Activity 2

NeDL Transition Academy

Programming Activity 2: Console application to parse contacts file (JSON/XML).

Part 1

Step 1. Create a new console application in Visual Studio.

```
    class Program
    {
        static void Main(string[] args)
        {
            Console.WriteLine("Hello World!");
        }
    }
```

Step 2. Add using statement

```
using System.IO;
```

Step 3. Add nuget package reference to Newtonsoft.Json.

```
dotnet add package Newtonsoft.Json
```

or use VS add reference

Step 4. Create a class that represents a line a contact record.

```
using System;
using Newtonsoft.Json;

public class Contact
{
    public int Id { get; set; }
    [JsonProperty("first_name")]
    public string FirstName { get; set; }
    [JsonProperty("last_name")]
    public string LastName { get; set; }
    public string Email { get; set; }
    public string Gender { get; set; }

    public string IpAddress { get; set; }
    public string Skill { get; set; }
    public Guid Guid { get; set; }
}
```

Step 5: Read contents of contacts.json file.

```
var text =
File.ReadAllText("/Users/chadmichel/Projects/NeDLTransistionAcademy/Activity2/Contacts
.json");
```

Step 6: Parse the contents of the file using Newtonsoft.Json's JsonConvert class.

```
var contacts = Newtonsoft.Json.JsonConvert.DeserializeObject<Contact[]>(text);
```

Step 7: Loop over each contact and output the first and last name.

```
foreach (var contact in contacts)
{
    Console.WriteLine($"{contact.FirstName} {contact.LastName}");
}
```

Solution

```
    class Program
    {
        static void Main(string[] args)
        {
            var text = File.ReadAllText("Contacts.json");
            var contacts =
Newtonsoft.Json.JsonConvert.DeserializeObject<Contact[]>(text);

            foreach (var contact in contacts)
            {
                Console.WriteLine($"{contact.FirstName} {contact.LastName}");
            }
        }
    }

public class Contact
{
    public int Id { get; set; }
    [JsonProperty("first_name")]
    public string FirstName { get; set; }
    [JsonProperty("last_name")]
    public string LastName { get; set; }
    public string Email { get; set; }
    public string Gender { get; set; }
```

```
    public string IpAddress { get; set; }
    public Guid Guid { get; set; }
}
```

Stretch your thinking

What would happen if we remove the JsonProperty attributes from the Contact class?

Why is the IpAddress not being populated?

Part 2

Modify the existing solution to correctly parse the IpAddress property and the Skills property from the JSON file.

Part 3

Modifty the existing solution to parse an XML file instead of a JSON file.

Hints

- You will need to include namespace System.Xml.Serialization
    - `using System.Xml.Serialization;`
- Use File.Open to open the XML file
- Use XmlSerializer to deserialize the file.