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Value types \Rightarrow ① implicit ② explicit ③ parse ④ convert

① implicit \Rightarrow `int x = 4;`
`long y = x;` *من int إلى long*
`long y = long(x);` *من int إلى long*

② explicit \Rightarrow `long x = 10101010101010101010;`
`int y = x;` *هذا من long إلى int*
`int y = (int)x;` */* Error */*
يجب تحويله يدويًا
over flow
unsolve

③ Parse \Rightarrow [Convert From String to any Datatype]
for Ex:
`int Number = int.Parse(Console.ReadLine());`
`Console.WriteLine("Enter User Name");`
`Console.WriteLine("Enter Name:");` *أكتب هنا في كل حين*
`String Name = Console.ReadLine();` *من قبل في كل حين*
`Console.WriteLine("Enter Age:");`
`int Age = int.Parse(Console.ReadLine());`
وتنفع بـ double في الطريقة

④ Convert \Rightarrow *نفس كلام ال Parse*
`int Age = Convert.ToInt32(Console.ReadLine());`
`double salary = Convert.ToDouble(" ");`

Pre → مسبق
Post → متاخر
متوسط

(6)

Operators ⇒ Unary, Binary, Assignment, Relational, logical, Bitwise, Ternary.

Unary → ^{Pre} ++, -- ^{Post}

Binary → +, -, *, /, %

Assignment → =, +=, -=, *=, /=, % =

Relational → ==, !=, >=, <=, >, < ^{check condition}

Logical → !, &&, || [short circuit] ^{مقطع الدارة}

Bit wise → |, &, ^, >>, << [long circuit]

Ternary → = ? :

int x = 4;

String Message = x > 4 ? "x greater than 4 : less than 4"

Console.WriteLine(Message);

Notes ⇒ Unary we must know the operation arrangement

Result = (A+B) * C / D;

من اليمين لليسار
من اليمين لليسار

String Formatting ⇒ We will give an Example

① Composite Format: int x = 5

int y = 10

int Result = x + y;

② String.Format("Equation, {0} + {1} = {2}, x, y",

Result);

③ String Message = String.Format("نتيجة الخوارزمية")

Console.WriteLine(Message);

Console.WriteLine("نتيجة الخوارزمية")

String Manipulation \Rightarrow

```
int x = 5;  
int y = 10;  
Result = x + y;  
Console.WriteLine("Equation : {x} + {y} = {Result}");
```

Control Statement \Rightarrow Conditional, Loop

if else \Rightarrow

```
if (MonthNumber == 1)  
{  
    Console.WriteLine("Month is Jan");  
}  
else if (MonthNumber == 2)  
{  
    Console.WriteLine("Month is Feb");  
}  
else  
{  
    Console.WriteLine("Not valid");  
}
```

Switch Case \Rightarrow

```
switch (MonthNumber)  
{  
    case 1:  
        Console.WriteLine("Month is Jan");  
        break;  
    case 2:  
        Console.WriteLine("Month is Feb");  
        break;  
    default:  
        Console.WriteLine("Not valid");  
        break;  
}
```


باستخدام goto يمكن نقل الـ Switch case الى اماكن اخرى و
تسمى Triggers

Switch (option)

Case 3000:

Console.WriteLine("option 03");

goto Case 2000;

Case 2000:

Console.WriteLine("option 02");

goto Case 1000;

Case 1000:

Console.WriteLine("option 01");

break;

Exception of Switch case :-

• Net 6 => Case > 22 و Case < 22
بدأت اقدر ان اطبع الـ operator Case.

• Net 7: => بدأ اقدر ان اصنع الـ object الى ان اخله

object obj = new object();

obj = "Mustafa";

obj = 10;

obj = true;

Switch (obj)

{

Case int Number:

Console.WriteLine(\$"{Number} is int");

هكذا و الباق

Also on .Net 07 \Rightarrow when

Case int Number when Number > 10 && Number < 0

Console.WriteLine("{0} {Number} is int")

• .Net 8 \Rightarrow int option = int.Parse(Console.ReadLine())

String option = option switch

1 \Rightarrow "option 01"

2 \Rightarrow " " 02

3 \Rightarrow " " 03

\Rightarrow "Invalid"

}

in .Net 8 \Rightarrow we can also Add Operator int (And, or, <, >)
in previous way of .Net 8