# Hello World

Your first programs in .NET

# Prerequisites

We are installing:

**Visual Studio Code**

**Visual Studio Community 2017**

# Hello World example

Let's write something to the console

Let's say hi to our friend (string concatenation)

# Our first code

```
using System;


namespace ConsoleApplication
{
    public class Program
    {
        public static void Main()
        {
            Console.WriteLine("Hello World!");
        }
    }
}
```

# Compiler

1. From source code to machine code
2. Machine code
   a. Directly executed by CPU
   b. Executed by a virtual machine (intermediary step)
3. Languages like this: C# (.NET), Java, C/C++

# Interpreted languages (scripting)

There is no compilation step, code is executed directly, step by step and without any optimization

Languages: Powershell, Bash

# Variables

How a variable translates to machine code?

Typed vs dynamic

# Hello World v2

Let's read a variable from the console and use a condition to check if the number is bigger than 100 or not

# Hello World v3

Mathematical operations separated into functions: addition and substraction

# Hello World v4

Lets display the numbers from 1 to 10

# Hello World v5

Lets verify if a number is even or odd

# Exercises @Home - 1

Read 2 number from the keyboard and create mathematical operations for

-division

-multiplication

-on division if the number is 0 display a message that it is not possible

-calculate the minimum and maximum

Read a number from the keyboard and

-it is the temperature in C, convert it to F

-it is the temperature in F, convert it to C

-it is a number of days, convert it to years, months, weeks and days

 Conventions - year: 365 days, month: 30 days, week: 7 days, use only numbers bigger than 1000