

C++ Loops

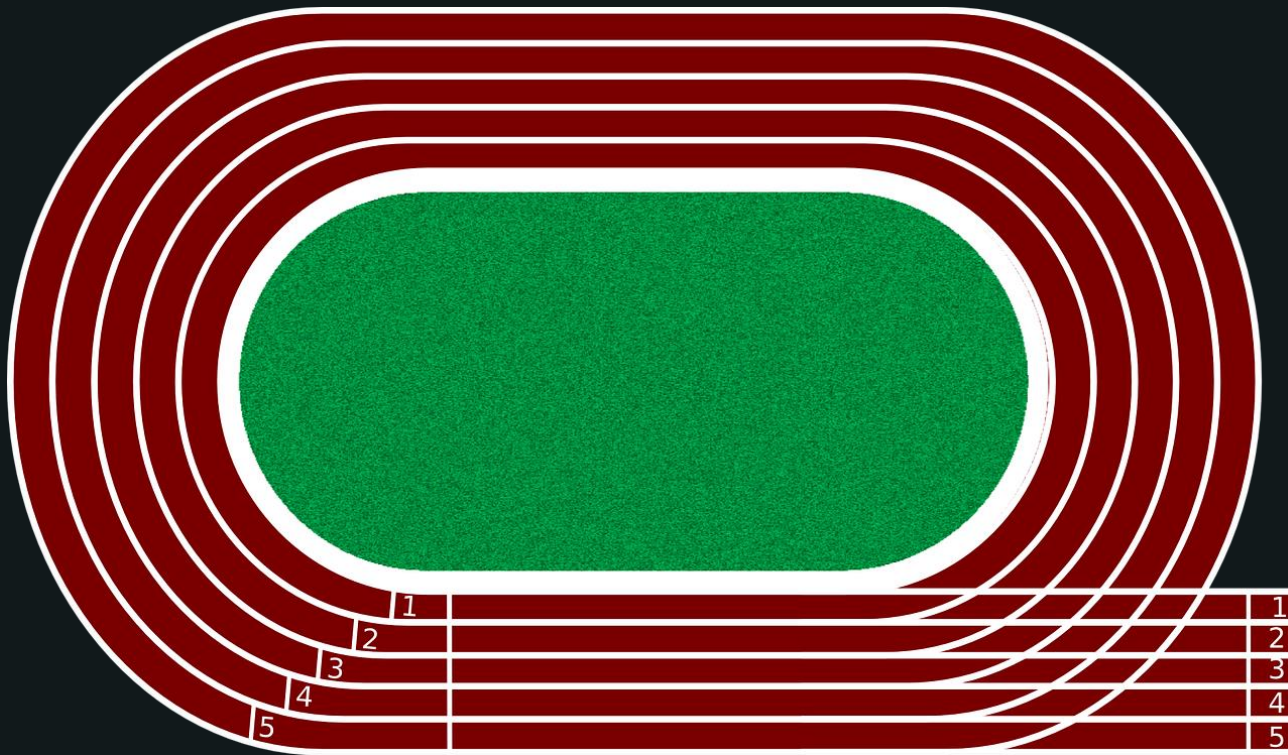
C++ Programming



Loops

When we want to **repeat** same **operation** **N** number of times

In Program if we want to **execute block of code** **N** no. of times



For Loop

While Loop

Do While Loop

For Loops

When we **know** how many **times** you want to **repeat** a task (execute a block of code)
like 10, 20 , 100 etc

```
for ( start; condition; increment )  
{  
  
    // body  
  
}
```

```
1 2 4  
for ( int i = 1 ; i <= 10; i++ )  
{  
    3  
    cout << i ;  
}
```

Program

Write a program, to print table of input number.
(using **For Loop**)

