Instructions for Smartly Coding Exercise Solution

Overview

This solution includes both back-end and front-end components to calculate and display pay slip details. The solution is structured into three .NET projects within a single Visual Studio solution.

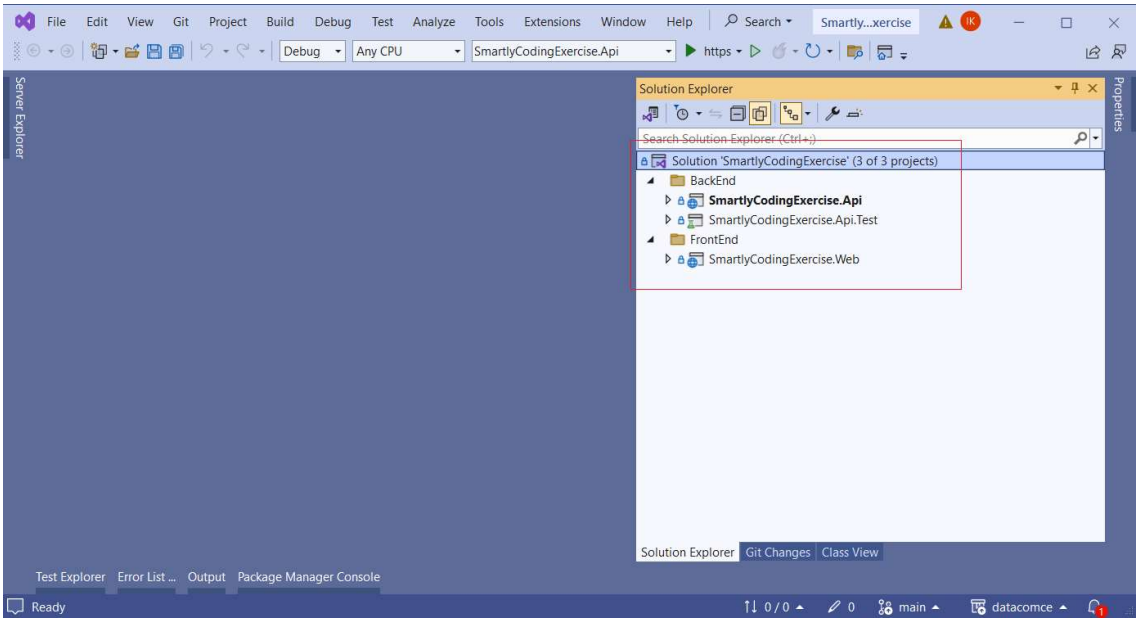
Solution Structure

Back-End

- SmartlyCodingExercise.Api:
  - ASP.NET Web API Core project that handles pay slip calculations.
- SmartlyCodingExercise.Api.Test:
  - NUnit test project for unit testing the Web API.

Front-End

- SmartlyCodingExercise.Web:
  - ASP.NET MVC project that serves the pay slip calculator front-end.



Prerequisites

Visual Studio 2022 or later with .Net 8.0

- With ASP.NET and web development workload installed.

Setup Instructions

1. Clone the Repository

Clone the repository to your local machine using the following command:

git clone https://github.com/priyanindikak/datacomce.git

2. Open the Solution in Visual Studio

Open the solution file (**SmartlyCodingExercise.sln**) located in the (**SmartlyCodingExercise**) folder.

3. Restore NuGet Packages

In Visual Studio, restore the NuGet packages by right-clicking the solution in the Solution Explorer and selecting **"Restore NuGet Packages"**

4. Build the Solution

Build the solution by pressing

- '**Ctrl+Shift+B**'
  or
- '**Build > Build Solution**' from the menu

5. Configure Database (if required)

This solution can be run in two modes:

1. In-Memory Data Mode:
   The solution is configured to run in this mode by default.

2. Entity Framework Data Mode:
   To switch to this mode, modify the configuration in the '**CommonConstantsHelpers.cs**' class.

