**Step-by-Step Guide to Running the Flask Application with MySQL Connectivity**

1. **Prerequisites**

* **Before running the application, ensure you have the following installed:**
* Python (3.x recommended)
* MySQL Server (Mysql Workbench)
* pip (Python package manager)
* MySQL Connector for Python
* Flask and required libraries

**2. Install Required Libraries**

* Run the following command in your terminal or command prompt to install the necessary dependencies:
* pip install flask mysql-connector-python bcrypt sqlalchemy werkzeug

**3.Setting Up MySQL Database**

**3.1 Start MySQL Server**

* **Ensure your MySQL server is running. You can start it manually or via command:**

mysql -u root -p

(Enter your MySQL root password when prompted.

**3.2 Create Database**

* Run the following SQL command to create the required database:
* **CREATE DATABASE atm\_db;**

**3.3 Create Users Table**

* Run the following command to create the users table:

USE atm\_db;

CREATE TABLE users (

user\_id INT AUTO\_INCREMENT PRIMARY KEY,

name2 VARCHAR(50) NOT NULL,

bank VARCHAR(30) NOT NULL,

card BIGINT UNIQUE NOT NULL,

pin int NOT NULL,

balance float

);

**//You can set max size also**

**3.4 Create Transactions Table**

* **Run the following command to create the transactions table:**

CREATE TABLE transactions (

id INT AUTO\_INCREMENT PRIMARY KEY,

user\_id INT NOT NULL,

transaction\_type varchar(30) NOT NULL,

amount DECIMAL(12,2) NOT NULL,

timestamp TIMESTAMP DEFAULT CURRENT\_TIMESTAMP,

FOREIGN KEY (user\_id) REFERENCES users(user\_id) ON DELETE CASCADE );

**3.5 Verify Database Connection**

* **After creating the database and tables, check if they exist by running:**
* SHOW TABLES;

**3.6 To describe a table run following command**

* describe users;
* describe transactions;

**3.7 To fetch a records from database run following command**

* select \* from users;
* select \* from transactions;

**4.Configure the Flask Application**

**4.1 Ensure Database Connection is Set in Flask**

* **In your Flask script, ensure the database connection settings are correct:**

import mysql.connector

db = mysql.connector.connect(

host="localhost",

user="root",

password="your\_password",

database="atm\_db",

auth\_plugin='mysql\_native\_password'

)

cursor = db.cursor()

print("Database connected successfully!")

* **Set mysql username and password here at the place of user and password**

**5. Running the Flask Application**

**5.1 Navigate to Project Directory**

* **Ensure you are in the project folder where your Flask script is located. Use:**
* cd /path/to/your/project
* (Replace /path/to/your/project with the actual location of your Flask app.)

**5.2 Run the Flask Application**

* **Run the following command:**

python your\_script.py # write your filename Ex: python app.py

or if using Flask CLI:

set FLASK\_APP=your\_script.py # Windows

export FLASK\_APP=your\_script.py # Mac/Linux

flask run

* **If everything is configured correctly, you should see an output like:**

1. **To run application on windows/desktop run following URL** :

\* Running on **http://127.0.0.1:5000/** (Press CTRL+C to quit)

**2. To run application on mobile run following URL :**

\* Running on **http://192.168.0.105:5000/** (Press CTRL+C to quit)

**6. Access the Application**

* **Once the server is running, open a web browser and type URL:**

<http://127.0.0.1:5000/>

* **Once the server is running, open a mobile and type URL:**

<http://192.168.0.105:5000/>

* **Note : Please congigure server is running … Ex: python app.py**

**7. Testing the Application**

* **Sign up**: Register a new user.
* **Login**: Enter your card number and PIN.
* **Check balance**: Navigate to the balance page.
* **Deposit/Withdraw Money**: Perform transactions and verify the balance updates.
* **Change PIN**: Update your security PIN.
* **View Transactions**: Check past transactions.

**8. Common Issues and Fixes**

**8.1 Database Connection Error**

* Ensure MySQL is running.
* Verify MySQL username and password.
* Try removing auth\_plugin='mysql\_native\_password' if facing authentication issues.

