Demos Module 2

Demo 2

Time to get to work. We are going to create our first application using our freshly installed Visual Studio 2022. We'll use the template and we'll take a look at the generated C# kit. Next, I will show you what steps we need to do to run our first program. Now, in this demo, I'm going to make you a C# developer already. Now with Visual Studio launched, we arrive here on this start screen from where we can actually launch a few operations. What we'll do is we'll create a new project. As mentioned in the slides, the project is really the container for all the code and all the files really that make up your application. When we compile our application later on, so build the application to make it executable, the project will also be what gets compiled, what gets built. So click here on Create a new project, and we'll build our first project together. What we see here in this Create a new project window is a list of templates. Microsoft already provides us with some starting templates to get us on our way when building applications. As mentioned, we'll keep things simple and we won't be focusing on the UI, really; we will be working with a Console Application. And the console uses a terminal, so a string‑based, a text‑based terminal that allows us to see text messages and also input text that we can work with in our application. So we'll select the console application here. Now, do make sure that in the list of languages, you are using C# and that also here in the Console App template, you're actually selecting the C# version of the Console App. Notice also here that this type of application can easily be executed on Windows, but also on Linux and on Mac. That is that cross‑platform functionality that I was referring to earlier. In this window, we are asked to give our project a name. I will give it a name. Let's call it HelloFromCSharp. You can also choose where you want your application to reside. When we click on Next, we are asked for the version of the framework. As mentioned, we are using .NET 8 here, but you can also use different versions of .NET if that would be a requirement for your application. You can ignore the other options here too and these might in fact be different, based on the version of Visual Studio 2022 you have installed on your machine. When I now click on Create, what Visual Studio is going to do, it's going to execute that template and generate a few files for us already. There we go, we have generated our first application based on that template, that project template that came with Visual Studio. Now without doing anything just yet on the code, what I'm going to do is I'm going to run the application. And to do so, we can actually click here on that green arrow here that also shows the name of the project again, HelloFromCSharp. And when I click here, Visual Studio will compile the application and also run it in one go. That goes pretty fast typically. And you see here that a console window, a terminal window that shows us a little bit of text, is showing, and it is showing Hello, World! Congratulations! You have created your first C# application, You're now officially a C# developer. Although you haven't written any code yet, but we'll fix that very soon. Now without going into too much detail, what we see here in Visual Studio is a code editor. Of course, writing the code is the most important task that we do, and therefore, also the code editor is very important in what we see here. And the code isn't just plain black text on a white screen. It's that it's using quite a few colors to give us an indication of the meaning of the code. Now, before we close this demo, there's one question I'd like to solve at this point. How did we get that Hello, World! to show on that console window? Well, here you see line of code that says Console.WriteLine, and I'm passing Hello, World! So using this console here, we are able to write text to the console, to that terminal, that is, and it is also possible to accept text from the console, and we'll see how to do that in the next demo.