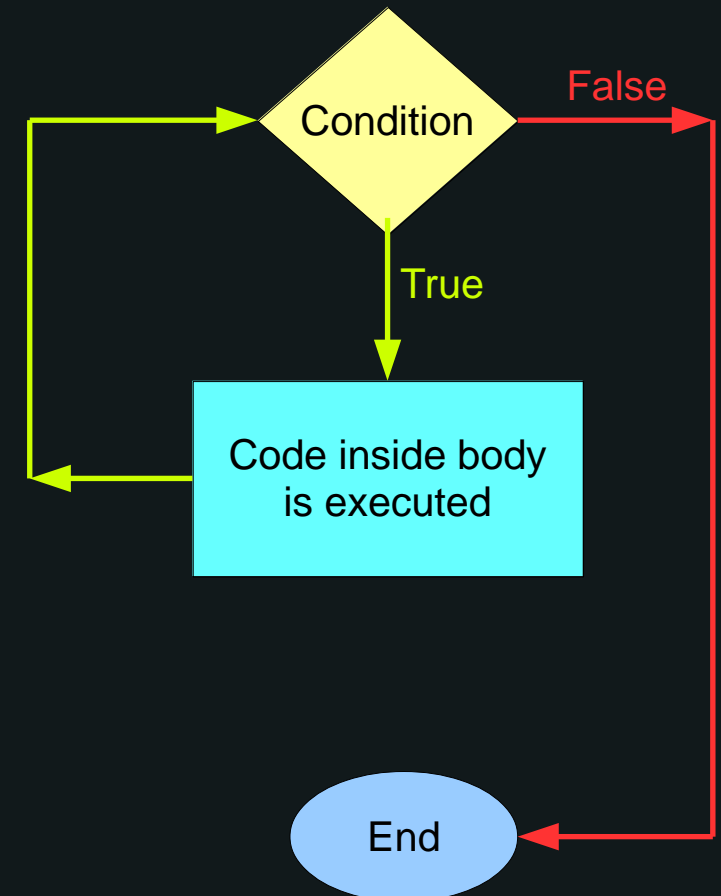
While Loops

While loop execute as long as a **specified condition** is **true** (& execute a block of code)

like $x < 10$ (**condition**) etc

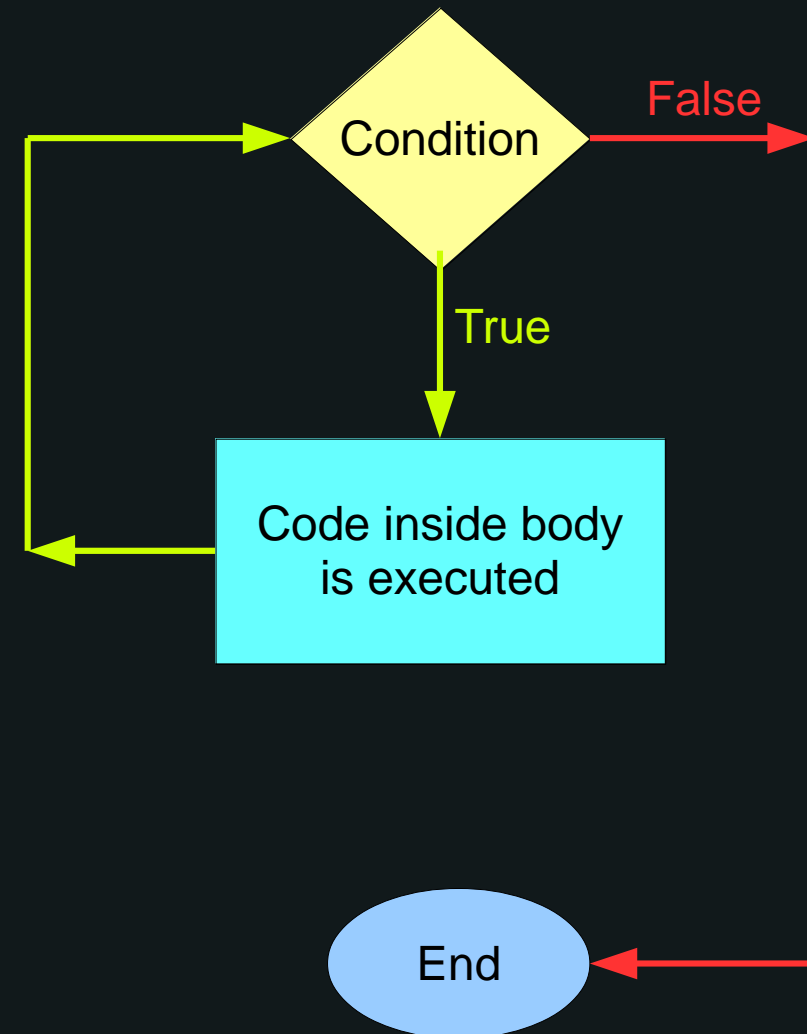
It **check the condition first**, and then **execute the body** .

```
while ( condition )  
{  
  
    // body  
  
}
```



While Loops

```
int i = 1;  
  
while( i<=10 )  
{  
    cout << i;  
    i += 1;  
}
```



Program

Write a program, to print table of input number.
(using **While Loop**)

