C# / .NET (CORE)
Lukáš Kubíček

lukaskubicek@gmail.com
Vakutech.cz

Proč .NET Core

- C# + Visual Studio = produktivní prostředí

- Velká komunita (hledání)

- Aktivně vyvíjený, moderní trendy

- Multiplatformní

- Rychlý

- https://dot.net

- https://docs.microsoft.com

Kde hledat pomoc

- Vše se vyvíjí, syntaxe se mění
- STACKOVERFLOW
- DOCS.MICROSOFT.COM – ASP.NET CORE

C#

- **general-purpose**
- **multi-paradigm imperative**, **declarative**, **functional**
- **strong typing (explicit, implicit)**
- **generic**
- **object-oriented** (**class-based**)

C#

- **Desktopové a systémové aplikace (GUI, Console, Služba)**

- **Serverové aplikace (asp.net, MVC, API,..)**

- **Embedded**

- **Cloud – Azure**

- **Scripts (LINQPad)**

.NET

- **CLR**
- **Framework Class Library**
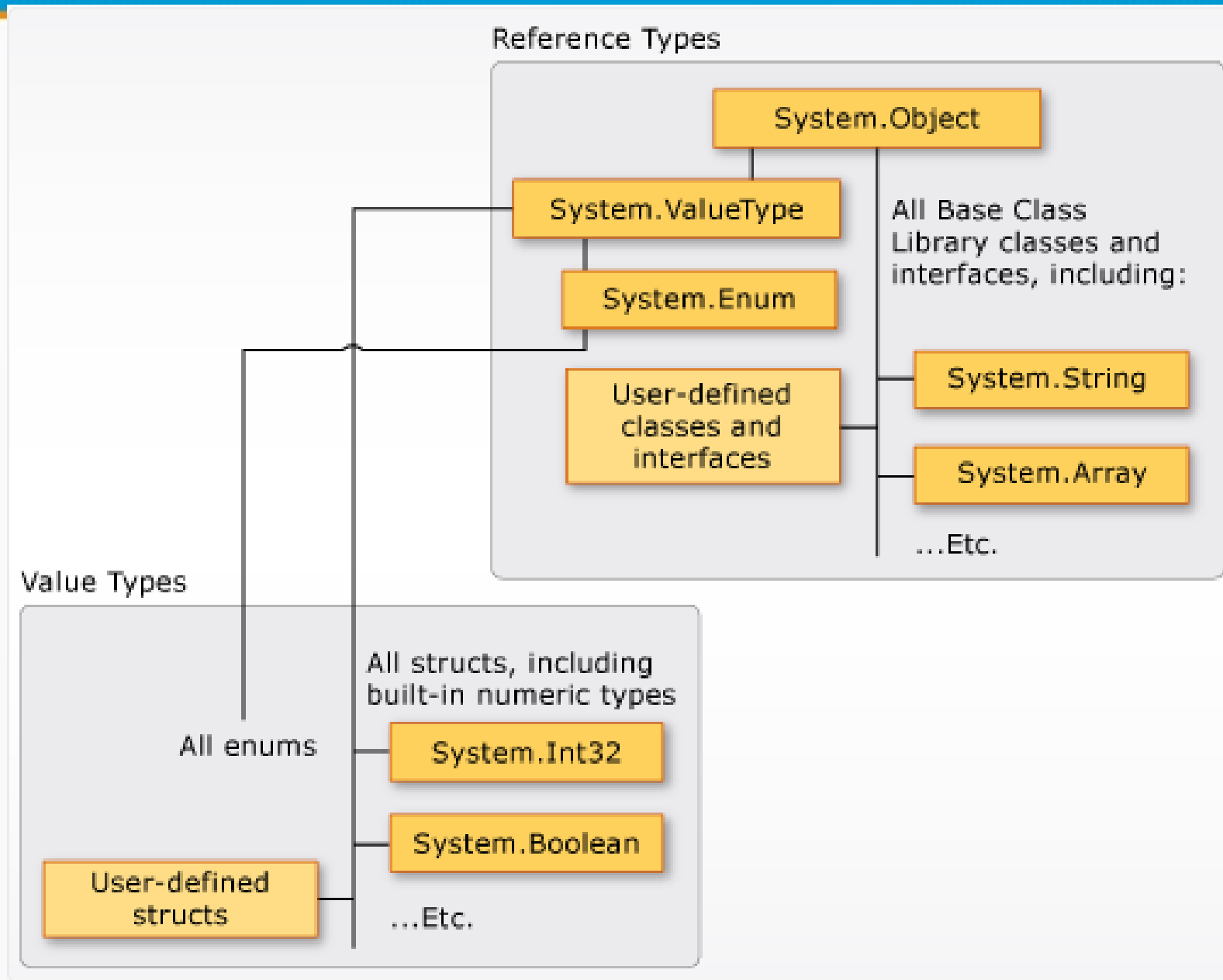- **Languages C# / F# / VB**

.NET CLR

- **.NET Framework includes the Common Language Runtime (CLR). It serves as the execution engine of .NET Framework and offers many services such as memory management, type safety, exception handling, garbage collection, security and thread management. All programs written for .NET Framework are executed by the CLR.**

.NET Core

- **.NET vs .NET Core**
- **.NET 5**
- **multiplatformní**

C# - vše je objekt

A tour of the C# language

https://docs.microsoft.com/en-us/dotnet/csharp/tour-of-csharp/

.NET architecture
Types and variables
Program structure

C# - Building blocks

https://docs.microsoft.com/en-us/dotnet/csharp/tour-of-csharp/program-building-blocks

Class Members
Accessibility
Fields
Methods
Parameters
Static and instance methods
Virtual, override, and abstract methods
Method overloading
Constructors
Properties
Indexers
Events
Operators
Expressions
Statements

Stataické vs instance

- **Int, float, double,..**
- **String**
- **DateTime**
- **File**
- Convert
- Console

Kolekce

- **Arrays**
- **Generics**
- **IEnumerable, Icollection**
- **List**
- **Dictionary**
- **HashSet**
- **ObservableCollection**

LINQ

- Language Integrated Query

- Extension Methods

- Lambdas

- Anonymous types

- SQL, InMemory, XML,..