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INTERNET TECHNOLOGY (INF3002_EN)

API documentation weather

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1 This is a Django web application that retrieves and displays weather information from the OpenWeatherMap API.

The main components of the application include:

1.1 `weather_get.py`

A module that contains two functions:

- `get_temperature(city_name, api_key)`: A function that retrieves the current temperature and weather data for a given city using the OpenWeatherMap API. The function takes in the city name and API key as arguments, and returns the temperature in Celsius and the raw JSON data.
- `evaluation(data)`: A function that parses the raw JSON data returned by the `get_temperature()` function and returns a dictionary containing relevant weather information such as temperature, humidity, wind speed, and weather description.

1.2 `urls.py`

A Django module that maps URLs to views. In this application, the only URL is the root URL (`/`) and (`weather/`), which maps to the `weather` view.

1.3 `views.py`

A Django module that contains the logic for handling HTTP requests and returning HTTP responses. In this application, the `weather` view retrieves the weather information for a given city using the `get_temperature()` and `evaluation()` functions and renders the data in an HTML template.

1.4 `templates/index.html`

An HTML template that displays the weather information retrieved by the `weather` view. The template uses Django's templating language to render the weather data in a user-friendly format.

1.5 API key

To use the OpenWeatherMap API, you need to obtain an API key from their website (<https://openweathermap.org/api>). Once you have an API key, you can pass it as an argument to the `get_temperature()` function to retrieve weather information for a given city.

2 Usage

To use the application, follow these steps:

1. Start the Django development server by running `python manage.py runserver` in your terminal.
2. Open a web browser and navigate to `http://127.0.0.1:8000/API/weather/` to access the application.
3. Enter a city name in the search box and click the `Search` button to retrieve the weather information for that city.

3 Conclusion

In conclusion, this Django web application provides a simple interface for retrieving and displaying weather information from the OpenWeatherMap API. By following the usage instructions, you can easily set up and use the application to retrieve weather information for any city in the world.