Assignment-4

(Calculator API)

You need to build a Calculator API Contract application which performs the following operations:

- Addition
- Subtraction
- Multiplication
- Division

Before you start implementing the above operations, you need to check that your server is working fine. For that, perform GET request which lets you land on the home page successfully with the message `Hello world!`. After that, you need to implement the following **POST** requests: The input may contain positive, negative, and floating-point numbers. Request body parameters for all endpoints:

- num1
- num2

1. **/add**

    Response:
    ```
    { status: "success"|"failure"|"error",
     message: "the sum of given two numbers",
    sum: num1+num2 }
    ```

2. **/sub**

    Response:
    ```
    { status: "success"|"failure"|"error",
      message: "the difference of given two numbers",
      difference: num1-num2 }
    ```

3. **/multiply**

    Response:
    ```
    { status: "success"|"failure"|"error",
      message: "The product of given numbers",
      result: num1*num2 }
    ```

4. **/divide**

    Response:
    ```
    { status: "success"|"failure"|"error",
      message: "The division of given numbers",
      result: num1/num2 }
    ```

5. The status should be **"error"** in the following cases:
   - num2 is 0 for endpoint **/divide**. In this case, the message should be `"Cannot divide by zero"`
   - The request body parameters contain values less than -1M(10 lakhs), or the result is < -1M. In this case, the message should be `"Underflow"`
   - The request body parameters contain values above 1M(10 lakhs), or the sum is > 1M. In this case, the message should be `"Overflow"`
   - The request body parameters contain Strings. In this case, the message should be `"Invalid data types"`.

Note: Please keep in mind you need to print messages as stated in the problem statement"

Submission steps:
Please download the zip file. Complete the template code and submit it.

Zip file link:
https://drive.google.com/file/d/1Lzl8dC23sT-j6OMAyVd8S76H8sFrPyaF/view?usp=sharing