**8.2 Flask Not Found**

Ensure Flask is installed by running:

pip show flask

If missing, install it:

pip install flask

**8.3 Port Already in Use**

Change the port in app.run():

app.run(debug=True, host='0.0.0.0', port=5001)

**9. Stopping the Application**

* To stop the Flask application, press **CTRL+C** in the terminal.

**10. Deploying the Application (Optional)**

* **If you want to deploy this application on a production server, consider using Gunicorn (for Linux servers) or mod\_wsgi (for Apache).**

pip install gunicorn

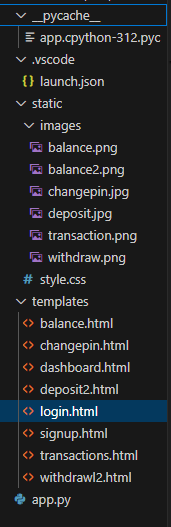
Run Flask with Gunicorn:

gunicorn -w 4 -b 0.0.0.0:5000 your\_script:app

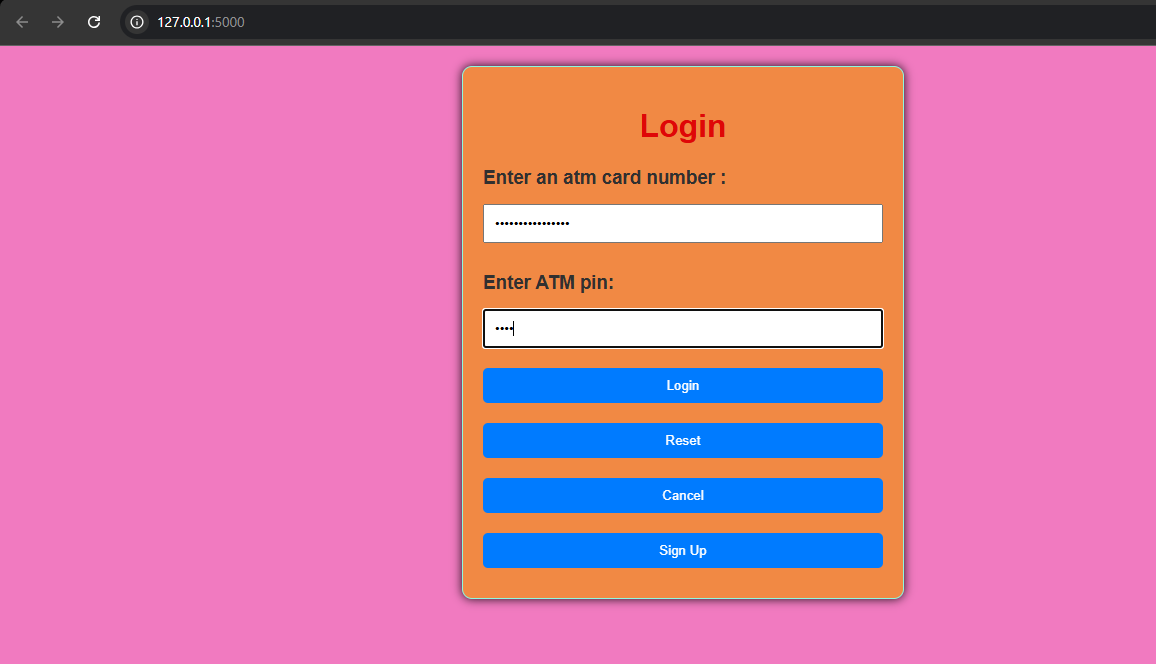
IMAGES

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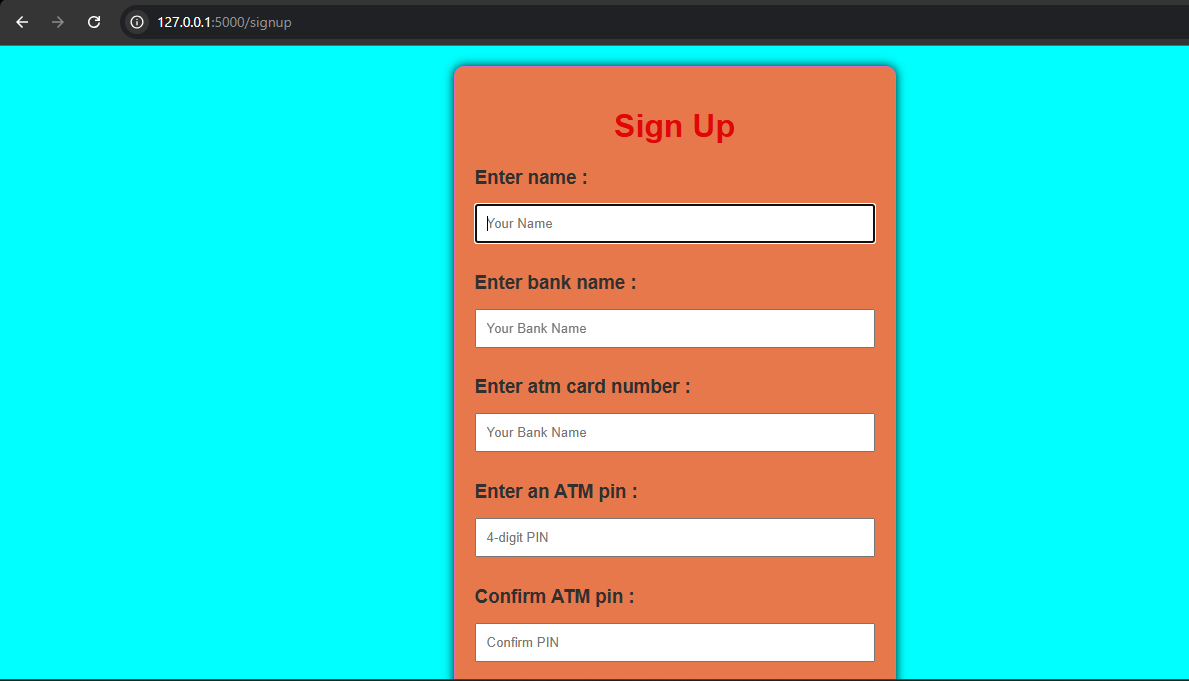
* **File Structure** :
* **ATM Project**



