

# 411 Final Project Documentation

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**Project Repository:** <https://github.com/andrewx-bu/WeatherDashboard>

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## 1. Steps to run our application:

Mac:

- I. Download/ clone repo
  - A. git clone <https://github.com/andrewx-bu/WeatherDashboard.git>
- II. Run with docker
  - A. Navigate to the root directory *WeatherDashbord/*
  - B. Run the *run\_docker.sh* script
- III. Alternatively, you can run locally
  - A. Set up virtual environment by running the *setup\_venv.sh* script
    1. This will install all dependencies in *requirements.txt*
    2. Make sure to activate it
  - B. Set up the database by running the *setup\_db.py* script
    1. This will create the *weather.db* file in the *WeatherDashboard/db* directory if the db file doesn't already exist
  - C. Run the *app.py* file

Example terminal testing on Windows for some of our routes:

- curl -X POST http://127.0.0.1:5001/create-account -H "Content-Type: application/json" -d '{"username": "user1", "password": "password1"}'
- curl -X GET http://127.0.0.1:5001/login -H "Content-Type: application/json" -d '{"username": "user1", "password": "password1"}'
- curl -X PUT http://127.0.0.1:5001/update-password -H "Content-Type: application/json" -d '{"username": "user1", "old\_password": "password1", "new\_password": "password2"}'
- curl -X POST http://127.0.0.1:5001/api/add-favorite -H "Content-Type: application/json" -d '{"user\_id": 1, "location": "San Francisco"}'

Example of some of our routes running correctly:

```
C:\Windows\System32\cmd.exe
C:\Users\jerem\OneDrive\Documents\A_BU\Senior\411\finalproj411>curl -X POST http://127.0.0.1:5000/create-account -H "Content-Type: application/json" -d '{"username": "user1", "password": "password1"}'
{"message": "Account created", "status": "success"}

C:\Users\jerem\OneDrive\Documents\A_BU\Senior\411\finalproj411>curl -X GET http://127.0.0.1:5000/login -H "Content-Type: application/json" -d '{"username": "user1", "password": "password1"}'
{"message": "Login successful", "status": "success"}

C:\Users\jerem\OneDrive\Documents\A_BU\Senior\411\finalproj411>curl -X PUT http://127.0.0.1:5000/update-password -H "Content-Type: application/json" -d '{"username": "user1", "old_password": "password1", "new_password": "password2"}'
{"message": "Password updated", "status": "success"}

C:\Users\jerem\OneDrive\Documents\A_BU\Senior\411\finalproj411>curl -X POST http://127.0.0.1:5000/api/add-favorite -H "Content-Type: application/json" -d '{"user_id": 1, "location": "San Francisco"}'
{"message": "Favorite location added", "status": "success"}
```

Check db for favorites here: [http://127.0.0.1:5001/api/get-favorites?user\\_id=1](http://127.0.0.1:5001/api/get-favorites?user_id=1)

```
127.0.0.1:5000/api/get-favorites?user_id=1
Pretty-print ☐
{
  "favorites": [
    {
      "created_at": "2024-12-10 19:47:13",
      "id": 1,
      "location": "San Francisco",
      "updated_at": "2024-12-10 19:47:13"
    }
  ]
}
```

Check db for users here: <http://127.0.0.1:5001/get-all-users>

```
127.0.0.1:5000/get-all-users
Pretty-print ☐
{
  "users": [
    {
      "id": 1,
      "username": "user1"
    }
  ]
}
```

## 2. Variables defined in our env file:

- We removed our secrets and put them in a text file called *env.txt* in our repo that contains one line:
  - `OPENWEATHER_API_KEY=[INSERT YOUR KEY HERE]`
- Make sure no white spaces or you'll get docker warnings

## 3. Smoke Test output:

- Database set up, app is running (make sure there is no user named *'testuser0'* existing in the database before running this test)
  - *smoketest.sh* will delete the user after testing favorites, to ensure no garbage data is left in the database after testing.
  - You can always delete the *weather.db* file and rerun *setup\_db.py*

```

● (.venv) crc-dot1x-nat-10-239-2-85:WeatherDashboard andrew$ sh smoketest.sh
Starting smoke tests...
Checking health status...
Service is healthy.
Checking database connection...
Database connection is healthy.
Creating user: testuser0
User created successfully.
Logging in user: testuser0
Login successful.
Updating password for user: testuser0
Password updated successfully.
Retrieving all users...
Users retrieved successfully.
Fetching user ID for username: testuser0
User ID for testuser0 is 1.
Adding favorite location: New York for user: 1
Favorite location added successfully.
Adding favorite location: San Francisco for user: 1
Favorite location added successfully.
Fetching favorite locations for user: 1
Favorites retrieved successfully.
Updating favorite location from 'New York' to 'Boston' for user '1'...
Favorite location updated successfully.
Fetching favorite locations for user: 1
Favorites retrieved successfully.
Removing favorite location 'San Francisco' for user '1'...
Favorite location removed successfully.
Fetching favorite locations for user: 1
Favorites retrieved successfully.
Clearing all favorites for user '1'...
All favorites cleared successfully.
Deleting user: testuser0
User deleted successfully.
Testing coordinates retrieval for city: New York
Successfully fetched coordinates for city: New York
Testing weather forecast for city: New York
Successfully fetched weather forecast for city: New York
Testing air pollution forecast for city: New York
Successfully fetched air pollution forecast for city: New York
Testing current weather for city: New York
Successfully fetched current weather for city: New York
Testing air pollution data for city: New York
Successfully fetched air pollution data for city: New York
Testing coordinates retrieval for city: Los Angeles
Successfully fetched coordinates for city: Los Angeles
Testing weather forecast for city: Los Angeles
Successfully fetched weather forecast for city: Los Angeles
Testing air pollution forecast for city: Los Angeles
Successfully fetched air pollution forecast for city: Los Angeles
Testing current weather for city: Los Angeles
Successfully fetched current weather for city: Los Angeles
Testing air pollution data for city: Los Angeles
Successfully fetched air pollution data for city: Los Angeles
All smoke tests completed successfully!
○ (.venv) crc-dot1x-nat-10-239-2-85:WeatherDashboard andrew$ █

```