

C# Notes

Applications Types :

1. Web Applications (Websites)
2. Mobile Application (Mobility : التنقل)
3. Desktop Application
4. Console Application

Program : is a set of instructions.

Software : is a set of Programs.

Types of comments :

1. Inline Comment // only one line comment.
2. Multiline Comment /**/.

Identifire : name of anything like class, namespace, function, variable and others.

Identifier naming rules :

1. Strat with a letter.
2. Don't use reserved words.
3. Don't use space.
4. You can use underscores.
5. Meaningful name.

Reserved Words : These keywords cannot be used as identifiers.

uint : u stand for unsigned which means only positive numbers.

Post & Pre

Examples :

1. Post increment :

```
int number = 0;  
number = number++ +2;    // the output number = 2
```

2. Pre increment :

```
int number =0;  
number = ++number + 2;    // the output number = 3
```

Notes :

1. Assignment Statement :

Example :

```
int number = 0;  
number = number +1;    // assignment statement
```

2. Compound Operation :

Example :

```
int num1 = 0, num2 = 0;
```

```
num1 = num1 +1;    =    num1 += 1  
num1 = num1 -1;    =    num1 -= 1  
num1 = num1 *1;    =    num1 *= 1  
num1 = num1 /1;    =    num1 /= 1
```

a = a +1;	a+=1
a = a -1;	a-=1
a+1	a++
a-1	a--

Formatting Output : تنظيم وتجميل الاوتبوت
Concatenation :

Efficient :for example to pick the right data type size for your function.
Inefficient : **waste of memory** if you pick up a bigger size than you need.

C# Datatype	Bytes	Range
byte	1	0 to 255
sbyte	1	-128 to 127
short	2	-32,768 to 32,767
ushort	2	0 to 65,535
int	4	-2 billion to 2 billion
uint	4	0 to 4 billion
long	8	-9 quintillion to 9 quintillion
ulong	8	0 to 18 quintillion
float	4	7 significant digits ¹
double	8	15 significant digits ²
object	4 byte address	All C# Objects
char	2	Unicode characters
string	4 byte address	Length up to 2 billion bytes ³
decimal	24	28 to 29 significant digits ⁴
bool	1	true, false ⁵
DateTime	8	0:00:00am 1/1/01 to 11:59:59pm 12/31/9999
DateSpan		-10675199.02:48:05.4775808 to 10675199.02:48:05.4775807 ⁶