

# Brainbay developer exercise

## Introduction

In this exercise, you'll build a basic .NET 8 solution from scratch using C# and your preferred editor or Visual Studio. The solution consists of two main components, but how you structure it is up to you.

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## Console Application

The console application fetches character data from a REST API for the TV show *Rick and Morty*. It stores only characters with the status "Alive" in a SQL database (either locally or on AWS).

### Requirements:

- Use the `HttpClient` class from the `Microsoft.Extensions.Http` NuGet package to access the API.
- Retrieve character data from: <https://rickandmortyapi.com/api/character/>
- Use any ORM (e.g., Entity Framework) to store the data.
- Clear the database before saving new data.

## Web Application

The web application displays a list of characters and allows users to add new ones. Character retrieval should occur at most once every five minutes, provided no new characters have been added. A response header must indicate whether the data was fetched from the database.

### Requirements:

- Develop an .NET 8 application.
- Use a response header named `from-database` to indicate data origin.

### Bonus Features:

- Create a view to display characters from a specific planet, with the planet name provided in the URL.

## Unit Testing

- Implement integration/unit tests for character retrieval.
- Ensure tests verify the expected number of characters returned.

## Evaluation Criteria

Your solution will be assessed based on:

- Use of common frameworks
- Code efficiency and performance
- Separation of concerns
- Ease of building and running the solution on other machines

## Submission

Once completed, push your code to a Git platform (e.g., GitHub, Bitbucket) and share the repository link.