In-Memory Data Mode (Default)

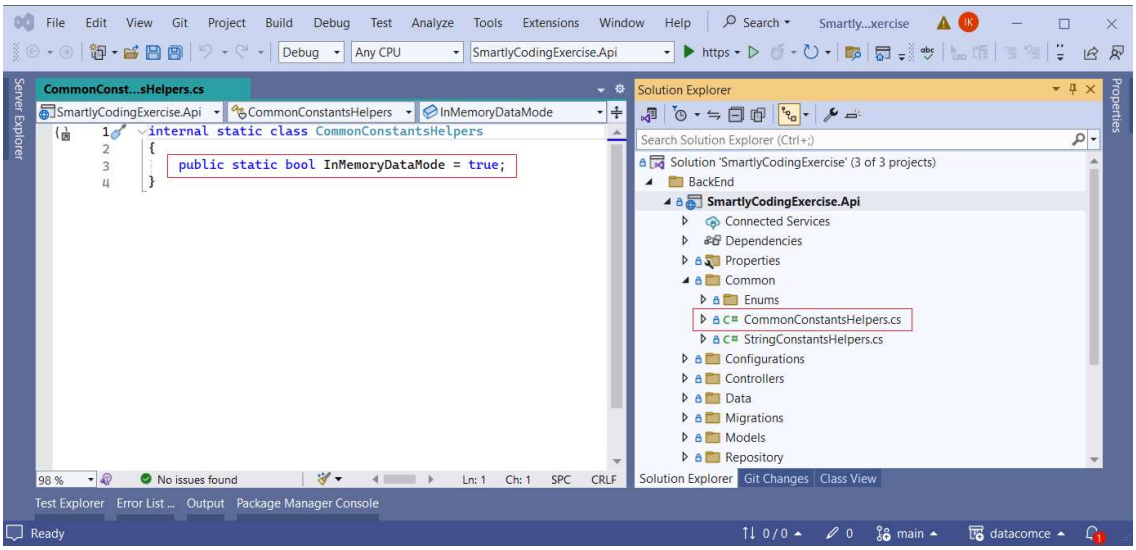
No additional configuration is required. The solution will use in-memory data storage.

Entity Framework Data Mode

1. Update the connection string in '**appsettings.json**' in the '**SmartlyCodingExercise.Api**' project.

2. Run the Entity Framework migrations to set up the database.
   - **add-migration** 'Setup and store initial data'
   - **update-database**

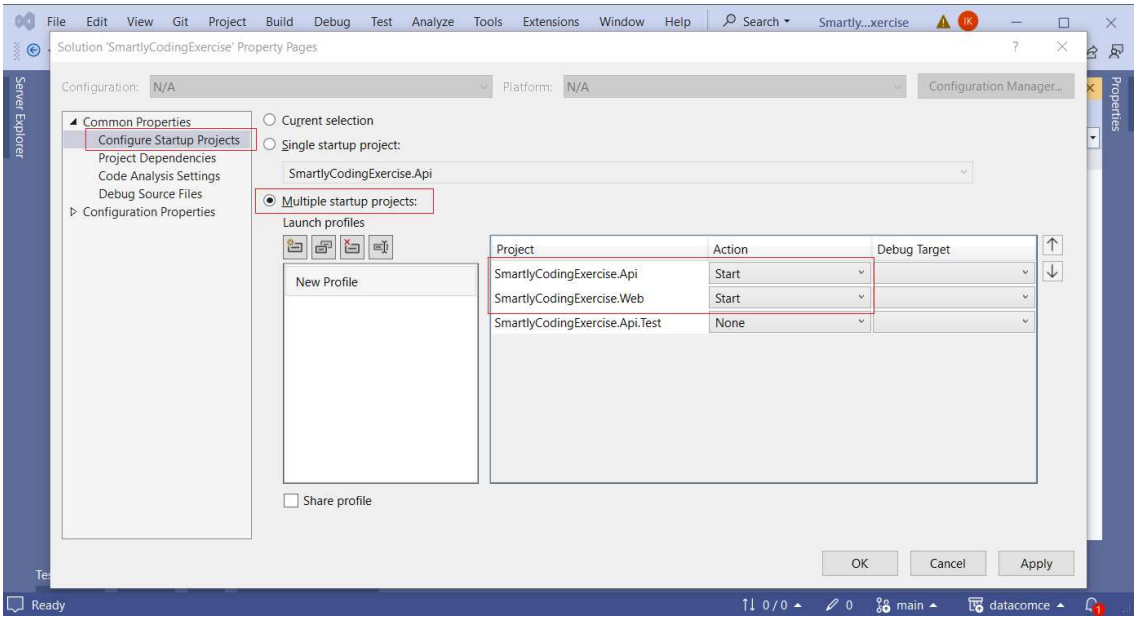
3. Change the configuration in '**CommonConstantsHelpers.cs**':
   - Location: '**BackEnd > SmartlyCodingExercise.Api > Common**'
   - Modify the relevant constants to enable Entity Framework data mode.
     InMemoryDataMode = false;



