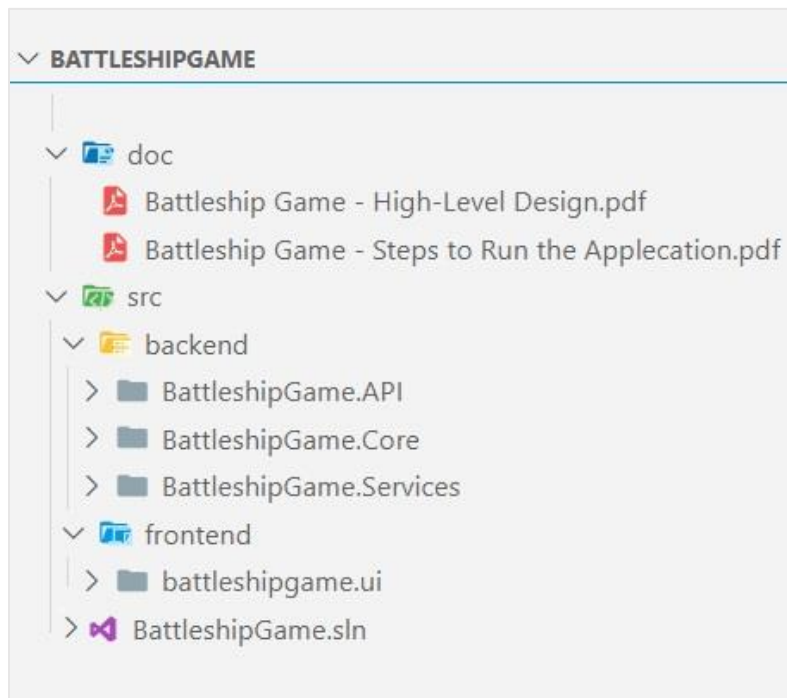# Battleship Game

Steps to Run the Application

Prerequisites

Make sure the following the steps and software is installed before running the application:

- **Backend (API):**
  - .NET 6 SDK
  - IIS with support for. NET Core.
- **Frontend (React):**
  - Node.js For dependency management: npm
  - Vite (Development and frontend build system)
- **Clone the Solution:**
  - Clone the full solution with the code from GitHub repository to your local machine
- **Open the Solution in Visual Studio.**
  - Open the. sln file in Visual Studio.
- **Build the Project:**
  - Use the **Build** option in Visual Studio to ensure everything compiles.
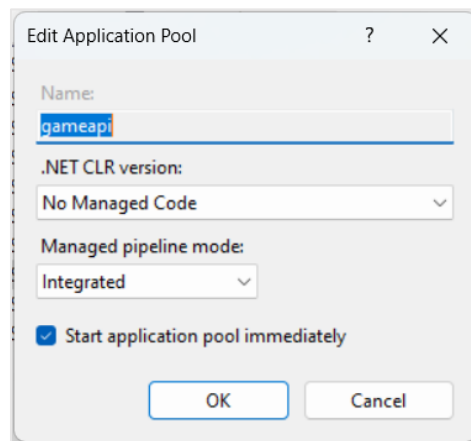
Solution structure

Backend (C# Web API)

Once the build is successful, follow the steps below.

- **Publish the API to IIS:**
    - **Publish**: Right-click on project and select "***Publish***".
    - **Destination**: You can publish to a folder or right to IIS. If sometimes a folder is used, you should copy the output files to "*C:\inetpub\wwwroot\gameapi*".
    - **Configure IIS**:
        - ✓ Open IIS manager and create a new site and contain it to the folder where the backend is published.
        - ✓ Set Application Pool as "***No Managed Code***". *(figure 01)*
        - ✓ Update the URL of the frontend application into the "AllowSpecificOrigin" of "appsettings.json" file. `"AllowSpecificOrigin"`: `"http://localhost"` *(figure 02)*

(figure 01)
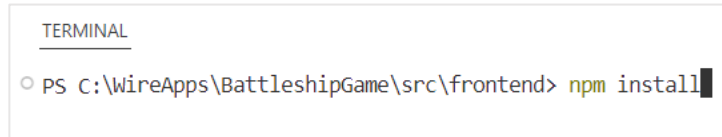
(figure 02)

Test the Backend API:

- ✓ Browse to `'https://localhost/api/game/start'` in your web browser or Postman and test the endpoints.

Frontend (React)

Once the cloning the project is successful, follow the steps below with Visual Studio or VS Code.