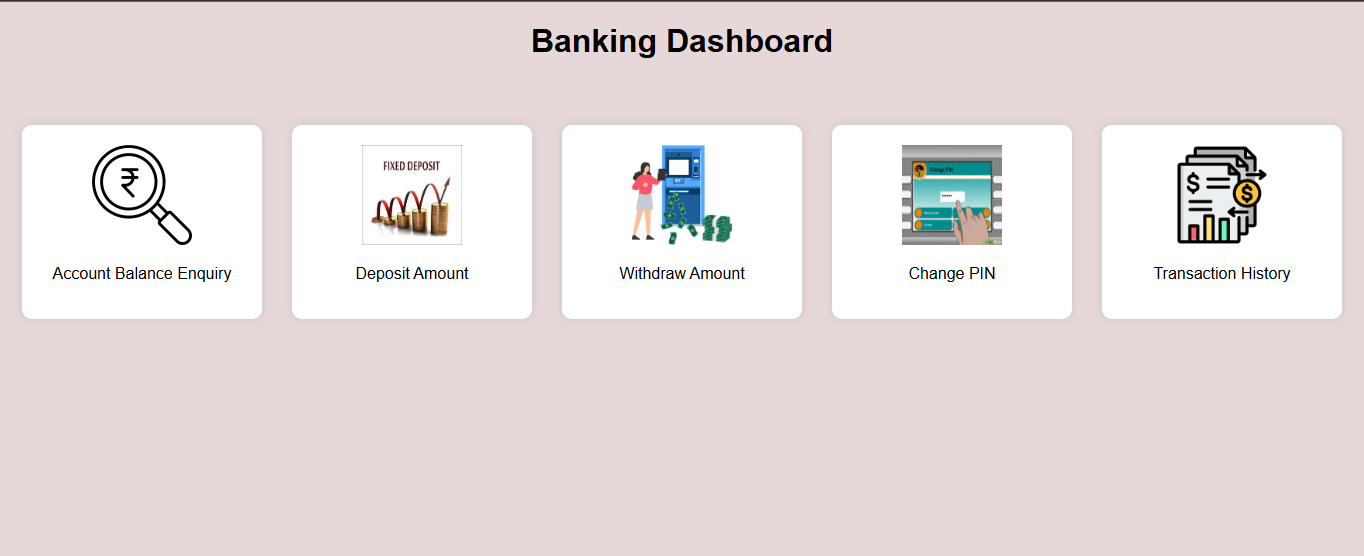
* **Login** **:**



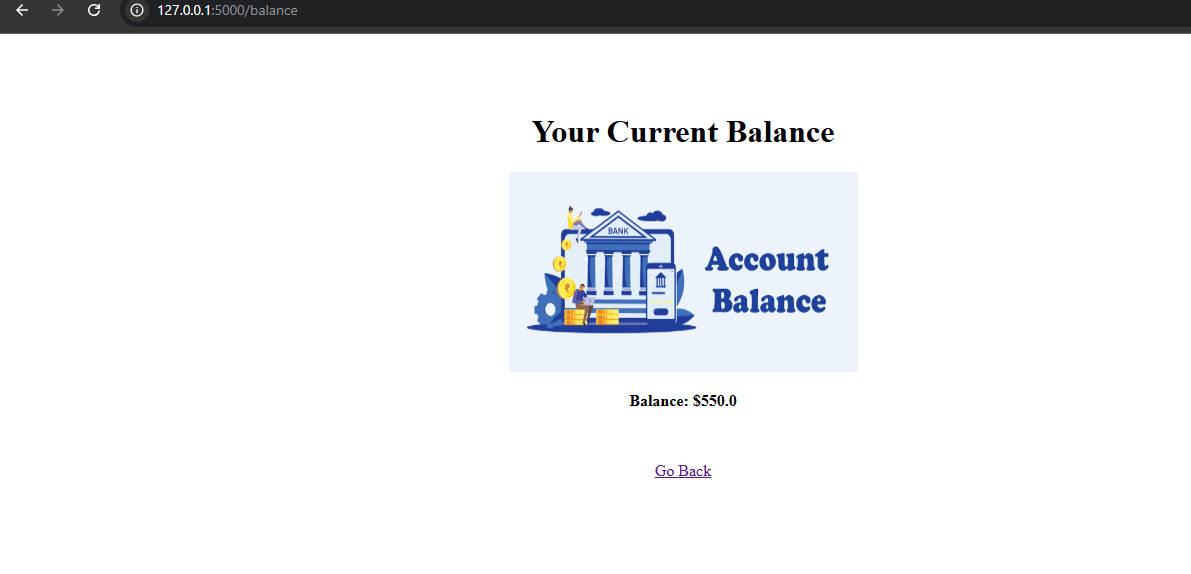
* **Signup :**



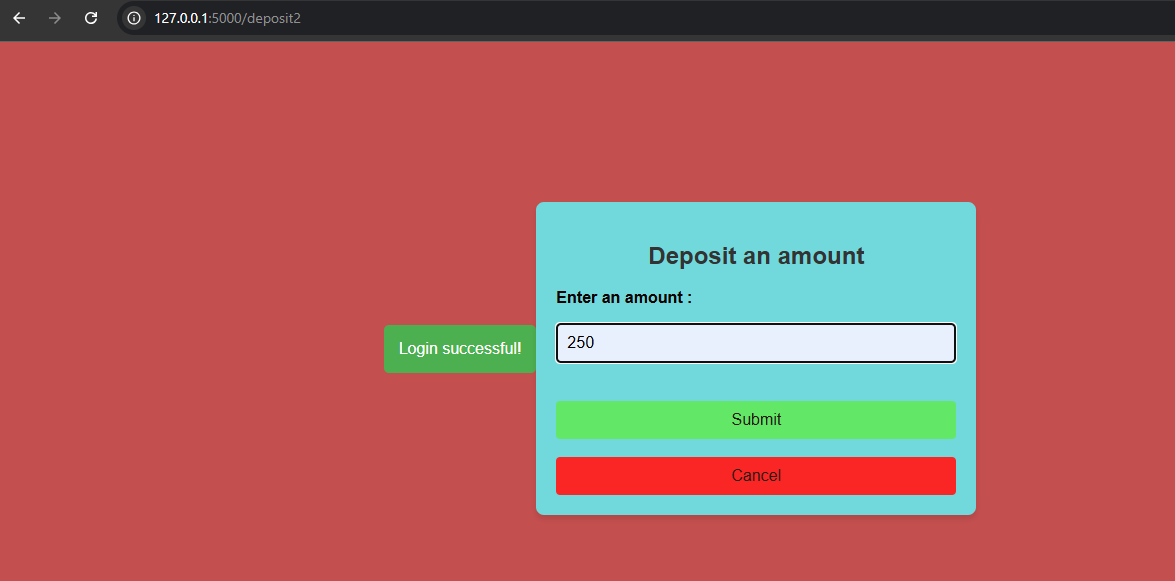
