Setup and Installation

Prerequisites

To set up and run the Bus Allocator app, the following prerequisites must be met:

- **Development Environment**:
  - Visual Studio (recommended IDE for C# development)
  - .NET (C#) framework installed in the development environment (minimum version compatible with your app)
- **Required Packages**:
  - Install the following NuGet packages in the project:
    - `ExcelDataReader` : For handling spreadsheet data input.
    - `Google.OrTools` : For solving the bus allocation using integer programming.

Installation Steps

1. **Clone the Repository**:

   - Clone the GitHub repository where the Bus Allocator app is hosted to your local machine.

   - Use the following command in your terminal or GitHub Desktop:

     ```
     git clone <repository-url>
     ```

   - List

     - Open the solution (`BusAllocatorApp.sln`) in Visual Studio.

2. **Install Required Packages**:

   - In Visual Studio, open the **NuGet Package Manager** and search for the required packages:

     - `ExcelDataReader`

     - `Google.OrTools`

   - Install both packages to ensure the app can read Excel files and perform integer programming for bus allocation.

3. **Generate Default JSON Files**:

   - On the first startup, the app automatically generates default JSON files for bus rates, routes, time sets, and departments. These files are used to store and manage persistent data for the bus allocation process.

   - The generated files can be manually edited after startup if necessary.

4. **File Structure**:

   - After running the app, the default configuration files (in JSON format) will appear in the working directory. These files include:

     - `routes.json`

     - `time_sets.json`

     - `depts.json`