Install Dependencies:

- ▪ Inside the frontend directory and run this command on VS Code Terminal or CMD. *(figure 03)*
  - ✓ Code "`npm install`"

```
TERMINAL

○ PS C:\WireApps\BattleshipGame\src\frontend> npm install
```

(figure 03)

Set API URL:

- ▪ Update API Base URL as (baseURL: `'https://localhost/api/game'`) in "config.js" file in "src" folder. *(figure 04)*
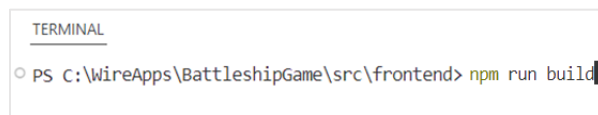
```
Js config.js    ×

battleshipgame.ui > src > Js config.js > [∅] default
  1    const config = {
  2        baseURL: 'https://localhost/api/Game'
  3    };
```
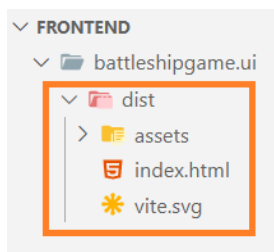
(figure 04)

Build the Frontend:

- ▪ Generate production ready files using the below command.
  - ✓ Code "`npm run build`" *(figure 05)*
- ▪ Which will create "*dist*" folder with the build output. *(figure 06)*

```
TERMINAL

○ PS C:\WireApps\BattleshipGame\src\frontend> npm run build
```
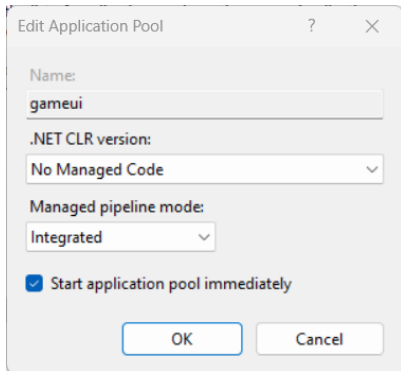*(figure 05)*

```
∨ FRONTEND
  ∨ 📁 battleshipgame.ui
    ∨ 📁 dist
      > 📁 assets
        🗐 index.html
        ✳ vite.svg
```
(figure 06)
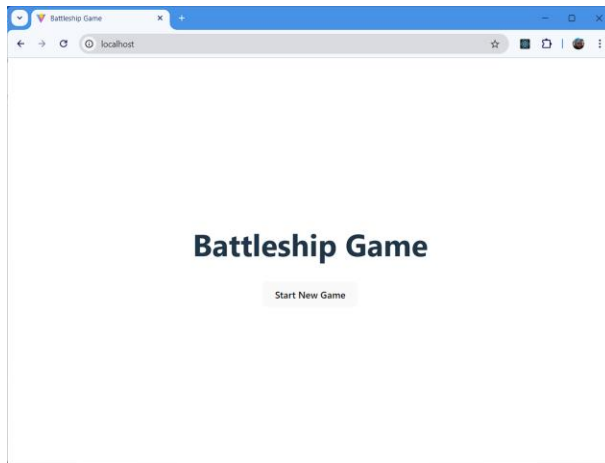
Host the Frontend in IIS:

- Copy the contents of "*dist*" folder to "*C:\inetpub\wwwroot*"
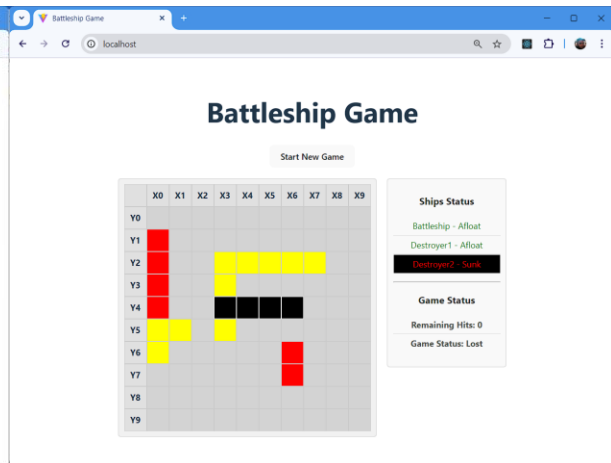- Set Application Pool as "***No Managed Code***". *(figure 07)*

 (figure 07)

Test the Application:

- ✓ And now navigate `'http://localhost'` in a browser to see that your frontend is loading and interacting with the backend. *(figure 08 / 09)*

(figure 08)   *(figure 09)*