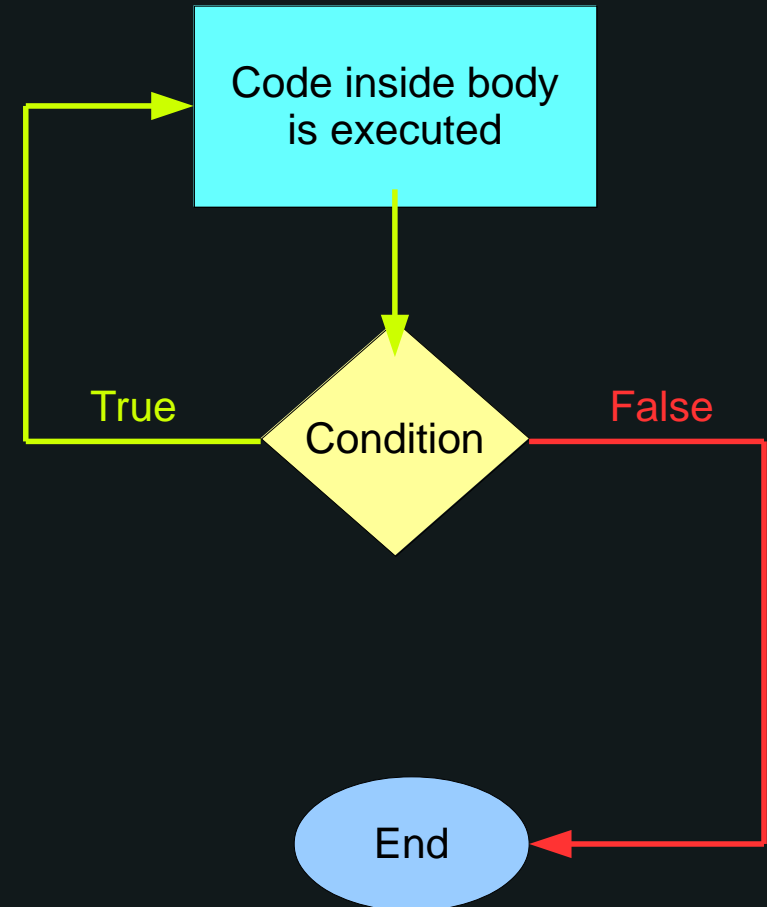
Do While Loops

While loop execute as long as a **specified condition** is **true** (& execute a block of code)

like $x < 10$ (**condition**) etc

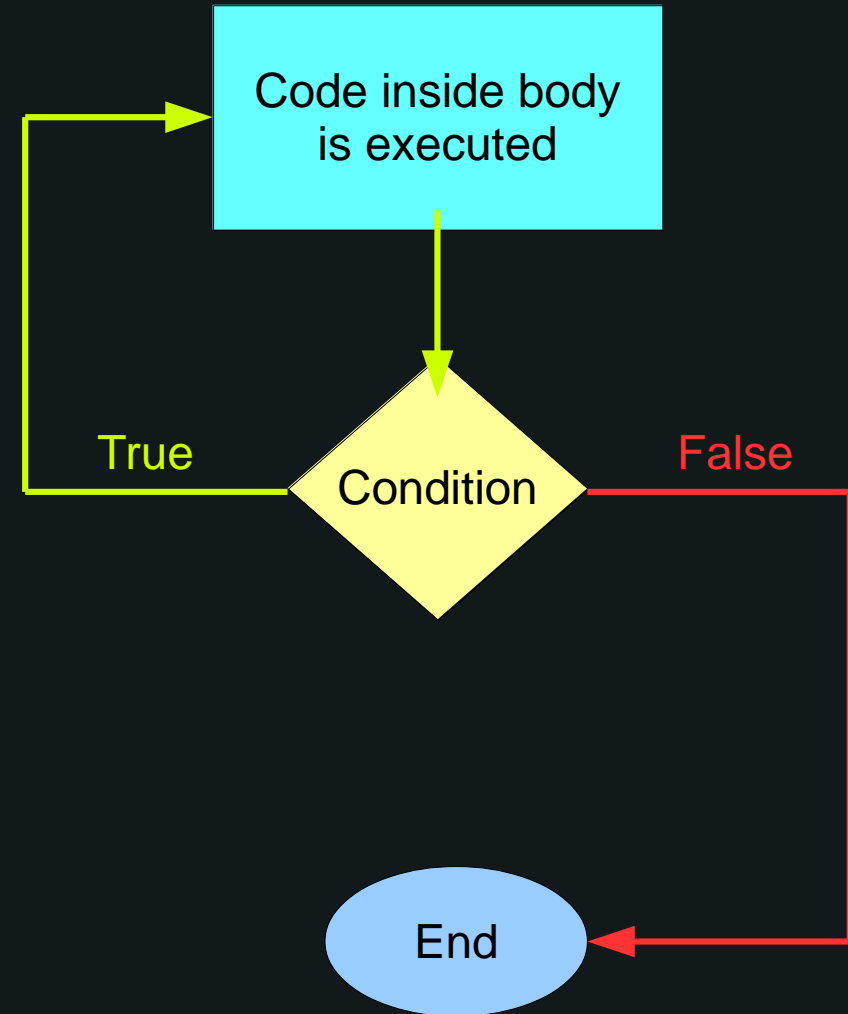
It **first execute the body**, and then **checks condition** .

```
do
{
    // body
}
while ( condition );
```



Do While Loops

```
int i = 1;  
  
do  
{  
    cout << i; 1  
    i += 1;  
}  
while( i<=10 ) 2
```



Program

Write a program, to print table of input number.
(using **Do While Loop**)

Break & Continue

Break is used to jump out of **BLOCK**.

Continue is used to jump out of **ITERATION**



```
for ( int i = 1 ; i <= 5 ; i++ )  
{  
    if ( i == 4 )  
        break;  
  
    cout << i ;  
}
```

```
for ( int i = 1 ; i <= 5 ; i++ )  
{  
    if ( i == 4 )  
        continue;  
  
    cout << i ;  
}
```