Assignment 7:
Create a simple web service and write distributed application(calculator) to consume the Web Service.

webservice.py

```
from flask import Flask, request

app = Flask(__name__)

@app.route('/add', methods=['POST'])
def add():
    data = request.get_json()
    num1 = data['num1']
    num2 = data['num2']
    result = num1 + num2
    return {'result': result}

if __name__ == '__main__':
    app.run()
```

Output:

```
PS C:\Users\aarad\OneDrive\College\DS> python webservice.py
>>
 * Debug mode: off
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
 * Running on http://127.0.0.1:5000
Press CTRL+C to quit
127.0.0.1 - - [21/Mar/2025 10:36:39] "GET / HTTP/1.1" 404 -
127.0.0.1 - - [21/Mar/2025 10:36:39] "GET /favicon.ico HTTP/1.1" 404 -
127.0.0.1 - - [21/Mar/2025 10:37:07] "POST /add HTTP/1.1" 200 -
```

app.py

```
import requests

def add_numbers(num1, num2):
    url = 'http://localhost:5000/add'  # Replace with the actual URL of the web service
    data = {
        'num1': num1,
        'num2': num2
    }
    response = requests.post(url, json=data)
    result = response.json()['result']
    return result
```

```
# Example usage
result = add_numbers(5, 10)
print(f"The result of adding 5 and 10 is: {result}")
```

Output:

```
PS C:\Users\aarad\OneDrive\College\DS> python app.py
The result of adding 5 and 10 is: 15
PS C:\Users\aarad\OneDrive\College\DS>
```