**Worksheet 2: Python WWW API**

**Learning Objectives**

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

**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:* To get the response of the HTTP request.
2. What type of data is returned by the response.json() method?  
   *Your Answer:* The response is json list
3. What will the program output if the API request is successful?  
   *Your Answer: “*First post title: sunt aut facere repellat provident occaecati excepturi optio reprehenderit”
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

}

**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](https://openweathermap.org/) 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