**Practice Problem:**

Timus 1000, Timus 1264, Timus 1293, Timus 1409

**If-else if-else:**

**Even or odd:**

#include**<bits/stdc++.h>  
using namespace** std;  
#define **optimize**() ios\_base::sync\_with\_stdio(0);cin.tie(0);cout.tie(0);  
#define **endl '\n'  
int** main()  
{  
 **optimize**();  
  
 **\_\_int32** a;  
 cin>>a;  
  
 **if**(a%2==0) cout<<a<<**" is even"**<<**endl**;  
 **else** cout<<a<<**" is odd"**<<**endl**;  
 **return** 0;  
}

**Leap year:**

#include**<bits/stdc++.h>  
using namespace** std;  
#define **optimize**() ios\_base::sync\_with\_stdio(0);cin.tie(0);cout.tie(0);  
#define **endl '\n'  
int** main()  
{  
 **optimize**();  
  
 **\_\_int32** year;  
 cin>>year;  
  
 **if**(year%400==0){  
 cout<<year<<**" is Leap Year"**<<**endl**;  
 }**else if**(year % 100==0){  
 cout<<year<<**" is not Leap Year"**<<**endl**;  
 }**else if**( year%4==0){  
 cout<<year<<**" is Leap Year"**<<**endl**;  
 }**else**{  
 cout<<year<<**" is not Leap Year"**<<**endl**;  
 }  
 **return** 0;  
}

#include**<bits/stdc++.h>  
using namespace** std;  
#define **optimize**() ios\_base::sync\_with\_stdio(0);cin.tie(0);cout.tie(0);  
#define **endl '\n'  
int** main()  
{  
 **optimize**();  
  
 **\_\_int32** year;  
 cin>>year;  
  
 **if**(year%400==0 ||(year%100!=0 && year%4==0)){  
 cout<<year<<**" is Leap Year"**<<**endl**;  
 }**else**{  
 cout << year << **" is not Leap Year"** << **endl**;  
 }  
 **return** 0;  
}

**Practice Problem:**

Timus 1068

**Loop**

*//counts how many 2 divides 100***int** x=100,count=0;  
**while** (x%2==0){  
 x/=2;  
 count++;  
}

**EOF=End of file**

**C**

**int** a;  
**while** (scanf(**"%d"**,&a)!=**EOF**){  
 **if**(a==0){  
 **break**;  
 }  
 printf(**"%d\n"**,a);  
}

**int** a;  
**while** (scanf(**"%d"**,&a)!=**EOF**){  
 **if**(a==0){  
 **break**;  
 }   
 printf(**"%d\n"**,a);  
}

**C++**

**int** a;  
**while** (cin>>a && a){  
 cout<<a<<**endl**;  
}

**int** a;  
**while** (cin>>a && a){  
 cout<<a<<**endl**;  
}

**1+ (1+2) + (1+2+3) +…. + (1+2+3+…+n)**

**int** n,sum=0;  
cin>>n;  
  
**for**(**int** i=1;i<=n;i++){  
 cout<<**"Sum of "**<<i<<**":"**;  
 **for**(**int** j=1;j<=i;j++){  
 sum+=j;  
 }  
 cout<<sum<<**endl**;  
}

**Practice Problem:**

Timus 1083, Timus 1086(number theory- sieve method), Timus 1209

LightOJ 1001,LightOJ 1008,LightOJ 1010,LightOJ 1015,LightOJ 1022,LightOJ 1053,LightOJ 1069,LightOJ 1072,LightOJ 1107,LightOJ 1116,LightOJ 1136,LightOJ 1182,LightOJ 1202,LightOJ 1211,LightOJ 1216,LightOJ 1294,LightOJ 1305,LightOJ 1311,LightOJ 1331,LightOJ 1433

Last but not the least UVa 100