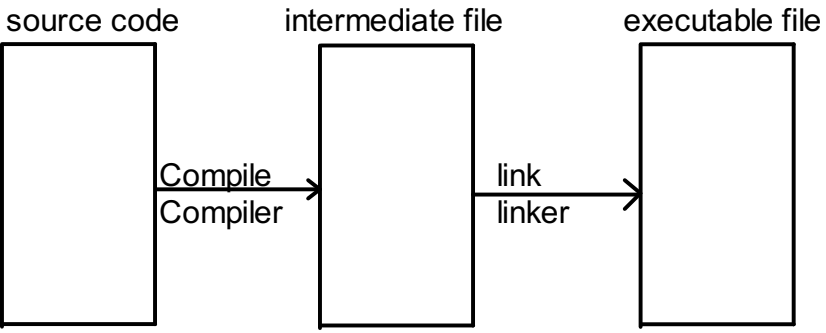
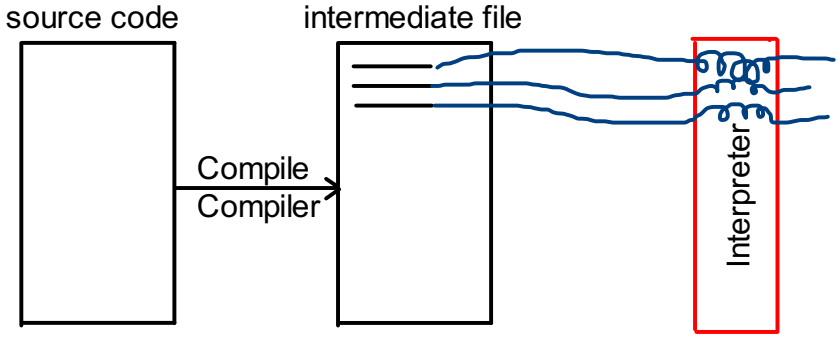
Program: is a set of instruction that solve a problem
program is written using a programming Language

Compiled Language



Faster
Platform Dependent

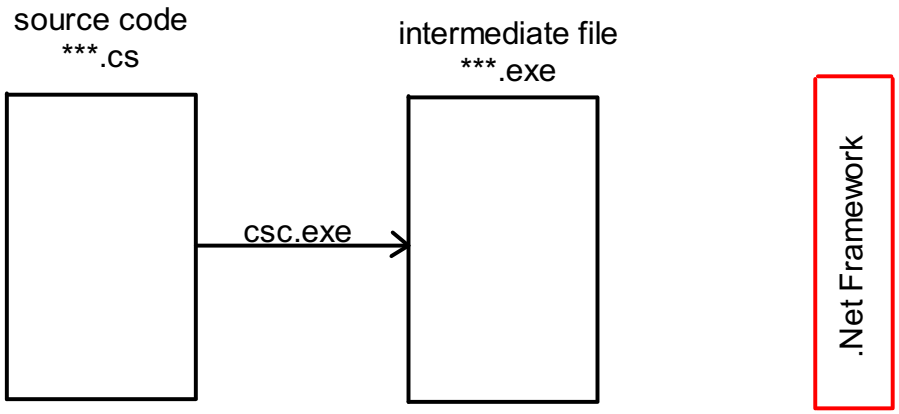
Interpreted Language



Slower
Platform Independent

C# Programming Language

C# is case sensetive



C# Program skelton

```
class MyClass
{
        public static void Main()
        {
                variable declaration
                expression
        }
}
```

variable Declaration:
variable is a named location in the memory that hold a value, can be changed

Data Type:

Data type	size (byte)	Range	
byte	1	0 -> 255	integer value
sbyte	1	-128 -> 127	integer value
short	2	-32768 -> 32767	integer value
ushort	2	0 -> 65535	integer value
int	4	-ve -> +ve	integer value
uint	4	0 -> +ve	integer value
long	8	-ve -> +ve	integer value
ulong	8	0 -> +ve	integer value
float	4	-1.5*E-45->3.4*E38	floating number (9 Precision)
double	8		floating number (17 Precision)
decimal	16		floating number (29 Precision)
char	2		Unicode character
bool		true / false	
string			string of character

Naming:
*)name consist of character, number and _ only
*)Can't start with number
*)Not from reserved word

*) name express what it do
*) start with Capital letter
*) if name consist of 2 or more part, each part start with Capital letter or separated with _

declaring variable:
data_type var_name;
examples:

```
int x;              //un-initialized variable
char ch = 'a';
float l, m = 2.3, n;
```

You CAN'T use un-initialized local variable

Expression:
- I/P statement
- O/P statement
- Operation
- Control statement

I/P statement:

```
int x;
string str;
str = System.Console.ReadLine();
x = int.Parse(str);
```

OR

```
x = int.Parse(System.Console.ReadLine());
```

```
char ch = System.Console.Read(); //Read 1 character
```

O/P statement:

```
System.Console.Write();
System.Console.WriteLine();
```

Print Constant Value:

```
System.Console.WriteLine("Welcome");
System.Console.WriteLine(99);
```

Print Variable Value:

```
int x = 5;
System.Console.WriteLine("{0}", x);
System.Console.WriteLine(x);
```

Print Mix from Constant and Variable:

```
int x = 5;
System.Console.WriteLine("The Value of {0} + {0} = {1} ", x, x + x);

System.Console.WriteLine($"The Value of {x} + {x} = {x + x}");

System.Console.WriteLine("The Value of " + x + " + " + x + " = " + (x+x));
```