Forex Trade Tracking Project Documentation

Late Hours: 50

Introduction

The Forex Trade Tracking Project is a terminal-based application designed to help users manage their forex trades efficiently. It enables users to do a number of tasks, including creating reports, tracking trades, registering, and signing in. To guarantee smooth integration and operation, this guide describes the project's features, setup procedure, and usage. The project's straightforward design makes it appropriate for beginners while simultaneously offering a variety of features to satisfy more experienced users. Long-term usability is ensured by its flexible nature, which makes modifications and scaling simple.

Features Overview

Main Menu:

1. **Login:** Verify current users' credentials against the database to authenticate them.
2. **Sign up:** Make a fresh user account with distinct login information and a safe password repository.
3. **Exit:** Make sure all session data is deleted by safely closing the application.

Trading Menu:

1. **Add Trade:** Enter the currency pair, entry price, and trade size to record a new trade. Accurate tracking is ensured by the system through data validation.
2. **View Open Trades:** Show active trades in a table, structured with important information such as size, possible profit or loss, and entrance price.
3. **Close Trade:** Choose an open trade from the list of active deals to mark it as closed. The trade's final performance measures are computed by the system.
4. **View Closed Trades:** Show completed deals together with complete performance details, including percentages of profit and loss.
5. **Delete Trade:** Eliminate a trade from the database forever. This feature is helpful for removing external data or fixing mistakes.

6. **View Reports:** Get comprehensive trade performance summaries.

Report Menu

1. **Live Report**:
    - Provides a summary of the results of recent trades.
    - Users are asked to provide the necessary currency pairs' current market prices.
    - Each trade's potential profit or loss is shown by real-time computations.
2. **Regular Report**:
    - Offers an overview of all trades that have been done.
    - draws attention to key metrics including overall success rate, average trade time, and cumulative profit/loss.
3. **Back to Main Menu**:
    - Go back to the Trading Menu after leaving the Report Menu.

System Requirements

- **Python 3.8+**
    - Download from python.org
- **MySQL Workbench & MySQL Server 8.0+**
    - Download from mysql.com
    - **Python Dependencies**:
      pip install pymysql
    - pip install hashlib
    - pip install python-dotenv
    - pip install time
- pip install sys

These requirements ensure that the application runs smoothly and interacts efficiently with the database. Regular updates to Python and MySQL are recommended for optimal performance and security.

Installation & Setup

1. **Clone the Repository**:
    - Obtain the project files from the GitHub repository using the provided link.
2. **Set Up MySQL Database**:

    - Import the schema provided in the GitHub repository to create the necessary tables.
    - If preferred, create your own database using the CREATE TABLE queries available in the documentation.
3. **Configure the Environment**:
    - Create a .env file in the project directory and configure database connection details:
      DB_HOST=localhost
    - DB_USER=root
    - DB_PASSWORD=your_password
    - DB_NAME=forex_tracking
    - This ensures secure and efficient database connections.
4. **Run the Application**:
    - Navigate to the project directory in your terminal or command prompt.
    - Execute the following command:
      python main.py
    - Follow the on-screen instructions to start using the application.

Usage Guide

Main Menu

- **Login:** To access the program, enter your username and password. You can try again or create a new account if authentication doesn't work.
- **Register:** Enter a secure password, a unique username, and an email address. Using the same email address and username again is prohibited.
- **Exit:** Terminate the application. Make sure to save your work before leaving because any unsaved data will be lost.

Trading Menu

1. **Add Trade**:
    - Follow the prompts to enter trade details, such as the currency pair, entry price, and trade size, by following the instructions. Ensure that currency pairs comply to the necessary format.
2. **View Open Trades**:
    - Provides an organized overview of all trades that are currently active. The trade ID, currency pair, entry price, and current status are among the details included in each row.

3. **Close Trade**:
    - To mark the trade as closed, choose it from the list of open trades. The system will prompt you to confirm the action and calculate the final performance metrics.
4. **View Closed Trades**:
    - Provides a graphic overview of every trade that has been closed. Comprehensive performance measures including duration and total profit/loss are included in this view.
5. **Delete Trade**:
    - Remove a trade from the database permanently. This feature is helpful for removing outdated data or fixing mistakes.
6. **View Reports**:
    - Opens the Report Menu for selecting a report type.

Report Menu

1. **Live Report**:
    - Summarizes the performance of active trades by prompting users to input current market prices for currency pairs.
    - Real-time metrics like potential profit or loss are calculated and displayed.
2. **Regular Report**:
    - Summarizes the performance of closed trades by highlighting cumulative profit/loss, average trade duration, and success rate.
3. **Back to Main Menu**:
    - Returns the user to the Trading Menu.
4. **Exit**:
    - Return to the Main Menu or close the application gracefully. This ensures all data is saved and no processes are left running.

Database Details

- The database schema is provided in the GitHub repository and includes tables for users, trades, and reports.
- No initial data is provided; all data is user-generated during runtime, allowing for personalized tracking and analysis.

Key Tables:

1. **Users**:
    - user_id **(Primary Key)**
    - username
    - email
    - password_hash
2. **Trades**:
    - trade_id **(Primary Key)**
    - user_id **(Foreign Key)**
    - currency_pair
    - entry_price
    - exit_price
    - status **(open/closed)**
3. **Reports**:
    - Generated dynamically based on trade data. Reports include summaries for both active and closed trades.

Troubleshooting

1. **Database Connection Errors**:
    - Verify .env file configuration and ensure MySQL Server is running. Check if the database credentials are correct.
2. **Dependencies Not Found**:
    - Reinstall missing packages using pip install commands listed in the System Requirements section.
3. **Application Crashes**:
    - Check error logs for details on the crash. Common issues include missing files or corrupted data.
    - Ensure all necessary files from the repository are present and correctly placed.
4. **Incorrect Report Data**:
    - Double-check trade details for accuracy. Errors in entry or exit prices can affect the reports.