Assignment No 1

Important Note:

- For all the questions, you must use Visual Studio and upload all files of the solution.
- Create separate solutions files for each question (i.e. one project per solution)
- Every Question should be named as "k<Year><StudentID>_Q<QuestionNumber>
  for instance: k170123_Q1
- Your Assignment should have proper Objected Oriented Programming and Data Structures
- Last Date for Submission: **March 21, 2021 (11:59 PM)**
- All URLs, File Paths will be included in app.config or web.config. No Hardcoding
- Assignment will be marked as 0 if:
  - Submitted late.
  - The submitted assignment does not open or file is corrupted.
  - Assignments submitted via any medium except for Google Classroom.
  - Copied amongst students or from another source

Question No 1: Downloading a Web Page

Create a Console Application which whenever executed will download a Web Page (for a given link) into the folder specified. The application will take the URL as input as well as the directory to store the file.

Sample Input: C:\> myQuestion1.exe https://www.psx.com.pk/market-summary D:\Assignment1
Param 1: Your Executable File
Param 2: URL
Param 3: Output Folder
Sample Output: D:\Assignment1\ - will contain a file named Summary21Feb21.html

Question No 2: Parsing the Data

Create a console application which will parse the data from Question 1 into meaningful information which is required for our system. In this question, we require only three elements i.e. category (such as "Automobile Assembler"), script (such as "Atlas Honda Limited") and Current Price (such as "451.35"). Your task is to read data generated from Question 1 and based on the folder provided in the app.config, generate folders against each Category. Once the folders are generated, save the scripts which belong to that category as an xml file. If the application is re-executed after few minutes, the same procedure will be repeated but previously files should persist.

Sample Input: Summary21Feb21.html
Sample Output: Multiple folders against each category. Each category may contain 1 or multiple xml files.

```
<xml>
 <Scripts>
  <Script>Al-Shaheer Corporation.</Script>
  <Price>15.83</Price>
 </Scripts>
```

```
 <Scripts>
  <Script>At-Tahur Ltd.</Script>
  <Price>18.42</Price>
 </Scripts>
</xml>
```

Question No 3: Displaying on a Desktop App

Create a Windows Form Application which will read data generated from Question 2 as an input. The application would have the following functionalities:

- User can see a list of All Scripts and Current Price
- User has a dropdown to Filter by Category and see current prices of all scripts which belong to that category.
- User can click on refresh to reload the data

Note: To display all scripts and their prices, you can enhance your output from question 2 to achieve better performance.

Question No 4: Displaying on a Web App

Create a ASP.Net Page which will allow the user to perform all operations defined in Question 3 on a web page. All operations should not post the entire page to the server.