Lecture Notes

* Can write code in MSIL
* Platform or Language independent.
* Version 1.0 to 4.8
* .NET 5 & 6
* Current version 8
* Component of CLR: CLS, CTS, FCL
* Follow Common language Infrastructure, then your lang is supported.
* CLR converts IL code to Machine code (.jit, GC, security manager, threading, other)

CTS

* Allows Cross-lang execution.
* Object oriented model to come in .Net
* Define set of rules
* Library that contains primitive datatypes.

|  |  |
| --- | --- |
| Integer | Byte |
|  | SByte |
|  | Int16 |
|  | Int32 |
|  | Int64 |

Type:

1. Reference Types (stored on heap, managed by GC, class, structure)
2. Value Types (stored on stack, not managed by GC, primitives)

Other Types:

When we do not want main in class file, then we have to specific this as Class Library File and it will generate the .dll file.

For using dll file, add Dependences in folder -> Add Project Referernce. This allows the **Cross Platform feature.**

CLS:

* Subset of CTS.
* Docs that tell program can be turned into CIL code.
* When diff lang use same bytecode, diff parts of diff lang
* Example: C# unsigned int, not CLS compliant, VB don’t know unsigned type (not support)
* Method add(), Add(), ADD() 3 methods in C# but not in VB (insensitive).

Arrays:

* Every array is Derive from System.Array class and it is derived from System.Object

2 types:

Jagged Array (cols not fix)

* int[][] myJag = new int[3][];
* using [][] access.

Rectangle array [10,2] (dimensional array)

* string [,] arr = new string[3, 3];
* using [i,j] access