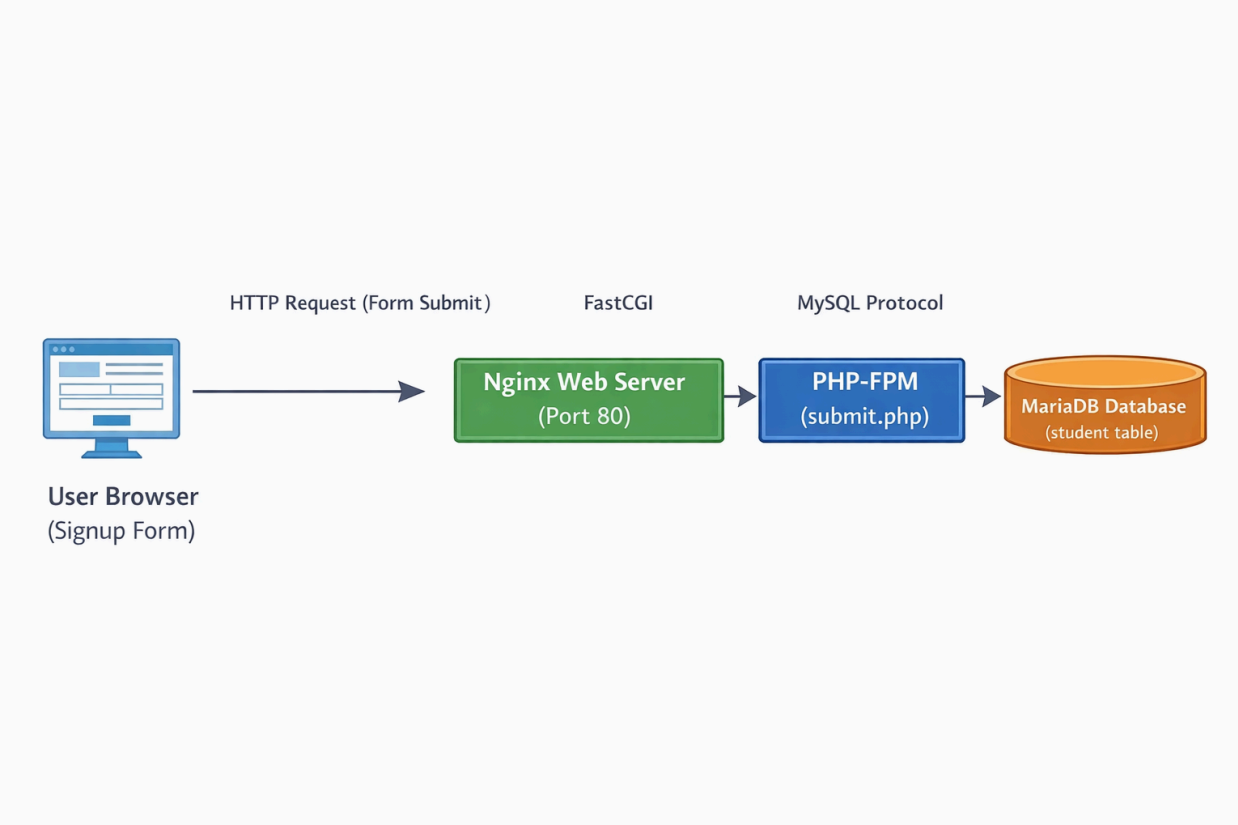
The project focuses on **real-world deployment concepts**, including:

- Web server configuration
- PHP processing with PHP-FPM
- Database integration using MySQL connector
- End-to-end data flow from browser to database

Tech Stack Used

- **Operating System:** Linux (Amazon Linux / RHEL-based)
- **Web Server:** Nginx
- **Backend Language:** PHP 8.4
- **PHP Handler:** PHP-FPM
- **Database:** MariaDB
- **Connector:** php-mysqlnd
- **Architecture Style:** LEMP Stack

Architecture Diagram



⚙️ How the Application Works

1. User opens the **signup form** in the browser.
2. Form data is submitted via **HTTP POST**.
3. **Nginx** receives the request and forwards PHP files to **PHP-FPM**.
4. **PHP-FPM** executes `submit.php`.
5. PHP connects to **MariaDB** using `php-mysqlnd`.
6. User data is inserted into the **student** table.
7. Success or error response is returned to the user.

Project Structure

```
/usr/share/nginx/html/
│
├── signup.php    # User registration form
├── submit.php    # PHP backend processing
```

Database Design

Database Name : registratnForm

Table Structure

```
CREATE TABLE student (
    id INT PRIMARY KEY AUTO_INCREMENT,
    name VARCHAR(15),
    email VARCHAR(50) UNIQUE,
    website VARCHAR(300),
    comment VARCHAR(300),
    gender VARCHAR(15)
);
```

Step-by-Step Deployment Guide

1. Update System

```
sudo yum update -y
```

2. Install Nginx , PHP 8.4, MariaDB

```
sudo yum install nginx mariadb105-server php -y
sudo systemctl start nginx mariadb php-fpm
sudo systemctl enable nginx mariadb php-fpm
```

3. Install PHP MySQL Connector

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

4. Create Database & Table

Login to MariaDB:

```
mysql -u root -p
```

Create database and table:

```
CREATE DATABASE registratnForm;
USE registratnForm;

CREATE TABLE student (
    id INT PRIMARY KEY AUTO_INCREMENT,
    name VARCHAR(15),
    email VARCHAR(50) UNIQUE,
    website VARCHAR(300),
    comment VARCHAR(300),
    gender VARCHAR(15)
);
```

5. Add Project Files

```
cd /usr/share/nginx/html
sudo nano signup.php
sudo nano submit.php
```

Ensure database configuration in submit.php:

```
$servername = "localhost";
$username = "root";
$password = "root";
$dbname = "registratnForm";
```

Access the Application

Signup Page

```
http://<SERVER-IP>/signup.php
```

✅ **New record created successfully!**

Submitted Information:

- **Name:** Rahul
- **Email:** rahul.sharma@gmail.com
- **Website:** https://rahulblog.in
- **Comment:** Exploring full stack development
- **Gender:** male

Verify Data Insertion

```
mysql -u root -p
```

```
USE registratnForm;
SELECT * FROM student;
```

```
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)]> show databases;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| mysql              |
| performance_schema |
| registratnForm     |
+--------------------+
4 rows in set (0.001 sec)

MariaDB [(none)]> use registratnForm;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
MariaDB [registratnForm]> show tables;
+--------------------------+
| Tables_in_registratnForm |
+--------------------------+
| student                  |
+--------------------------+
1 row in set (0.000 sec)

MariaDB [registratnForm]> select * from student;
+----+-------+-----------------------+---------------------+-------------------------------+--------+
| id | name  | email                 | website             | comment                       | gender |
+----+-------+-----------------------+---------------------+-------------------------------+--------+
|  1 | Rahul | rahul.sharma@gmail.com | https://rahulblog.in | Exploring full stack development | male   |
+----+-------+-----------------------+---------------------+-------------------------------+--------+
1 row in set (0.000 sec)

MariaDB [registratnForm]>
```

Conclusion

This project successfully demonstrates the **deployment of a complete web-based registration system** using the **LEMP stack (Linux, Nginx, MariaDB, PHP)**. It covers the full lifecycle of a web application from serving the frontend form to processing backend logic and securely storing user data in a relational database.

Through this project, we implemented:

- Nginx as a high-performance web server
- PHP with PHP-FPM for backend processing
- MariaDB for reliable data storage
- End-to-end form handling using HTTP POST requests