Assignment 2 – BCS 426 C# Programming

Due: 2/19/2020 @ 1:40pm

You will need to update the existing Visual Studio DLL solution from the previous assignment. When you submit the assignment in the Blackboard dropbox make sure you zip both solutions and submit them.

IMPORTANT – Make sure you ***properly comment*** AND ***properly indent*** your program. The commenting and indenting documents are on Blackboard in the "Handouts" folder. ***If you fail to properly comment or properly indent I will deduct points.***

VERY IMPORTANT – IF THE PROGRAM DOES NOT COMPILE THERE WILL BE MAJOR POINTS TAKEN OFF.

Overview

You will need to make updates to existing classes to use serialization. You will also create a menu-driven console application that allows the user to read/write JSON and XML. It will also create Microsoft Excel files.

Part 0 – Regions

All code that you write should be placed inside of appropriate regions similar to what you did in assignment 1.

Part 1 – Updates to Existing Classes

Add serialization/deserialization code to Worker and Shift. Your class definitions should be compatible with the following JSON examples (they need to work with the given JSON variable names):

Worker JSON

```
{
  "id": 100,
  "name": "Rose Diaz",
  "payrate": 10
}
```

Shift JSON

```
{
  "date": "\/Date(1579237200000-0500)\/",
  "hoursworked": 30,
  "workid": 100
}
```

Part 3 – Main Project

Create a console application project in Visual Studio. It will contain a menu-driven program to manipulate and use the classes that you created. This project should import your DLL solution. DO NOT COPY THE DEFINITION OF ANY OF THE CLASSES INTO THE CONSOLE APPLICATION, IMPORT THE DLL SOLUTION!!!

Menu Description

This program will present a menu to the user and then perform an action depending on what the user chooses to do. You should create one instance of each class in main. When the program runs it should display the menu to the user and give them a chance to input a choice. An action should be taken depending on what choice the user makes. The menu actions should manipulate and use the appropriate class instance that you declared at the top of main.

You should not hardcode filename strings into the program. If the user chooses to read or write data to a file you should first ask the user to enter that filename then use that file for input/output as appropriate.

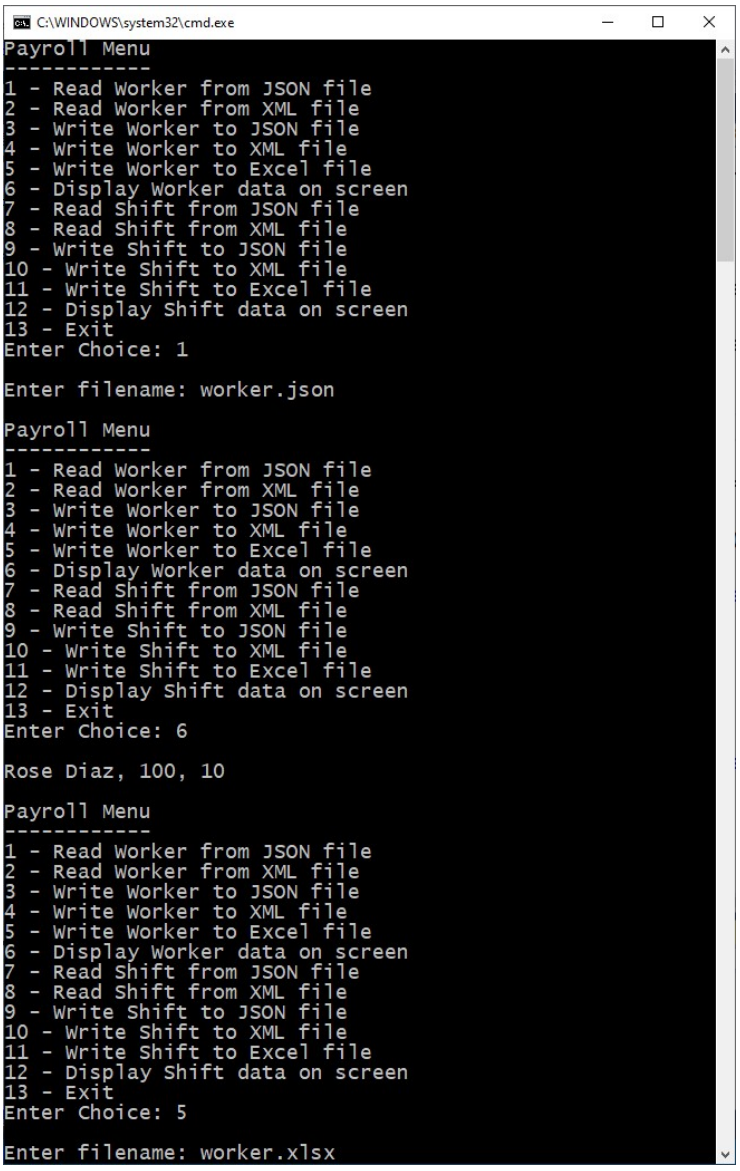
Here is the menu:

```
Payroll Menu
------------
1 - Read Worker from JSON file
2 - Read Worker from XML file
3 - Write Worker to JSON file
```

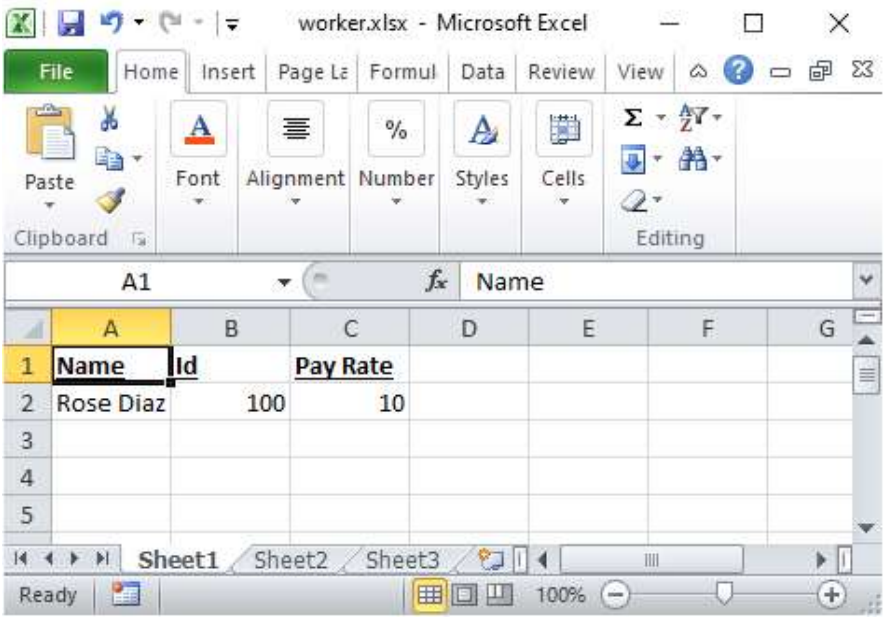
```
4 - Write Worker to XML file
5 – Write Worker to Excel file
6 - Display Worker data on screen
7 - Read Shift from JSON file
8 - Read Shift from XML file
9 - Write Shift to JSON file
10 - Write Shift to XML file
11 - Write Shift to Excel file
12 - Display Shift data on screen
13 - Exit
Enter Choice:
```

THE PROGRAM SHOULD KEEP SHOWING THE MENU AND PERFORMING AN ACTION UNTIL THE USER CHOOSES TO EXIT. HERE IS A SCREENSHOT:

Here is a sample program execution:



Here is a screenshot of the Worker Excel file:



Here is a screenshot of the Shift Excel file (the date appears as m/d/y and the time is not shown):