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Thread: [Let's talk about variables - Padrino's Tutorials : Part 2](#)

padrino - June 13, 2025, 6:05 pm

Introduction

Welcome to part 2 of Padrino's Tutorials. In this series I will be giving you the rundown on the fundamentals you need to get started on your programming journey. We'll be using C# in this series, but the skills are transferable and you will be able to take what you learn and apply it to other languages. If you missed part 1, you should read it [here](#). In part 2, we will be going over variables and data types, essential to understand if you want to start building your own programs. So, let's get into it.

What is a variable?

Well, put simply, a variable is a way of storing data that we can access and use later in our program. In fact, you have already dipped your toe into using variables in our previous tutorial when we saved our users input and sent it back to them in our "hello, world!" program. But let's look at them some more examples

Above we can see a super simple declaration of a string variable. We declare a variable of type string, give it the name of name, and assign it the value of padrino. We can now access this in our program whenever we need to, for example, if we wanted to output it to the console we could do the following:

```
Code string name = "padrino";  
Console.WriteLine(name);
```

That code would give us the output of "padrino" in the console. So, pretty simple, hey? But in order to do more, we need to understand the different types of variables we can have, and in order to do that, we need to understand data types.

Data Types

Programming is all about data, we collect it, store it, manipulate it, and send it. But in order to do any of that we need to assign it to its correct type. For example, if we tried to store the value "6" as a string in the way we did above, we could output it to the console no problem. But say we wanted to carry out some mathematical operation on it, we would be met with an error. This is because the program sees that value as a string, not a number. So, what datatypes can we have? Let's look at some of the more fundamental ones you'll need:

String

A string is a string of characters that the program sees as pure text. Think of it as written language, something to be written or read. We signify a string by enclosing the value in double quotes. For example:

Code String example = "this is a string"; We can also carry out string operations on this data type, but we'll get to that in another tutorial

Integer

An integer is a whole number. Unlike strings, we can carry out mathematical operations on integers. Below you can see an example of us declaring 2 variables and multiplying them together and storing that value as a third integer:

```
Code Int myFirstInteger = 6;  
Int mySecondInteger = 2;
```

Int myThirdInteger = myFirstInteger * mySecondInteger;

Double

A double is very much like an integer, only we can use it to represent decimal values for example:

Code Double myDouble = 6.66D;

Char

A char is simply a single character enclosed in single quotes.

Code char myChar = 'a';

Boolean

A boolean is simply a true or false value. You will use this a lot to carry out checks in conditional statements - but we'll get to that later. Here's an example of them being declared:

Code bool example = true;

bool anotherExample = false;

Putting it into practice

Below I have written a simple program that uses many of the variable types mentioned above. Don't worry if you don't understand everything, it's a learning process - it's a lot to take in. I encourage you to mess around with it and try it yourself.

You can run this program on your visual studio install, or alternatively you can use dotnetfiddle [here](#).

Code using System;

```
public class Program
{
    public static void Main()
    {
        //strings
        string name = "padrino";
        Console.WriteLine(name);

        //Characters
        char character = 'p';
        Console.WriteLine(character);

        //Integers
        int myFirstInteger = 6;
        int mySecondInteger = 2;

        int myThirdInteger = myFirstInteger * mySecondInteger;

        Console.WriteLine(myThirdInteger);

        //Boolean
        bool example = true;

        if(example){
            Console.WriteLine("looks like the boolean was true.");
        }
    }
}
```

You'll see that this code will output the following:

Code padrino

p

12

looks like it was true.

Conclusion

In this thread we have covered the basics of variables and data types and even put them into practice. Congratulations! This is a huge step in understanding the fundamentals of programming - and again, don't worry if you're struggling to understand, just keep at it. In the next installement we will cover some more complex operations such as loops and conditionals (one of which we I actually used in the code above, see if you can spot it!). As always, my DM's are always open if you need help understanding anything.

Bastille - *June 14, 2025, 2:42 am*

Thanks for the tutorial, can't wait to see concrete examples and applications, such as hiding processes, or making malware.