LOOP TYPES

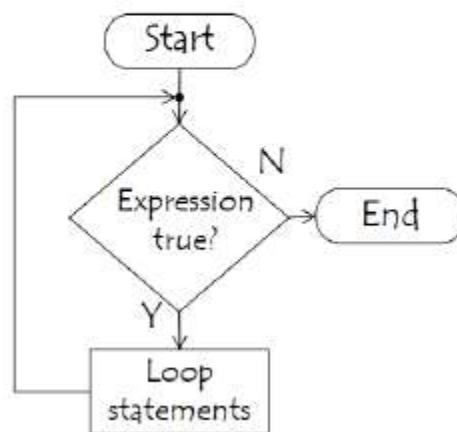## While Loop

The while loop repeatedly executes statements while a specified condition is true

Syntax

```
while <expression>

<statements>

End
```

```
while expression
    <loop statements>
end
```


Example// Write a program to print numbers from 1 to 5

the solution

```
counter = 1;
while counter <= 5
   disp(counter);
   counter = counter + 1;
end
```

example2

Write a program to calculate the sum of numbers from 1 to n
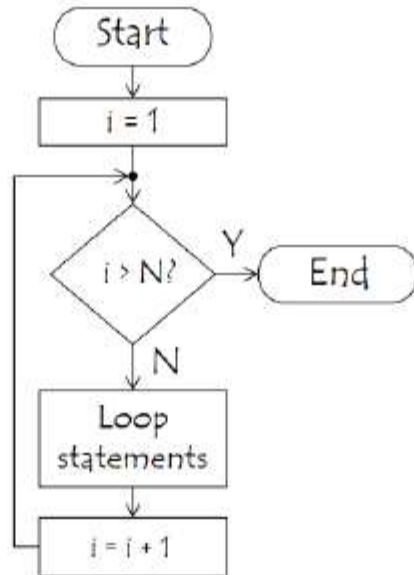
the solution//

```
n = 10;
sum = 0;
counter = 1;
while counter <= n
   sum = sum + counter;
   counter = counter + 1;
end
disp(sum);
```

for loop

loop is used to repeat a statement or a group of statements for a fixed number of times.

```
for var = start_value : end_value

   <program statements>
   ...
end
```

```
for i = 1:N
    <loop statements>
end
```


Example

Print even numbers from 1 to n

Solution

```
n = 10;
for counter = 2:2:n
    disp(counter);
end
```

example2

Print numbers from 1 to 5

```
for i = 1:5
    disp(i);
end
```