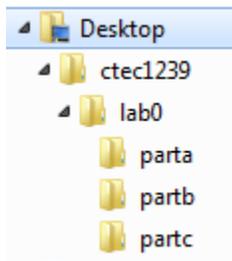


Lab 0: Introduction to Microsoft Visual Studio

In this lab, you will be writing three (3) simple console-mode applications in C#.

Using Windows Explorer, create the following directory structure on your Desktop:



Start Microsoft Visual Studio 2015, which is installed on the machines in L2.

From the Visual Studio Start Page, click on New Project ...

Under the Visual C# category (on the left), click on Windows Desktop (also on the left) and then Console Application (on the right.)

Choose the *parta* folder for the project, and call it LabZero. The code should initially look similar to this:

```
Program.cs x
ConsoleApplication1.Program
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;

namespace ConsoleApplication1
{
    class Program
    {
        static void Main(string[] args)
        {
        }
    }
}
```

Inside the Main() function, in between the *braces*, insert the following code,

```
    Console.WriteLine( "This program was written by YOUR NAME HERE." ) ;
```

with your actual name in place of *YOUR NAME HERE*.

For example,

```
static void Main(string[] args)
{
    Console.WriteLine("This program was created by Joe Blough.");
}
```

Build the project and run the program. Notice that you can't actually see the output (because the program runs so quickly that the window closes barely after it opens!)

Add code after the WriteLine() to keep the console window open:

```
static void Main(string[] args)
{
    Console.WriteLine("This program was created by Joe Blough.");

    // Keep console window open
    Console.Write("Press any key to close.");
    Console.ReadKey();
}
```

Now build the project and run it again. *Better?*

Add in your student number. For example,

```
static void Main(string[] args)
{
    Console.WriteLine("This program was created by Joe Blough.");

    const int STUDENT_ID = 8812797;

    Console.WriteLine("Student #" + STUDENT_ID);

    // Keep console window open
    Console.Write("Press any key to close.");
    Console.ReadKey();
}
```

Build and run it again.

Now **Clean Solution** (from the Build menu); **Close Solution** it (from the File menu).

Using Windows Explorer, copy all the files and folders from the *parta* folder to the *partb* folder.

Back in Visual Studio, from the File menu, choose Open, then Project/Solution... and open the **solution** file (not the project file) in the *partb* folder.

Build and run the solution. Notice that it is the same program from the *parta* solution.

From a web browser, use Google (or Bing) to convert your student number to HEXADECIMAL.

For example, I searched for "8812797 in hex" and got

8 812 797 =

0x8678FD

from Google.

Change the STUDENT_ID line to use the new hexadecimal value (the number that begins with 0x to the right of the equal sign).

[You may need to double-click on the **Program.cs** file in the **Solution Explorer** pane to re-open the code.]

For example,

```
const int STUDENT_ID = 0x8678FD;  
  
Console.WriteLine("Student #" + STUDENT_ID);
```

Build and run the program again. Notice that the *output does not change!*

Again, Clean and Close the solution. This time, copy the files from the *partb* folder to the *partc* folder.

Open the solution from the *partc* folder.

Modify the program to actually display the student number *IN HEXADECIMAL*.

```
const int STUDENT_ID = 0x8678FD;  
  
string hexStudentId = String.Format("{0:X}", STUDENT_ID);  
  
Console.WriteLine("Student #" + hexStudentId + " (hex)|" );
```

Build and run the program. The output should match the value of STUDENT_ID (except for the **0x**).

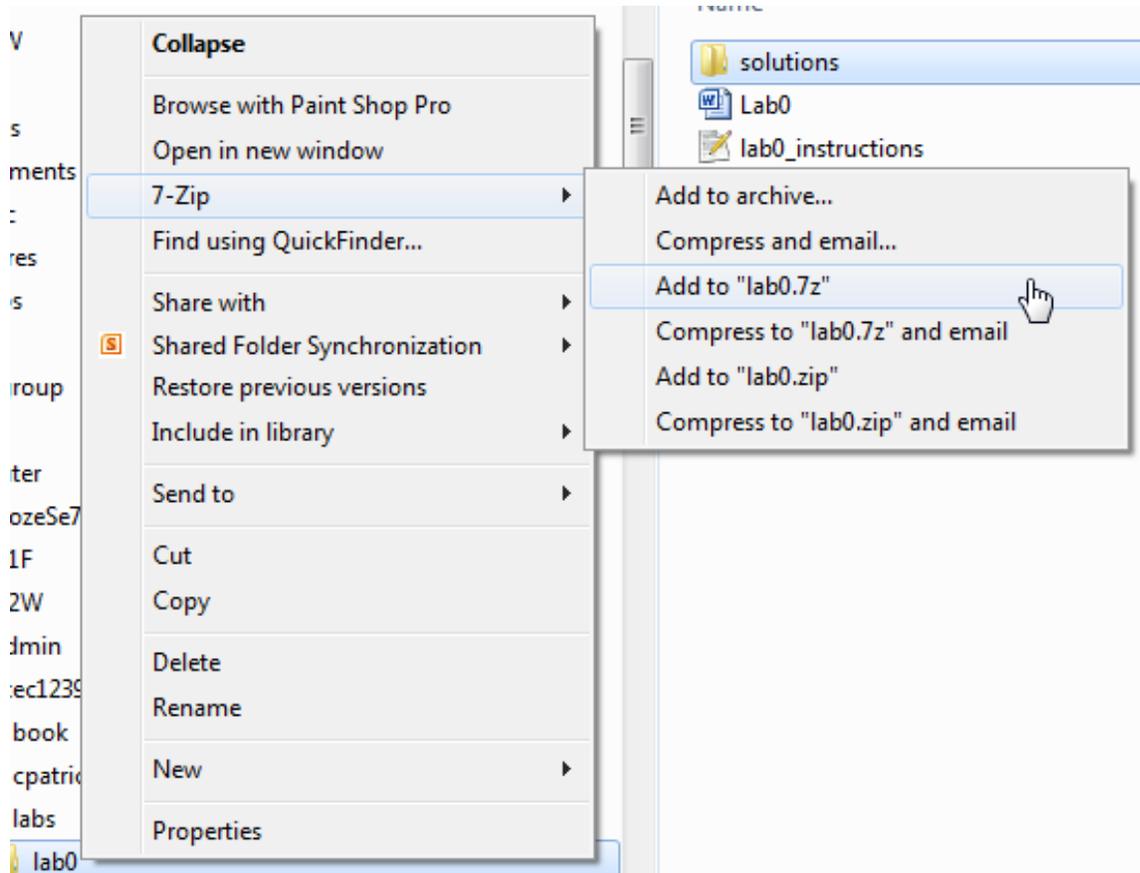
Now change STUDENT_ID so that its value is in DECIMAL again. Build and run the program. Same output!

Hand It In

Again, Clean and Close the solution.

From Windows Explorer again, create a **.7z** archive of the entire *lab0* folder:

Right-click (RC) on the folder and use the 7-Zip menu. For example:



Post the .7z file on Blackboard.