Documention

This is a console App developed in .net framework 4.7.2 for calculating how many stops for resupply are required to make the distance between the planets, based on a given input that is the distance and should be in mega light(MGLT). The data needed to realise this project are taken from the API: <https://swapi.co/>  . The project contains the unit testing methods also developed in .net framework 4.7.2.

Structure of the project

Classes:

Program.cs

It contains the Main() method to initialize the project and to show the console window. From here is instantiated a new object and is called the method that serves to make the right calculations.

StarShipModel.cs

It contains the partial class StarShipModel that contains attributes for the star ship object.

And the other class JsonModel that has the methods to calculate the stops for the distance. This method is called GetAllStarships() and gets as the input an int, which is the distance in mega lights, than it gets the data from the Api using the endpoint <https://swapi.co/api/starships/>.

In order to have a clear code and more readable I have created another generic methods called SendRequest() which get the endpoint as string url,it creates an web request to this one, and deserialize the response from json format into object c#.

The method GetAllStarships() collect all the data from the Api and then it process the response to calculate the stops and print the result in the console window.

Foreach method is used the block try...catch to handle the exceptions.

For the summary of the methods is used xml documentation.

Unit Tests

For the test is used NUnit Testing using .net framework 4.7.2. I have build up three method test. There can be as cases as you want but I have created only three ones.

The first case, I have called the method GetAllStarships() with an input 100 as the distance in mega lights. I have build a string using the string builder with the expected result and it asserts if the results are equal.

The second case, I have create a method test that gets the input. Then inside the method I have created to different object, and I have call the same methods from these objects to see if they returns the same result.

The third, I have create a method test that gets two inputs. Then inside the method I have called tha same method with different inputs to see if the result returned is the same.