Module 1

What is .NET and C#?

The .NET runtimes

.NET Framework
Windows

- Console
- Windows Forms
- WPF
- ASP.NET

.NET Core
Cross platform

- Console
- ASP.NET Core
- UWP

Mono / Xamarin
Mobile

- iOS
- OS X
- Android

.NET Standard

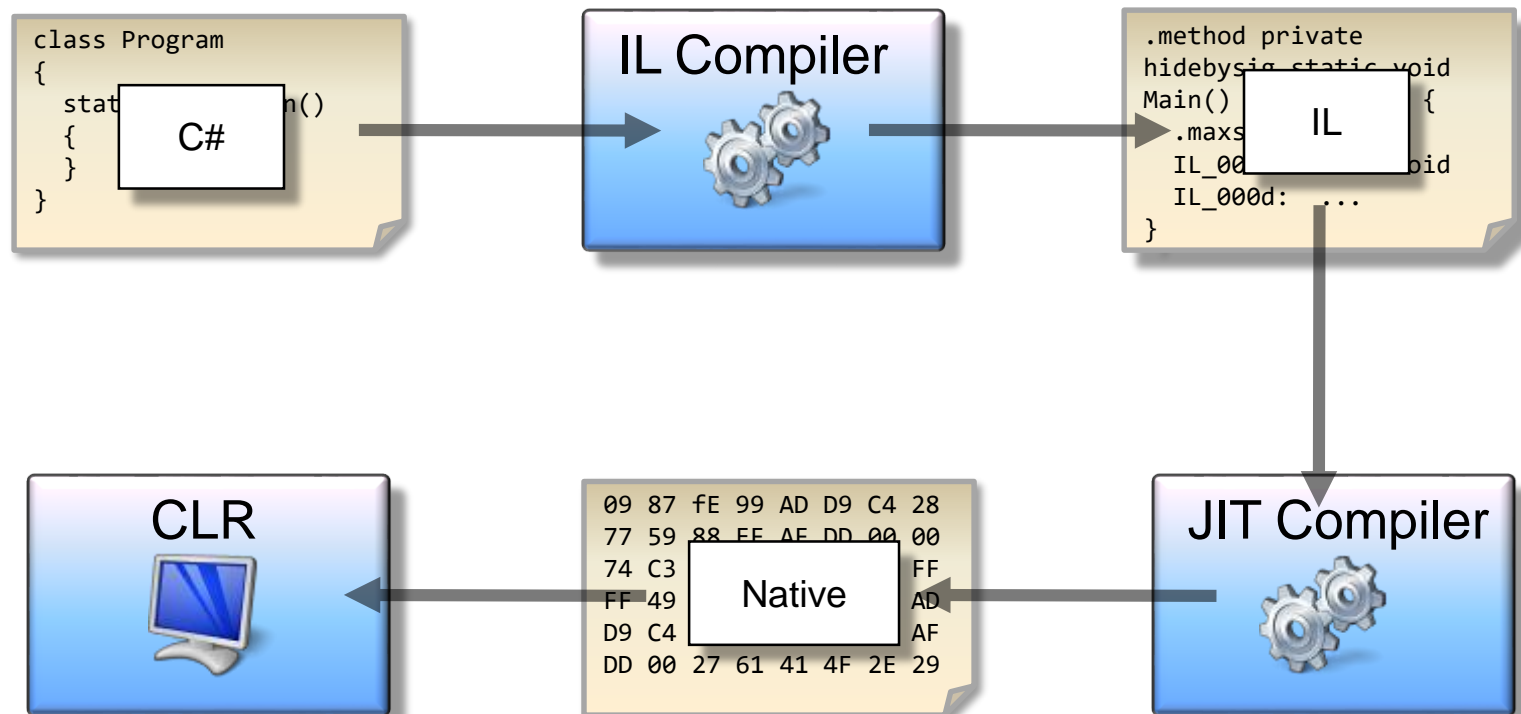## Infrastructure

| Languages | Build tools | Runtime components |
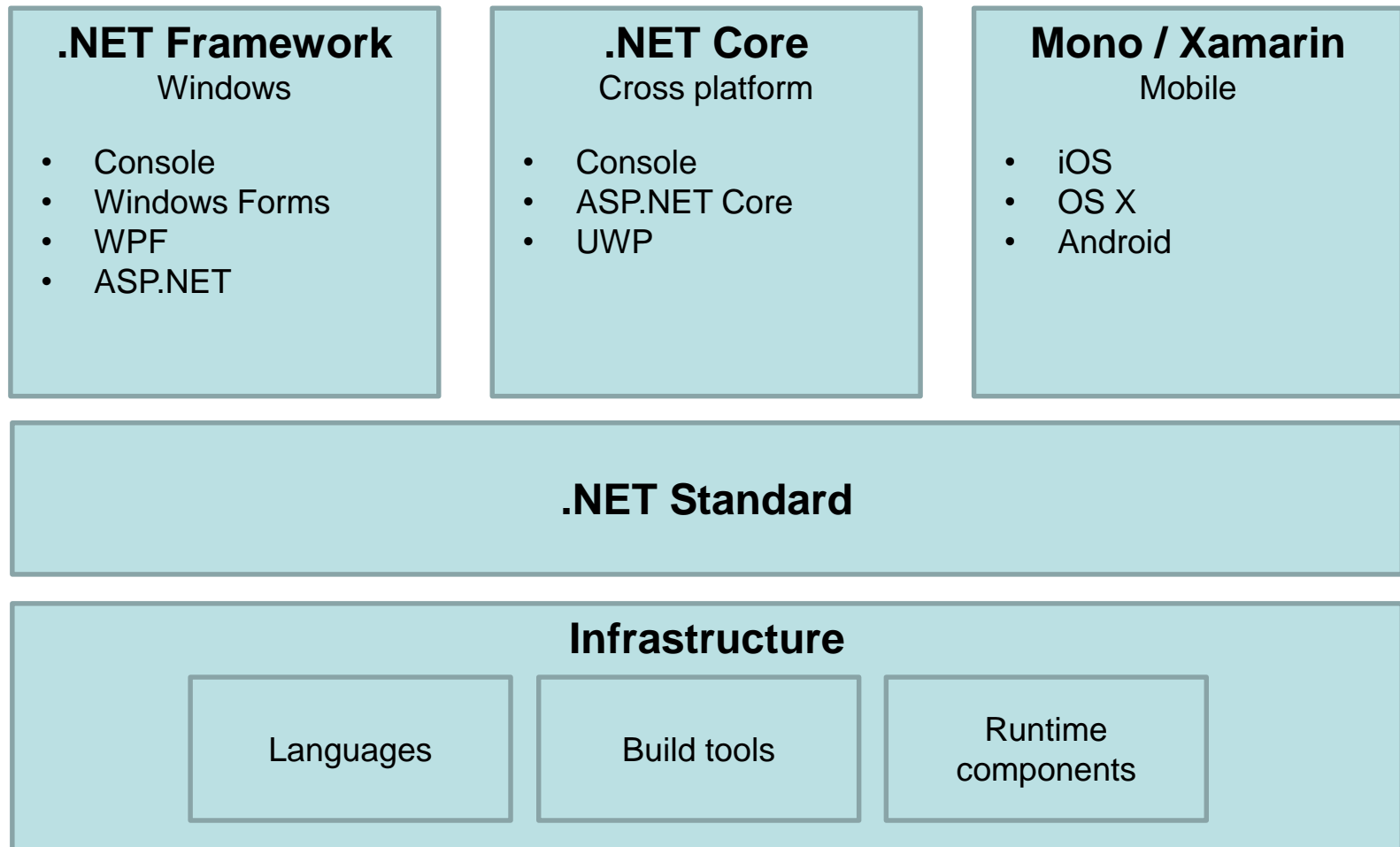
Compilation and Execution (.NET Framework)

- The compilation and execution happen in multiple steps

The C# Language

- <u>The</u> language for the .NET Framework!
- New and very powerful object-oriented language inspired by C, C++, and Java
  - C/C++ syntax
  - Java paradigms
- Type-safe, easy-to-use, and very elegant

- Created exclusively for the .NET Framework by Anders Hejlsberg
- Evolves all the time with the trends of the development community

From Wikipedia

```csharp
// Comment

int numberOfDays = 10;
string code = "x";

if (numberOfDays == 10)
{


}
else
{
    if (code == "x")
    {
        bool success = (numberOfDays * 2) > 20;
        // more code...

    }
}
```

The Evolution of .NET and C#

Year	.NET Fr.	Visual Studio	C#
2002	1.0	Visual Studio .NET	1.0
2003	1.1	Visual Studio 2003	-
2005	2.0	Visual Studio 2005	2.0
2006	3.0	-	-
2007	3.5	Visual Studio 2008	3.0
2010	4.0	Visual Studio 2010	4.0
2012	4.5	Visual Studio 2012	5.0
2013	4.5.1	Visual Studio 2013	-
2014	4.5.2	-	-
2015	4.6	Visual Studio 2015	6.0
2015	4.6.1	-	-
2017	4.6.2	Visual Studio 2017	7.0
2017	4.7	-	-

Visual Studio

- Development Environment
  - Visual Studio
    - Community 2017
    - Professional 2017
    - Enterprise 2017
  - Visual Studio Code
    - C# plugin(s)

- Download from https://www.visualstudio.com/