What is C#?

"C# is a simple, modern, object oriented, and type-safe programming language derived from C and C++. C# (pronounced 'C sharp') is firmly planted in the C and C++ family tree of languages, and will immediately be familiar to C and C++ programmers. C# aims to combine the high productivity of Visual Basic and the raw power of C++.”

– Microsoft

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Ok so what is it really?

- Object oriented
  - C++ power
  - Java abstraction
- Do I still have my C++ pointers?
  - Yes and No
  - Microsoft changed the way pointers are handled now
  - unsafe code designation
The .NET IDE

- MSDN
  - Intelli-sense
  - Quick and easy “API” look up
- Solution files
  - Collections of projects

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The Start Page

• Projects Tab
  – Contains all of your recent projects
  – Allows you to create or open a project

• Online Resources
  – Quick and easy access to code samples
  – Access to the web community

• My Profile
  – Customize how the IDE looks
The Solutions Pane

- Displays all of the active projects
- Similar to a workspace
- This is the folder structure that the project is in
  - Any files folders etc. can be shown and viewed here
- You can create folders and new files here

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Class View

• Access to all methods in your project
• Access to variables
• Access to libraries
• Similar to the Visual Studio 6 Class representation
Properties Pane

- View and change any property that is associated with the object selected
- The lightening bolt allows you to create action methods that execute when a certain action is performed
Dynamic Help

- Quick and Easy Access to MSDN
- Help files open up in the editor window
Coding your first C# application

• So where are my libraries?
  – C# doesn’t have its own libraries
  – Instead the .NET class libraries are used for all .NET languages

• The using key word
  – When trying to “import” or “include” a library the code syntax is
    using System;
Creating the Project

• Displayed when you create a new project
• Pick various types of Web or Application geared projects
• C#, J#, C++, VB, Databases, and Setup files
• Specify to add to or close the current solution
The Design View

• Allows you to drag forms into an application
• Allows you to view how your program would look while running
• From here you can select the objects and modify their properties through the properties pane
Windows Application – Design View
The Tool Box

- Contains forms that can be dragged into any application
- It is apart of any project you create and the contents of the tool boxes change according to the type of project
The Code View

• This is where the actual code can be viewed
• The entire project can be written in this view and it is possible to hard code any object’s attributes
• You can access the code that is generated by .NET when you drag and drop and clean the code up if necessary
Console Application – Code View

```csharp
namespace ConsoleApplication1
{
    public class Class1
    {
        /// <summary>
        /// The main entry point for the application.
        /// </summary>
        /// <param name="args"></param>
        static void Main(string[] args)
        {
            return; // TO DO: add code to start application here
            Console.WriteLine("Hello World");
        }
    }
}
```

Build succeeded
Documentation

• The /// operator will create an XML block of code that can be parsed into web pages
• Microsoft’s version of Javadoc
• After putting these comments in you can build comment web pages from the Tools menu by selecting the Build Comment Web Pages option
Compiled Resources

• http://www.microsoft.com/net/
• http://www.csharp.org
• http://www.csharpcorner.com
• http://www.tek-tips.com
• http://www.google.com