

"Programming"

* Lecture 7 *

* Looping *

- Follow for Loop: -

- Example: write a program to print the numbers : 3 6 9 12 15 ... 30

→ #include <iostream>
using namespace std;
main()

```
{  
    int i;  
    for(i=3; i<=30; i+=3)  
        cout<<i<<" ";  
}
```

- Another Solution: for(i=1; i<=10; i++)
 cout<<i*3<<" ";

- Example: Write a program to print this output:

→ #include <iostream>
#include <cmath>
using namespace std;
int main()

```
{  
    int i;  
    for(i=1; i<=5; i++)  
        cout<<i<<" "<<i*i<<" "<<pow(i,3)+5<<endl;  
}
```

x	x^2	x^3+5
1	1	6
2	4	13
3	9	32
4	16	69
5	25	130

- Example: write a program to print out even numbers from 0 to 100.

→ for(i=0; i<=100; i+=2)
 cout<<i<<" ";

Another solution: `for(i=0 ; i <= 100 , i++)
if (i%2 == 0)
cout << i << " " ;`

- Example: Write a program to printout multiplication table.

→ `for(i=1 ; i <= 12 ; i++)
{
for(j=1 ; j <= 12 ; j++)
cout << i << " * " << j << " = " << i * j << " " ;
cout << endl ; }`

* While Loop *

- While form:

```
Initial  
while (Condition)  
{  
Statement;  
} ++
```

- Example: `int i;
i = 1;
while (i <= 5)
{
cout << i << endl;
i++;
}`

* do while Loop *

- Example:
`int i;
i = 1;
do
{
 cout << i << endl;
 i++
} while (i <= 5);`

* Note:- Only "do while" ends with Semi Colon. ";"