

Technical Laboratory (week 4)

Task: Read an XML database into a listview

Download the XML database from here

http://www.cs.indiana.edu/surg/pervasive/class_materials/p535_people.xml

And save it in the *bin* of your project folder for easy access from the program. We are going to create something that should look similar to this:



You can use MS Access, SQL server etc for databases but XML is the easiest way to create a small database for prototype purposes

Step 1: Create a new project and design your form using a button and listview (see example above).

Step 2: Assign a string variable to the path where the file is. Since your file is in the bin, you don't have to worry about writing out the full path. Just use `../`.

```
string peopleInfo = "../p535_people.xml";
```

Step 3: To read a database into compatible C# objects, you need to declare two things: a dataset and a datatable. A dataset can contain multiple tables of data. Remember, all declarations should be inside your class and not inside the functions of the class.

```
//create a new DataSet and call it "p535"
private DataSet p535 = new DataSet();

//create a new datatable and call it "people"
private DataTable people = new DataTable("people");
```

Step 4: Now you want to be able to read the database into the dataset and load the data into a datatable. Add using System.Xml; where declarations for library are made. You can have these statements executed 1) when the program loads or 2) when the button is clicked.

```
//reading the file from the given path into the dataset
p535.ReadXml(peopleInfo);
```

```
//loading data from the table "people" (see the xml file) into "people"  
people = p535.Tables["people"];
```

Step 5: Now you are ready to access the database. Go to form design and double click on the button. This will take you to the button click event function.

```
private void button1_Click(object sender, EventArgs e)  
{  
  
}
```

You will place all your code here which will be executed when you click the button.

Step 6: Now loop through each of the rows in the datatable and add the first and last names to the listview. Change the View Property of the listview and choose "list".

```
foreach (DataRow row in people.Rows)  
{  
    ListViewItem Name =  
        new ListViewItem(row["first"].ToString() + row["last"].ToString());  
  
    listView1.Items.Add(Name);  
}
```