**BCS 450 C# Lab – Serialization**

***Overview***

Create a project in C# using Visual Studio. You will write classes that use C# serialization.

***Part 1 – Create the project***

Create a C# console application in Visual Studio. Name the project Lab-Serialization.

***Part 2 – Add Serialization DLL Reference to Project***

Add a reference to **System.Runtime.Serialization.dll** to the project.

***Part 3 – Create an Address class***

Add a class named Address to the project. The Address class should have member variables and properties for city (string) and state (string).

***Part 4 – Address Serialization***

Add code to the Address class that will allow it to be used by the DataContractJSONSerializer.

***Part 5 – Main***

Should implement the following specifications:

1. Create an instance of **Address**.
2. Put data into the **Address** instance using the properties.
3. Save as JSON to file. Add code to save the **Address** instance to a file in JSON format. Use the DataContractJSONSerializer.
4. Create another instance of **Address**.
5. Read as JSON from a file. Populate the second Address instance with data from the JSON file you created in a previous step using the DataContractJSONSerializer.

Run the program and check that everything works correctly.

***Part 6 – Create a Person class***

Add a class named Person to the project. The Person class should have member variables and properties for first (string), last (string), age (int) and Address (Address). Add a default constructor to the Person class that will call new for the Address member variable.

***Part 7 – Person Serialization***

Add code to the Person class that will allow it to be used by the DataContractJSONSerializer.

***Part 8 – Update Main***

Should implement the following specifications:

1. Create an instance of **Person**.
2. Put data into the **Person** instance using the properties.
3. Save as JSON to file. Add code to save the **Person** instance to a file in JSON format. Use the DataContractJSONSerializer.
4. Create another instance of **Person**.
5. Read as JSON from a file. Populate the second **Person** instance with data from the JSON file you created in a previous step using the DataContractJSONSerializer.

Run the program and check that everything works correctly.

***Extra Challenge – XML***

Add code to main that serializes/deserializes the Person class to XML.