# KeithBaizeElevatorChallenge

## Overview

This is a console-based application that simulates the behavior of an elevator. The application models the elevator's ability to move to various floors, process floor and exit requests, and change its direction based on current requests.

## Technologies Used

* C# .NET Core
* Xunit for unit testing

## Prerequisites

* .NET Core SDK 5.0 or higher
* Visual Studio 2019 or VS Code (or any compatible IDE)

## How to Run

1. **Unzip the Provided Solution File:** Unzip the provided KeithBaizeElevatorChallenge.zip file to a directory of your choice.
2. **Open the Solution:** Navigate to the directory where you unzipped the file and double-click on the KeithBaizeElevatorChallenge.sln file to open it in Visual Studio.
3. **Restore NuGet Packages:** In Visual Studio, right-click the solution in the Solution Explorer and select "Restore NuGet Packages".
4. **Run the Project:** Press F5 to build and run the project. You can also run the project by clicking the "Start Debugging" button or by selecting "Debug" from the menu and then "Start Debugging".

## How to Run Tests

1. **Navigate to the Test Explorer:** In Visual Studio, go to "Test" on the menu bar and select "Test Explorer".
2. **Run Tests:** Once the Test Explorer is open, click the "Run All" button to execute all the unit tests.

## Features

* Elevator starts at a specified floor.
* Elevator can move to another floor via the MoveToFloorAsync() method.
* Elevator processes floor and exit requests asynchronously using the ProcessRequestsAsync() method.
* Simulate button presses inside the elevator using the PressButtonInsideElevator() method.
* The elevator changes direction automatically when there are no more floor requests in the current direction.

## Debugging

Debugging logs are printed to the console to give visibility into the elevator's internal state. This includes information such as the floor requests, current floor, and direction as the elevator moves and processes requests.

## Contact

If you have any questions or run into issues, feel free to contact the maintainer at [baize.developer@gmail.com](mailto:baize.developer@gmail.com).

Happy Coding!