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Loop in C Program

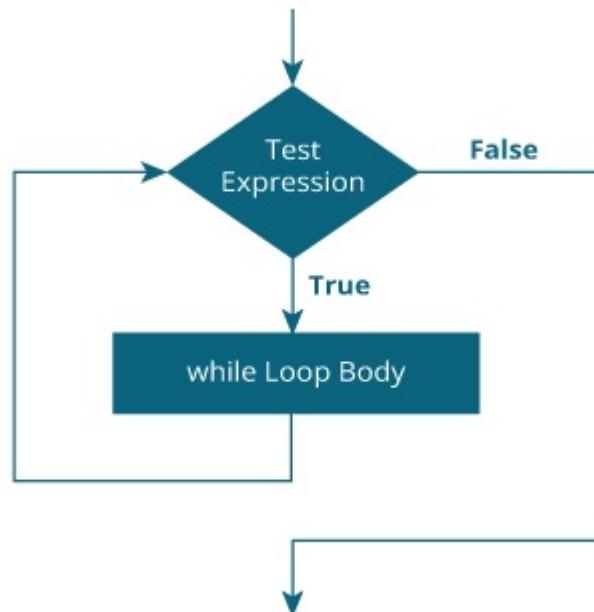
In the C Programming language we want to repeated a set of instruction having a particular number is called a loop there are basic three type of loop **FOR, WHILE and DO WHILE**; In any loop we take control **initialize, testing and increment/decrement**

Title: while Loop

Syntax:

```
initialize;  
while (testing)  
{  
    Statement;  
    Increment/decrement;  
}
```

Flow Chart:



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Example:

Write a C program to find the area of the circle at given radius.

```
#include<stdio.h>
#include<conio.h>
void main()
{
    int r,i;
    float a;
    clrscr();
    i=1;
    while(i<=10)
    {
        printf("\n Enter the Radius = ?");
        scanf("%d",&r);
        a=3.14*r*r;
        printf("Area of Circle = %f",a);
        i=i+1;
    }
    getch();
}
```

Title: do...while Loop

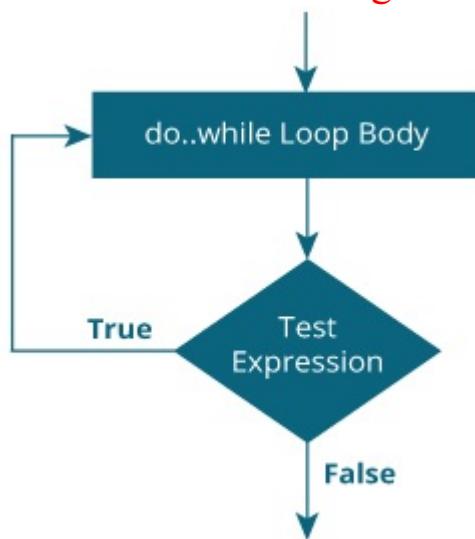
Syntax:

```
Initialize;
do
{
    statement;
    increment/decrement;
} while(testing);
```

Flow Chart:

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Example:

Write a C program to find the area of the circle at given radius.

```
#include<stdio.h>
#include<conio.h>
void main()
{
    int r,i;
    float a;
    clrscr();
    i=1;
    do
    {
        printf("\n Enter the Radius = ?");
        scanf("%d",&r);
        a=PI*r*r;
        printf("Area of Circle = %f",a);
        i=i+1;
    }while(i<=10);
    getch();
}
```

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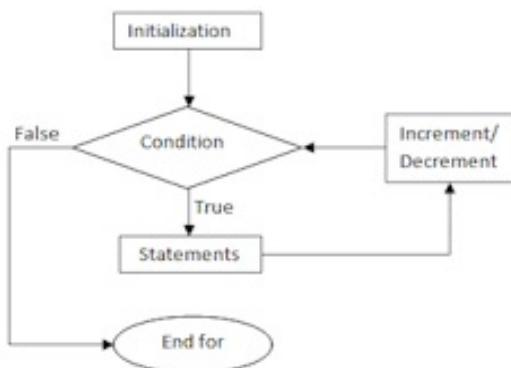
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Title: for Loop

Syntax:

```
for(initialization; test condition; increment/decrement)
{
//body of for loop
}
```

Flow Chart:



Example:

Write a C program to find the area of the circle at given radius.

```
#include<stdio.h>
#include<conio.h>
void main()
{
    int r,i;
    float a;
    clrscr();
    for(i=1;i<=10;i++)
    {
        printf("\n Enter the Radius = ?");
        scanf("%d",&r);
        a=3.14*r*r;
        printf("Area of Circle = %f",a);
    }
    getch();
}
```