C sharp

* What is C# and who developed ?

C # is a programming language it was used to mobile apps, desktop apps, cloud-based services, websites, enterprise software and games. And it was designed by ANDERS HEJLSBERG

In 2000

* What is programming Language ?

The set of instructions given to the computer to carry out the output and is also known as source code or code.

* What is Compilation ?

It is the one of the special program that convert source code into machine understandable language that executable by the CPU.

* What is syntax ?

The set of keyword or instruction given to the computer.

* Which compiler used in c # ?

JIT – Just In Time Compiler (it convert Intermediate Language code to Machine Language code)

* JIT process and it types:

|  |
| --- |
| OS  Hardware  Configuration |

|  |
| --- |
| SOURCE CODE |

|  |
| --- |
| IL code |

|  |
| --- |
| JIT |

|  |
| --- |
| ML code |

Intermediate Language code (IL) – half compiled or partially compiled code.

**JIT compiled by following way:**

* Method (or) function.
* Code fragments.
* File.

**Types:**

* Normal JIT compiler - (this was run using cache after one time compilation).
* Econo JIT compiler – (not cached and it should be used in lower storage devices).
* Pre JIT compiler – (IT has Native Image Generator NGEM.EXE so it was compile at start and there was a no compilation time can be taken).
* How did your code work ?

Console.WriteLine(“Hello world !”);

Console - Part of class.

. - Member access operator.

WriteLine() - Method.

( ) - Method Invocation operator.

; - Statement operator.

H,e,l,l,o - Character.

“Hello world” - Literal string.

Class - To store method.

Literal value - Hard coded value that never changes.

* Data types :
* Integer - int number = 10;
* String - str word = “hi”;
* Float - float number =12.3F; (F is literal suffix)
* Decimal - decimal money = 100.50m; (m is literal suffix)
* Double - double number = 1524D; (D is literal suffix)
* Character - char word = ‘hello’;
* Keyword :
* \n - new line.
* \t - tab for spacing.
* \” - string escape.
* @ - Console.WriteLine(@“c: \source\repose”);(@ is known as verbatim string)
* Without @ - (Console.WriteLine(“c: \\source\\repose”);
* Ver - keyword used for data type.
* $ - $“hello {first name}”;
* Operators :
* [Arithmetic Operators](https://www.geeksforgeeks.org/c-sharp-operators/#Arithmetic%20Operators) - + , - , \* , / , % , ++, --
* [Relational Operators](https://www.geeksforgeeks.org/c-sharp-operators/#Relational%20Operators) - == , != , > , < , <=, >=
* [Logical Operators](https://www.geeksforgeeks.org/c-sharp-operators/#Logical%20Operators) - && , || , !
* [Bitwise Operators](https://www.geeksforgeeks.org/c-sharp-operators/#Bitwise%20Operators) - ~ , & , | , ^ , << , >>
* [Assignment Operators](https://www.geeksforgeeks.org/c-sharp-operators/#Assignment%20Operators) - = , += , -= , \*= , /= , %= , >>= , <<= , &= , ^= , |=
* [Conditional Operator](https://www.geeksforgeeks.org/c-sharp-operators/#Conditional%20Operator) - if, else