Documentation

Weather CLI Application

The Weather CLI Application is a command-line tool that allows users to register, log in, fetch weather data for specific locations, view their search history, and update their password. The application interacts with a MySQL database to manage user information and search history.

Prerequisites

- Python 3.8 or higher
- MySQL Server
- Required Python packages

Setting Up the Environment

Install Python Packages:- pip install mysql-connector-python bcrypt requests

Set Up MySQL Database

Configure Database Credentials

Command:-

```sql
CREATE USER 'sss_assignment_sep24'@'localhost' IDENTIFIED
BY 'doitnow';

GRANT ALL PRIVILEGES ON weather_db.* TO
'sss_assignment_sep24'@'localhost';

FLUSH PRIVILEGES;
```

Ensure that the database connection credentials (DB_USER, DB_PASSWORD, DB_NAME, DB_HOST) in database connection in the script are set according to your MySQL setup.

Database & Tables Creatio

```sql
CREATE DATABASE weather_db;
USE weather_db;

CREATE TABLE users (
    id INT AUTO_INCREMENT PRIMARY KEY,
    username VARCHAR(50) NOT NULL UNIQUE,
    password VARCHAR(255) NOT NULL
);

CREATE TABLE search_history (
    id INT AUTO_INCREMENT PRIMARY KEY,
    user_id INT,
    timestamp TIMESTAMP DEFAULT CURRENT_TIMESTAMP,
    location VARCHAR(100),
    weather_data TEXT,
    FOREIGN KEY (user_id) REFERENCES users(id)
);
```

API Key

Obtain an API key from OpenWeatherMap (https://openweathermap.org/api) and replace the placeholder in the script

API_KEY = 'your_openweathermap_api_key_here'

Running the Application

```
326          else:
327              print("No valid session found. Please log in first.")
328      else:
329          parser.print_help()
330
331  if __name__ == "__main__":
332      main()
```

PROBLEMS   OUTPUT   DEBUG CONSOLE   **TERMINAL**

```
PS C:\Users\ASUS\Desktop\Assignment-SSS> python -u "c:\Users\ASUS\Desktop\Assignment-SSS\Code_Ass.py"
usage: Code_Ass.py [-h] [--register] [--login] [--weather WEATHER] [--history] [--update]

Weather CLI Application

options:
  -h, --help         show this help message and exit
  --register         Register a new user
  --login            Login an existing user
  --weather WEATHER  Fetch weather data for a location
  --history          Show search history for the logged-in user
  --update           Update user password
PS C:\Users\ASUS\Desktop\Assignment-SSS>
```

1. Register a New User:-

```
    --update            Update user password
PS C:\Users\ASUS\Desktop\Assignment-SSS> python -u "c:\Users\ASUS\Desktop\Assignment-SSS\Code_Ass.py" --register
Enter username: Abcdef
Enter password:
Registration successful!
PS C:\Users\ASUS\Desktop\Assignment-SSS>
```

```
mysql> select * from users;
+----+----------+--------------------------------------------------------------+
| id | username | password                                                     |
+----+----------+--------------------------------------------------------------+
|  1 | Srinath  | $2b$12$OUJ1CDMNBWPJcpaHxTQbTuTaoWjfXmR8kYjUOBimtUQJEPpsf6KHG |
|  2 | Rahul    | $2b$12$zeEGVtnEvq.1H9DCMuVrCOllQ/gXND3gBhC.vPL8OUXhqH7dNMet2 |
|  3 | Ashish   | $2b$12$Xot3Sa0YDeLqDGXuIGA3XeAUXp.O/fI.gJm2Fo8DHYUsIruMG30NK |
|  4 | Abcdef   | $2b$12$Y86TlKiqdNg/tDeeq5KIBOz6hot5R8bgcXy9ket8bMWOFkRHkzhvG |
+----+----------+--------------------------------------------------------------+
4 rows in set (0.00 sec)
```

