Derbis Corrales Varela *11/03/2022*

[Derbis.corrales@hotmail.com](mailto:Derbis.corrales@hotmail.com)

Steps to prepare the application for execution

The solution contains 3 projects:

* **LightsOut.Web**: User Interface (ASP.Net MVC)
* **LightsOut.API**: API REST that exposes the main methods, can be visualized with swagger.
* **LightsOut.Services**: This project contains the contracts and implementations of Service, Repository, and Context of Data. Regularly those artifacts will be in different projects, but this is only a proof of concept.
* **LightsOut.Services.Tests**: Test project (xUnit). Only a few tests.

**Note**: As a result of the application developer, when you execute, you will view a web page with the game Lights Out, and a little explanation about how to solve this puzzle:

Interfaz de usuario gráfica, Aplicación

Descripción generada automáticamente

The following sections provide the details about how to perform these steps.

## Step 1: Software requirements

* Visual Studio, I used VS 2022
* .NET 5
* Internet connection to update the NuGet packages.

## Step 2: Set up in Visual Studio

* Open Solution **GameLightsOut.sln**
* Compile de solution
* Set de connection string in the config file (**appsettings.json**) of project **LightsOut.API**. This is **very important** because the database with the basic data will be created and filled in the first execution. I used **EF Core Code** First and apply **Migrations**. The BBDD should not exist, but the user should be permission in SQL Server to create Databases.

Interfaz de usuario gráfica

Descripción generada automáticamente con confianza media

* Set de "**Endpoints:apiUrlBase**" in the config file (**appsettings.json**) of project **LightsOut.Web** (UI). If the previously set port is available, it may not be necessary to change this property.

Interfaz de usuario gráfica

Descripción generada automáticamente con confianza baja

## Step 3: First Execution

* Prepare for **multiple project start-ups**. For the correct execution, it is necessary that the 2 projects are started (LightsOut.API and LightsOut.Web) (see image).

Interfaz de usuario gráfica, Texto, Aplicación

Descripción generada automáticamente

* When you execute the app, the database will be created:

Interfaz de usuario gráfica, Texto

Descripción generada automáticamente

* When you execute the app, 2 web pages should be open:
  + API Swagger
  + Lights Out Game

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| Interfaz de usuario gráfica, Texto, Aplicación  Descripción generada automáticamente | Tabla  Descripción generada automáticamente |

## Others Notes

* References: <https://en.wikipedia.org/wiki/Lights_Out_(game)> and <https://www.logicgamesonline.com/lightsout/>
* Tests Result:

