



How to Get Data from API in Python Flask

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In modern web development, APIs (Application Programming Interfaces) play a crucial role in enabling the interaction between different software systems.

Flask, a lightweight WSGI web application framework in Python, provides a simple and flexible way to create APIs. In this article, we'll explore how to get data from an API using Python Flask. We'll cover setting up a Flask project, making [API](#) requests, and handling responses.

Setting Up a Flask Project

To get started with [Flask](#), you'll need to install it. You can do this using pip:

Install Flask and requests:

```
pip install Flask requests
```

Directory Structure:

Next, create a new directory for your project and a [Python](#) file.

```
flask_api_project/  
├── app.py  
├── templates/  
    └── data.html
```

Displaying Data in Flask Templates

Flask supports rendering HTML templates using the [Jinja2](#) template engine.

Let's create a simple HTML template to display the data we get from the API.

First, create a `templates` directory in your project folder and add a file named

`data.html`.

HTML



```
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4     <meta charset="UTF-8">
5     <meta name="viewport" content="width=device-width,
    initial-scale=1.0">
6     <title>API Data</title>
7 </head>
8 <body>
9     <h1>API Data</h1>
10    <pre>{{ data | tojson }}</pre>
11 </body>
12 </html>
```

Next, create a new directory for your project and a Python file, e.g., app.py. In this file, we'll set up the basic structure of our Flask application.

Python



```
1 from flask import Flask, jsonify, request
2
3 app = Flask(__name__)
4
5 @app.route('/')
6 def home():
7     return "Welcome to the Flask API tutorial!"
8
9 if __name__ == '__main__':
10     app.run(debug=True)
```

app.py

The requests library provides a straightforward way to handle API responses. In the example, we use the `json()` method to parse the JSON response from the API. We then use Flask's `jsonify` function to return the data as a JSON response from our endpoint.

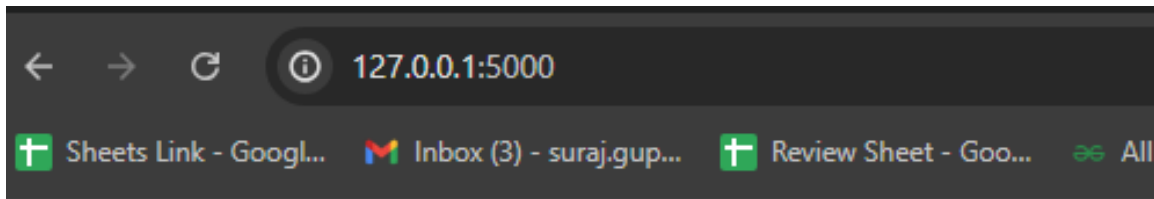
Python



```
1 from flask import Flask, jsonify, render_template
2 import requests
3
4 app = Flask(__name__)
5
6 @app.route('/')
7 def home():
8     return "Welcome to the Flask API tutorial!"
9
10 @app.route('/api/data')
11 def get_data():
12     try:
13         response =
14         requests.get('https://jsonplaceholder.typicode.com/todos/1')
15         # Raises an HTTPError if the HTTP request returned
16         an unsuccessful status code
17         response.raise_for_status()
18         data = response.json()
19     except requests.exceptions.HTTPError as http_err:
20         return jsonify({'error': f'HTTP error occurred:
21         {http_err}'}), 500
22     except Exception as err:
23         return jsonify({'error': f'Other error occurred:
24         {err}'}), 500
25     return render_template('data.html', data=data)
26
27 if __name__ == '__main__':
28     app.run(debug=True)
```

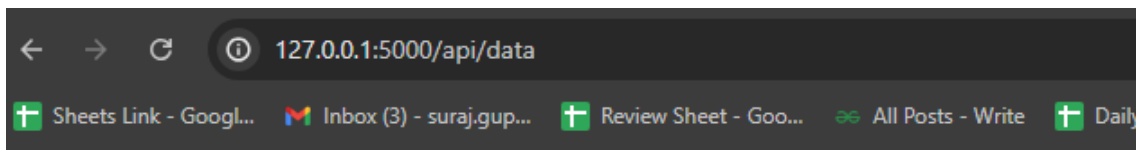
Output

Home page



Welcome to the Flask API tutorial!

Get Data Page



API Data

```
{"completed": false, "id": 1, "title": "delectus aut autem", "userId": 1}
```

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