* **Dashboard :**

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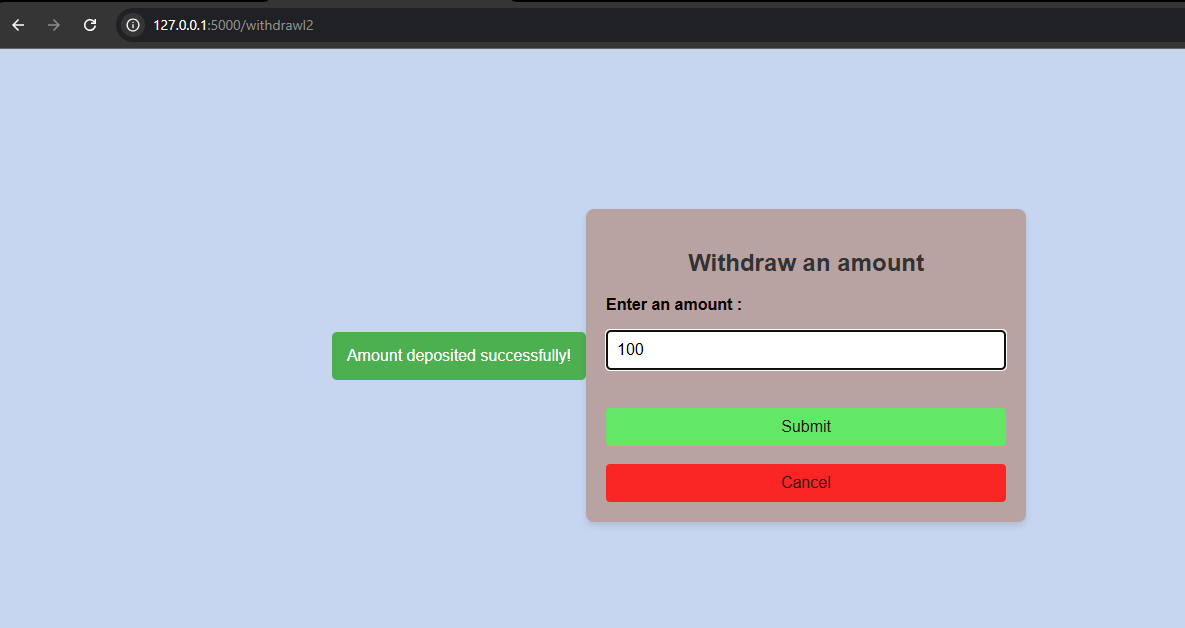
* **Balance Enquiry :**