6. Running the Projects

1. Configure startup projects.

    1. Right-click on the solution name and select **Properties**.
    2. Select **Configure Startup Projects** and choose the **Multiple startup projects** option.
    3. Set both of these projects as startup projects:
        - **SmartlyCodingExercise.Api**
        - **SmartlyCodingExercise.Web**
    4. Press the **Apply** button to save the changes.

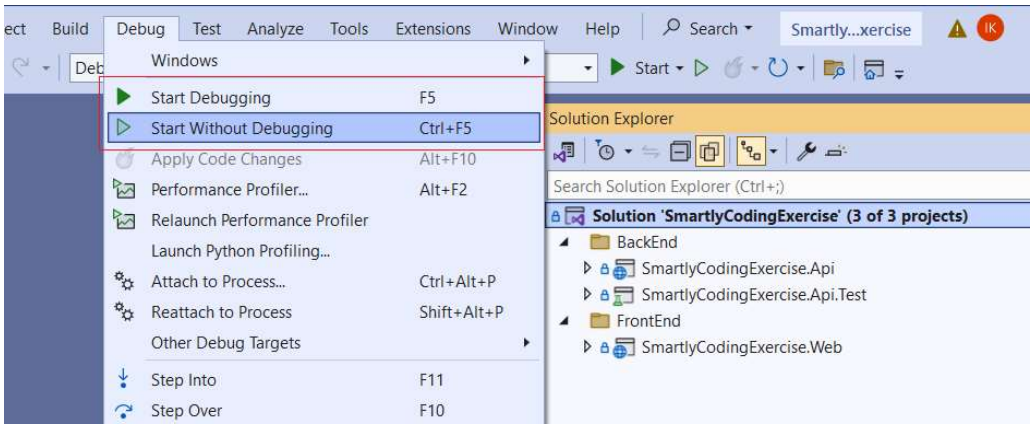


Running the MVC Application and the Web API

The solution can be run using one of the following methods.

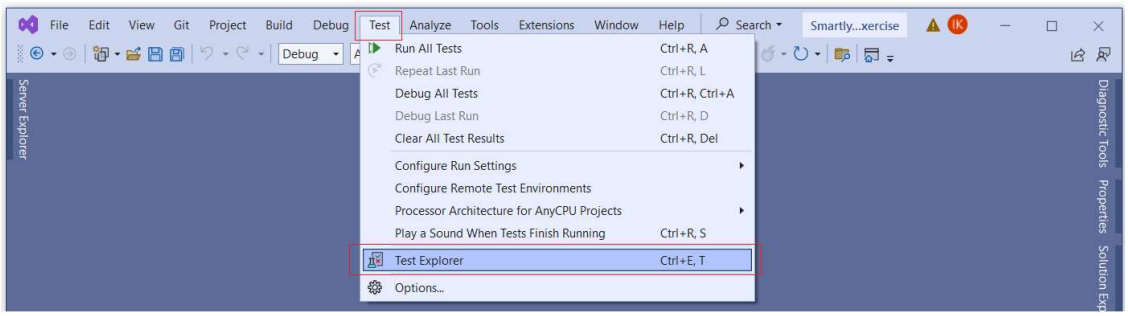
1. Press **F5** or **Ctrl + F55**
2. Press Visual Studio **Start Arrow**

