SIT323/SIT737- Cloud Native Application Development 4.2C: Enhanced Functionality for the Calculator Microservice

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Overview

The objective of this task is to expand upon the capabilities of the calculator microservice introduced in task 4.1P. By integrating supplementary features and refining its error handling mechanism, you will enhance your proficiency in microservice development while fortifying your ability to craft resilient and intuitive applications.

The required tools for doing this task are as follows:

- Git (https://github.com)
- Visual Studio Code (https://code.visualstudio.com/)
- Node.js (https://nodejs.org/en/download/)

Part I

You can choose between the following options to proceed with this Credit task:

a. Additional Arithmetic Operations

Expand the capabilities of the calculator microservice by introducing support for advanced arithmetic operations such as exponentiation, square root, and modulo operations. You need to implement corresponding API endpoints to handle these operations, thereby enriching the functionality of the microservice and providing users with more comprehensive calculation capabilities.

OR

b. Error Handling:

Enhance the error handling mechanism of the microservice to deliver more informative error messages to clients. You need to refine error detection and reporting mechanisms, addressing scenarios such as invalid inputs and division by zero. By improving error handling, students will enhance the usability and reliability of the microservice, ensuring a smoother user experience.

Submission Details-

- Once you are done, push your code into your repo, giving the repository the following name sit323-2025-prac4c, ultimately this should read as https://github.com/username/ sit323-2025-prac4c. You can copy/paste the link of your public repo for your submission through the OnTrack ;
- Ensure that detailed documentation is included with your code, offering step-by-step instructions that explain the process undertaken for this part. Failure to provide this documentation will result in an incomplete mark for the task.