« Programming » * Lecture 6 *

- Look at Exercise 8 in Sheet 2:

```
#include <iostream.h>
main()
{ int n = 2;
  Switch (n)
{ Case 2 : Cout << "ZZZ\n";
  Case 3 : n=n*5 ; Cout << "AAA\n";
  break;
  Case 4 : n=n/2; Cout << "BBB\n";
  Case 5 : n=n%2; Cout << "CCC\n";
  default : Cout << "DDD\n";}}
```

```
ZZZ
AAA
```

```
#include <iostream.h>
main()
{ int n = 3;
  Switch (n)
{ Case 2 : Cout << "ZZZ\n";
  Case 3 : n=n*5 ; Cout << "AAA\n";
  Case 4 : n = n/2 ;
  Cout << "CCC\n" ;
  default : Cout << "DDD\n";
  break;}}
```

```
AAA
BBB
7
CCC
DDD
```

---

* Different forms of if statement :-

- Write a program which expresses this equation:

$$y = \begin{cases} 5x^2 & x \geq 0 \\ 2x^3 & x < 0 \end{cases}$$

- program:

```
#include<iostream.h>
#include<math.h>
main()
{ int x,y;
  Cin>>x;
   if(x>=0)
   y=5-pow(x,2);
   else
   y=2*pow(x,3);
   Cout<<"y="<<y;}
```

- Another Shape of if statement: C = Condition ? ____ : ____

, where: ? means if
: means else.

So, the previous program can be written as:

```
#include<iostream.h>
#include<math.h>
main()
{ int x,y;
  Cin>>x;
  y=(x>=0)?5-pow(x,2):2*pow(x,3);
  Cout<<"y="<<y;
```

---

* Looping Statement * for, while, dowhile.

- for Loop:-

```
for(initial value ; Condition ; Counter)
   Cout
```

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* Example:

```
for(i=1 ; i<=10 ; i++)
Cout<<i<<endl;
```
