## Worksheet 2: Python WWW API

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### Learning Objectives

- Learn how to use Python libraries to interact with the web.
- Understand APIs and how to make HTTP requests.

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## Activity 1: Code Exploration

**Instructions:** Carefully review the following Python script, which uses the `requests` library to interact with a web API. Then, answer the questions that follow.

```
import requests

# URL for the API endpoint
url = "https://jsonplaceholder.typicode.com/posts"

# Making a GET request
response = requests.get(url)

# Checking the response status code
if response.status_code == 200:
    # Parsing the JSON data
    data = response.json()
    print("First post title:", data[0]['title'])
else:
    print("Failed to fetch data. Status code:", response.status_code)
```

**Questions:**

1. What is the purpose of the `requests.get()` method in this code?
   *Your Answer:*
2. What type of data is returned by the `response.json()` method?
   *Your Answer:*
3. What will the program output if the API request is successful?
   *Your Answer:*
4. Modify the code to make a **POST request** to the same URL, sending the following data:

```
{
    "title": "My Post",
    "body": "This is a test post",
    "userId": 1
}
```

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## Activity 2: Hands-On Coding

**Instructions:** Write a Python script to fetch data from the **OpenWeatherMap API**. Follow these steps:

1. Create a free account on OpenWeatherMap and get your API key.
2. Use the API to fetch the current weather data for a city of your choice.
3. Parse the JSON response to display:
    - The city name.
    - The current temperature (in Celsius).
    - Weather description (e.g., clear sky, rain).

**Hint:** Use the `requests` library and the API endpoint:

```
https://api.openweathermap.org/data/2.5/weather?q={city_name}&appid={your_api_key}&units=metric
```

**Example Output:**

```
City: Toronto
Temperature: 10°C
Weather: Clear sky
```

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