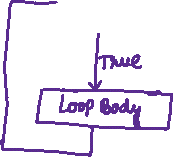
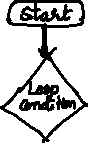
**While Loop**

The while loop will execute a block of statement as long as a test expression is true. While loop is useful when the number of iterations can not be predicted beforehand. The while loop evaluates test expression at beginning of each pass.

While Loop Flow Diagram



Syntax:-

while(condition)

{

// loop body

}

Here, Condition is a Boolean expression that results in either True or False, if it results in True then statements inside loop body are executed and condition is evaluated again. This process is repeated until the condition is evaluated to False. If the condition results in False then execution is skipped from loop body and while loop is terminated.

Example:-

#include<iostream>

using namespace std;

main()

{

int i,num,fact=1;

cout<<"\nEnter number";

cin>>num;

i=num;

while(num>0)

{

fact\*=num;

--num;

}

cout<<"The factorial of "<<i<<"is "<<fact<<"\n";

return 0;

}

Example 2

#include<iostream>

using namespace std;

main()

{

int n,sum\_even,sum\_odd,ctr=1;

cout<<"Upto which natural number?";

cin>>n;

while(ctr<=n)

{

if(ctr%2==0)

sum\_even+=ctr;

else

sum\_odd+=ctr;

ctr++;

}

cout<<"\n"<<"The sum of even integers is"<<sum\_even;

cout<<"\n"<<"The sum of odd integers is"<<sum\_odd;

return 0;

}