Conventions and syntax assignment

So to this point I have taken a four classes that program in C# and one class in C++. I am pretty comfortable programming in C# and can get by using C++, and I have watched the video that we were supposed to watch on this topic, that aside I am still not completely clear on the difference between conventions and syntax. But I will give it my best

Syntax:

1. Syntax is the structure. For example an if statement (in the C languages at least, not sure about others but I am guessing in them as well) has to have some kind of instance that the computer must verify contained in parenthesis, followed by some kind of code to be implemented contained in curly brackets and ended by a ; in order to be recognized as an if statement. Like so: if(some variable >5) {execute this code};
2. Another example of syntax would be methods/functions. Function names must be followed by two parenthesis in order for the system to know they are functions, the “if” statement is a type function. Users can also create their own functions that do custom things however without the previous structure the system will not see it as a function and will give syntax errors.

Conventions:

1. Conventions are a set of rules that programmers follow to ensure clean readable code. They are not necessary for the computer to process the code but make it easier for programmers to see and make sense of the code. For example variable naming conventions. It is proper coding practice to use camel case when creating variables. All words are joined and the start of each word is a capital letter with the exception of the first letter. Like so: btnCountCoins. It is also proper educate to abbreviate any form controls (I know we haven’t created any windows forms in this class but that was the first variable name I thought of). Also variables should have names that are meaningful. You shouldn’t name the variable that contains weather data bob, weatherData would be much better because you now know exactly what that variable contains.
2. I guess I can also mention class, function, and constant variable names as well. Class and function names follow the camel case format except that the first letter of each word is capitalized, like so: CountCoins(). Again you want to name them appropriately. You wouldn’t want to call a function that returned the current time to be called GetZooAnimals(), you should call it GetCurrentTime() or something similar. Constant variables are variables that for the life of the program will stay the same. For instance the temperature at which normal water naturally freezes is 32 degrees. It does not change. In order to prevent any accidental change to that variable you give it the const(syntax) designation and then proper coding practice is to then make the name of the variable all capital letters with multiple words separated by the underscore like so: FREEZING\_TEMPERATURE\_WATER. You can also appropriately abbreviate if desired as long as the abbreviation is sufficiently clear like so: FREEZING\_TEMP\_WATER.
3. There are a ton of examples I could continue to give but I have other stuff I need to do so I will end with the structure of code. As was shown in the video while the computer doesn’t need indenting and spacing to read the code it is much easier for us to read the code if it looks like the following:

public class BasicCode()

{

void Start()

{

const int MAGIC\_NUMBER = 5;

int number = 0;

if(number = MAGIC\_NUMBER)

{

cout << “Your number is the magic number”;

}

}

}

As opposed to:

public class BasicCode(){

void Start(){const int MAGIC\_NUMBER = 5;int number = 0;if(number = MAGIC\_NUMBER){cout << “Your number is the magic number”; }}}

So I will end with that.