**🤖 Robot Arm Control Panel**

**📌 Overview**

This project is a **web-based control panel** for a 6-motor robotic arm. It allows users to:

* Adjust motor angles using sliders
* Save and manage multiple poses
* Load and run saved poses
* Store pose data in a MySQL database

Built using **PHP, MySQL, HTML, CSS, JavaScript** and designed for use with **XAMP**

**⚙️ Features**

* 🎛️ **Sliders:** Control 6 motors (0–180°)
* 💾 **Save Poses:** Store motor positions
* 📋 **Pose Table:** View all saved poses
* 🔄 **Load Pose:** Activate a saved pose
* 🗑️ **Remove Pose:** Delete a saved pose
* ▶️ **Run Pose:** Send pose data to Arduino (future integration)
* 🎨 **Modern UI:** Clean design with hover animations

**🛠️ Installation**

**1️⃣ Setup XAMPP**

* Install [XAMPP](https://www.apachefriends.org/)
* Start **Apache** and **MySQL**

**2️⃣ Create Database**

1. Open [phpMyAdmin](http://localhost/phpmyadmin/)
2. Run the following SQL:

CREATE DATABASE robot\_arm;

USE robot\_arm;

CREATE TABLE poses (

id INT AUTO\_INCREMENT PRIMARY KEY,

motor1 INT NOT NULL,

motor2 INT NOT NULL,

motor3 INT NOT NULL,

motor4 INT NOT NULL,

motor5 INT NOT NULL,

motor6 INT NOT NULL,

status TINYINT DEFAULT 1

);

**3️⃣ Project Files**

Place all files inside:

C:\xampp\htdocs\robot\_arm\

Files included:

* index.php → Main control panel
* save\_pose.php → Saves new poses
* remove\_pose.php → Deletes poses
* load\_pose.php → Loads and activates a pose
* get\_run\_pose.php → Retrieves active pose
* update\_status.php → Updates pose status

**4️⃣ Run the Project**

Open browser and go to:

http://localhost/robot\_arm/

**🚀 Usage**

1. Move sliders to adjust motor angles
2. Click **Save Pose** → Pose added to database
3. Use **Load** and **Run** to activate saved poses
4. Remove unwanted poses using **Remove** button

**🔧 Future Enhancements**

* Connect to Arduino via USB or Serial for real motor movement
* Add WebSocket for **real-time control**
* Include authentication for multiple users

**📜 License**

This project is open-source and free to use.

Diagram

