**SQL Project - Setup Guide**

# Requirements - XAMPP (Recommended: XAMPP) - PHP 7.4+ - MySQL (via XAMPP)

## Python libraries - Python 3.8+ - Flask - Transformers (CodeBERT or T5) - Torch - Scikit-learn - Trained NL2SQL model (t5-nl2sql-model4 and codebert-nl2sql-cleaned)

-Flask\_cors

-sentancepiece

# Installation Steps

# PHP & MySQL Setup

- Download & install XAMPP from https://www.apachefriends.org/index.html  
- Start Apache and MySQL from the XAMPP Control Panel

- Download visual code (code editor)  
- Copy your PHP files (select\_table.php, result.php, verify.php, etc.) into C:\xampp\htdocs\sql\_project1\

## 2. Python Flask API Setup

- Install dependencies:  
  
 pip install flask transformers torch scikit-learn  
  
- Ensure your trained model (e.g., codebert-nl2sql-cleaned) is saved in your project directory.

* Add student\_project file inside xampp(not inside the htdocs)

**Running the PHP Server**

1. Start XAMPP and ensure:  
 - Apache is running  
 - MySQL is running  
  
2. Open your browser and go to:  
 http://localhost/project\_sql1/index.php

**Running the Flask Server**

1. Navigate to your Flask API folder (where app.py is located)  
  
2. Run the Flask server:  
  
 python app.py  
  
3. You should see:  
 \* Running on [http://127.0.0.1:5000/ (click](http://127.0.0.1:5000/%20(click) on this url)  
  
4. Test the API by visiting:  
 http://127.0.0.1:5000/

# Full Flow Usage

1. Visit:  
 http://localhost/project\_sql1/select\_table.php  
  
2. Choose:  
 - Database type (e.g., MySQL)  
 - One or more table names  
 - Enter a natural language query  
  
3. The system will:  
 - Send the prompt to Flask API → get SQL  
 - Execute SQL in PHP → Show results  
 - Optionally verify on verify.php

**Notes**  
- Run the Flask server before submitting a prompt.  
- Ensure MySQL database (e.g., chat\_box\_db) and table (prompt\_history) exist.