

Brief description of project

This project is a solutions to solve basic math operation and it is design using **C# .NET Model View Controller (MVC)** architecture for both backend and frontend components.

Backend:

- **API Controller:** Created to serve API requests.
- **API Key Authentication:** Implemented to secure specific routes. A custom attribute to protect API routes, ensuring only authorized clients with a valid API key can access protected endpoints.
- **Internal Library (DataTable):** Used to process math operations on the backend. After receiving requests from the frontend, it will begin to process and calculate and return to the client.

Frontend:

- **Request with Axios:** When a client enters a math operation, the frontend sends the request to the backend using Axios. The request includes the API key for authentication.

The backend processes the request, performs the necessary calculations using the **DataTable** library, and sends the result back to the frontend for display.

Test Cases

Negative	
Title	Enter Invalid math expression
Test Steps	<ol style="list-style-type: none">1. Fill in invalid math expression into the input box2. Click calculate button
Expected Result	Will see a invalid math expression error message being shown

Positive	
Title	Enter valid math expression
Test Steps	<ol style="list-style-type: none">1. Fill in valid math expression into the input box2. Click calculate button
Expected Result	Will show a calculated result