3. By using the Menu items

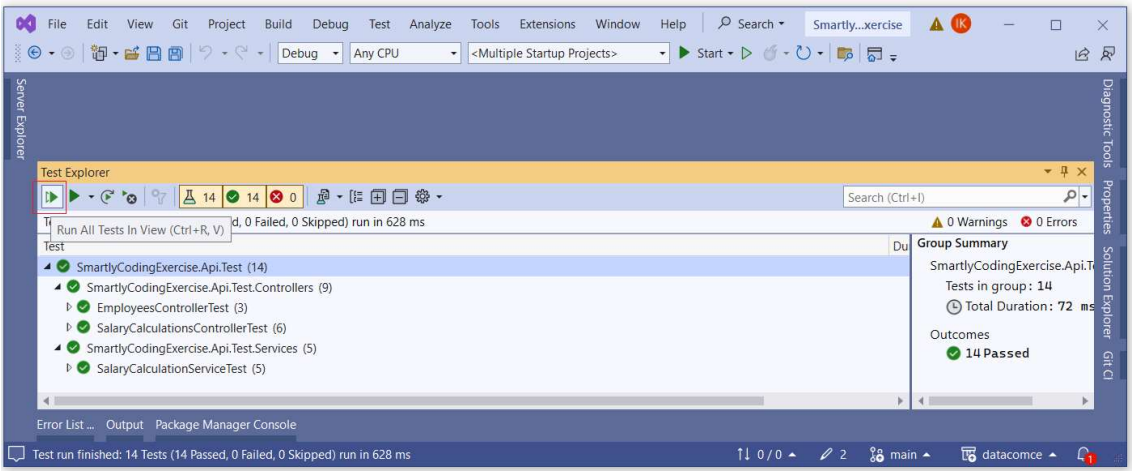


Running the Unit Tests

Open the **Test Explorer**:



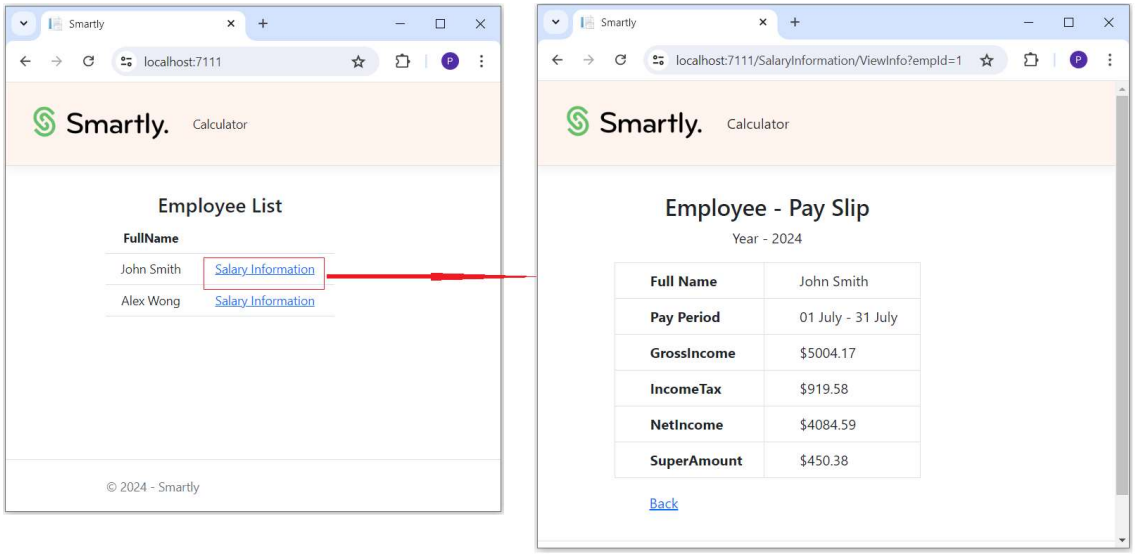
Press **Run All Tests in View** button:



Usage Instructions

1. **View Employee Pay Slip Details**:

   The web application is initially loaded with pre-stored employee details. To view the relevant pay slip details, click on the "**Salary Information**" link for the respective employee.



2. **Calculate Pay Slip:**

- Click the "**Calculator**" menu to access the Pay Slip Calculator view.
- Input the relevant fields: First Name, Last Name, Annual Salary, Super Rate, and Pay Period.
- Press the "**Calculate**" button to view the Pay Slip Summary.