2. Log In


```
PS C:\Users\ASUS\Desktop\Assignment-SSS> python -u "c:\Users\ASUS\Desktop\Assignment-SSS\Code_Ass.py" --login
Enter username: Srinath
Enter password:
Invalid username or password.
PS C:\Users\ASUS\Desktop\Assignment-SSS> python -u "c:\Users\ASUS\Desktop\Assignment-SSS\Code_Ass.py" --login
Enter username: Srinath
Enter password:
Login successful!
Welcome Srinath!
PS C:\Users\ASUS\Desktop\Assignment-SSS>
```

3. Fetch Weather Data


```
PS C:\Users\ASUS\Desktop\Assignment-SSS> python -u "c:\Users\ASUS\Desktop\Assignment-SSS\Code_Ass.py" --weather New York
usage: Code_Ass.py [-h] [--register] [--login] [--weather WEATHER] [--history] [--update]
Code_Ass.py: error: unrecognized arguments: York
PS C:\Users\ASUS\Desktop\Assignment-SSS> python -u "c:\Users\ASUS\Desktop\Assignment-SSS\Code_Ass.py" --weather Ghugus
Temperature: 28.39°C
Humidity: 75%
Weather: Overcast clouds
Wind Speed: 5.31 m/s
Search history saved!
PS C:\Users\ASUS\Desktop\Assignment-SSS>
```

4. View Search History


```
PS C:\Users\ASUS\Desktop\Assignment-SSS> python -u "c:\Users\ASUS\Desktop\Assignment-SSS\Code_Ass.py" --history
Session expired. Please log in again.
No valid session found. Please log in first.
PS C:\Users\ASUS\Desktop\Assignment-SSS> python -u "c:\Users\ASUS\Desktop\Assignment-SSS\Code_Ass.py" --login
Enter username: Srinath
Enter password:
Login successful!
Welcome Srinath!
PS C:\Users\ASUS\Desktop\Assignment-SSS> python -u "c:\Users\ASUS\Desktop\Assignment-SSS\Code_Ass.py" --history
Date: 2024-09-11 11:49:47, Location: goa, Weather Data: Temperature: 23.21°C, Humidity: 83%, Weather: Overcast clouds, Wind Speed: 4.94 m/s
Date: 2024-09-11 11:49:52, Location: delhi, Weather Data: Temperature: 28.05°C, Humidity: 89%, Weather: Mist, Wind Speed: 2.06 m/s
Date: 2024-09-11 11:50:06, Location: AGRA, Weather Data: Temperature: 28.66°C, Humidity: 78%, Weather: Light rain, Wind Speed: 4.12 m/s
Date: 2024-09-11 11:50:14, Location: HYDERABAD, Weather Data: Temperature: 27.73°C, Humidity: 69%, Weather: Scattered clouds, Wind Speed: 8.23 m/s
Date: 2024-09-11 11:50:19, Location: Ghugus, Weather Data: Temperature: 28.59°C, Humidity: 74%, Weather: Overcast clouds, Wind Speed: 6.7 m/s
Date: 2024-09-11 11:51:40, Location: chandrapur, Weather Data: Temperature: 28.49°C, Humidity: 74%, Weather: Overcast clouds, Wind Speed: 5.93 m/s
Date: 2024-09-12 09:11:14, Location: Srinagar, Weather Data: Temperature: 21.58°C, Humidity: 48%, Weather: Clear sky, Wind Speed: 0.47 m/s
Date: 2024-09-12 10:45:34, Location: Ghugus, Weather Data: Temperature: 28.39°C, Humidity: 75%, Weather: Overcast clouds, Wind Speed: 5.31 m/s
PS C:\Users\ASUS\Desktop\Assignment-SSS>
```

5. Update Password

```
Date: 2024-09-12 10:45:34, Location: dhugas, Weather Data: Temperature: 28.59 C, Humidity: 75%, Weather: Overcast clo
PS C:\Users\ASUS\Desktop\Assignment-SSS> python -u "c:\Users\ASUS\Desktop\Assignment-SSS\Code_Ass.py" --update
Enter new password:
Password updated successfully!
PS C:\Users\ASUS\Desktop\Assignment-SSS>
```