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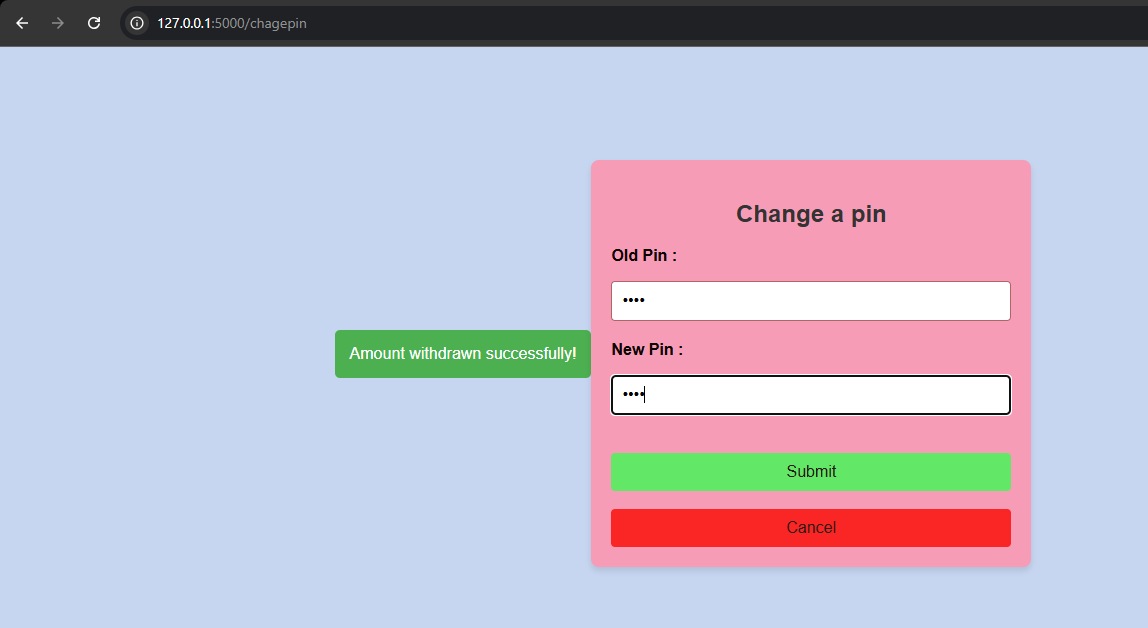
* **Deposit Amount :**

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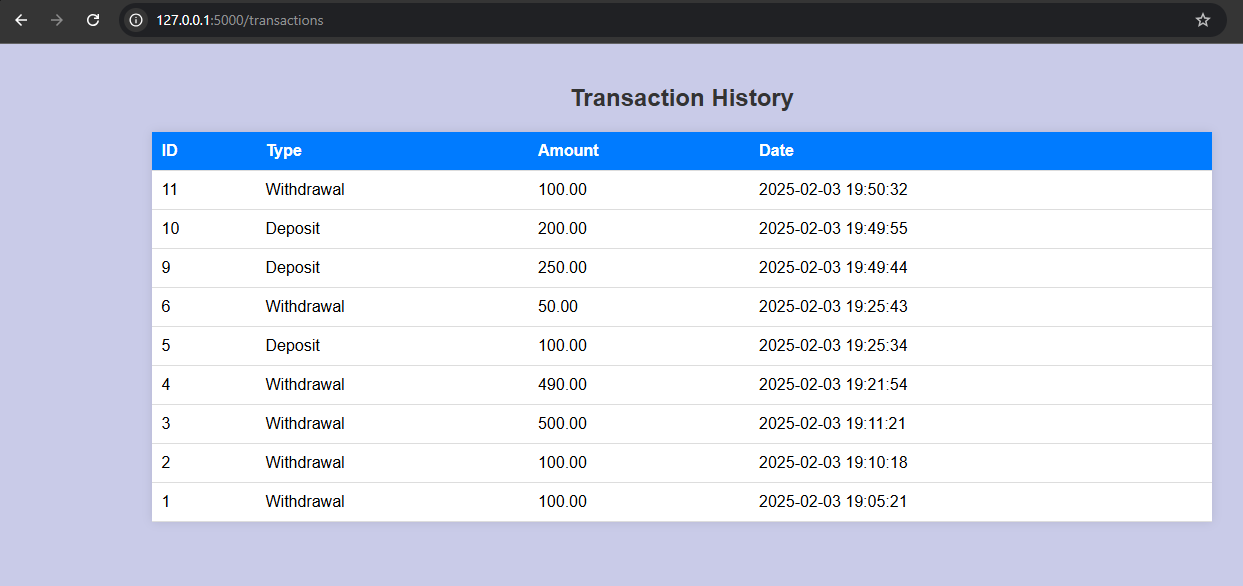
* **WithdrawAmount :**

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* **Change a pin :**

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* **Transaction History :**

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