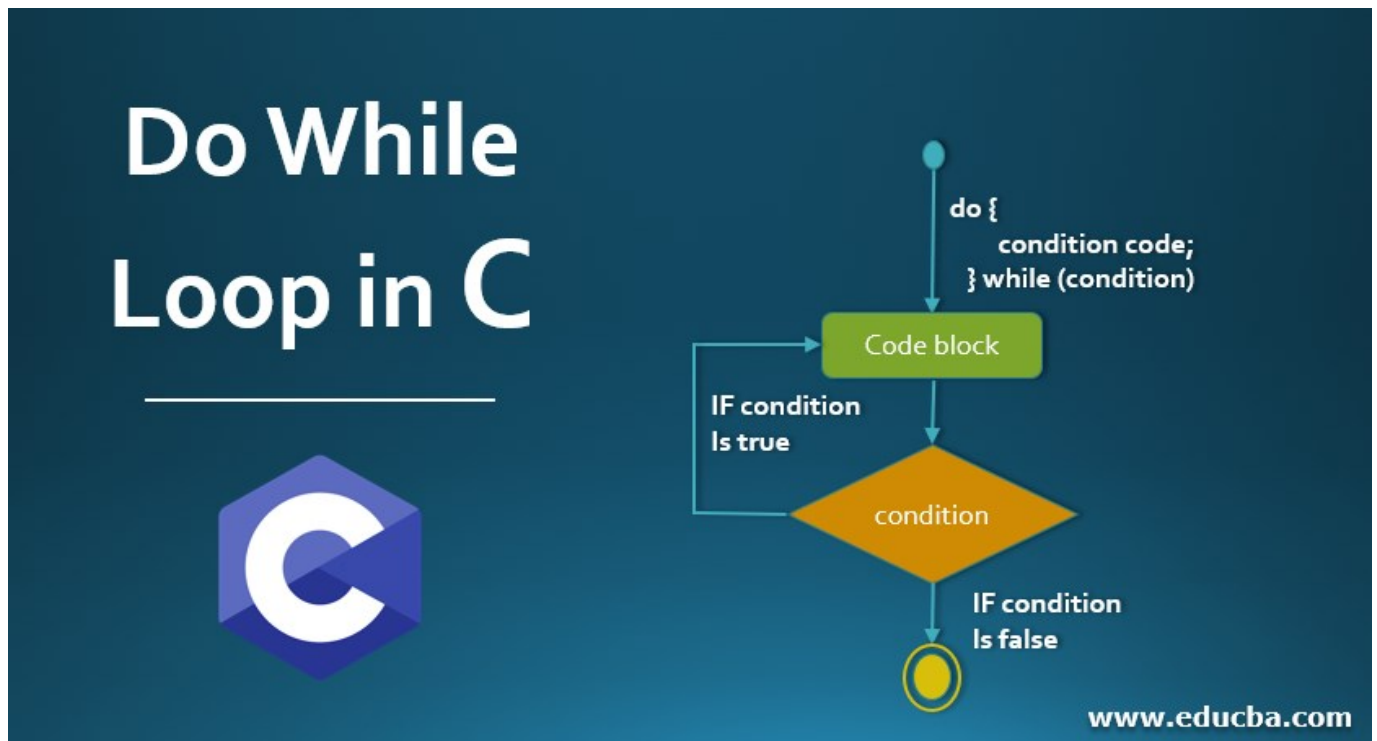




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## Introduction to Do While Loop in C

DO WHILE loop is the same as WHILE LOOP built-in term of the C Programming Language/Many other Programming Languages but DO WHILE loops execute (<https://www.educba.com/do-while-loop-in-matlab/>) the Program Statements first then the





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### Syntax:

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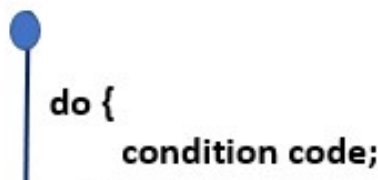
```
do{  
    //Program Statements which are to be executed if the condition of  
    the LOOP is TRUE.  
}while(Condition);
```

### Parameters:

- Statements inside of the do while will be executed based on its instruction only if the condition of the loop is true the second time. at first, statements will be executed and printed without checking the loop condition.
- **While(Condition):** Condition inside a loop is a parameter to run the program if the condition is TRUE else no programming statements will be executed which are inside of it

## Flowchart of Do While Loop

The flow chart of do while loop in C are given below:





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### How do While Loop Works in C?:

The do while loop works based on the condition in the while() parameter but at 1<sup>st</sup> the program inside of the do while will be executed then the condition is checked. it is the main working difference between the while and the do while program.

## Examples of Do While Loop in C

Examples of do while in C programming are given below:

### Example #1

The below example here is to print natural numbers within 10 from 1 number with the do while loop.

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#### Code:

```
#include <stdio.h>

int main() {
    int i=1; //assingning number 1 to i variable to start the natural
    numbers
    printf("Hi This is pavan.. WELCOME. Here I m Printing Natural
    Numbers:\n");
    do{
        printf("%d",i);//printing i variable's value
        printf(",");
        i=i+1; // assigning incrementation to the i variable
    }while(i<10); //loop with the condition
    printf("\n"); //For printing the line break
    return 0;
}
```





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## Example #2

Switch case listed do while program to print some specific text based on the options list which are embedded/showing in the program in the terminal/compiler when executing it.

**Code:**

```
#include<stdio.h>
#include<stdlib.h>
void main ()
{
    char c1;
    int choicel,dummy1;
    do{
        printf("\n1. Print Hello Pavan\n2. Print C Language\n3. Exit\n");
        scanf("%d",&choicel);
        switch(choicel)
        {
            case 1 :
                printf("Hello Pavan\n");
                break;
            case 2:
                printf("C Language\n");
                break;
            case 3:
                exit(0);
```





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```
printf("If you want to enter again/more: ",
scanf("%d",&dummy1);
scanf("%c",&c1);
}while(c1=='y');
}
```

### Output:

```
1. Print Hello Pavan
2. Print C Language
3. Exit
1
Hello Pavan
If you want to enter again/more?y

1. Print Hello Pavan
2. Print C Language
3. Exit
2
C Language
If you want to enter again/more?y

1. Print Hello Pavan
2. Print C Language
3. Exit
3
```

## Example #3

This is the C Program to print the table of the number which gave as input to the terminal/compiler by the user of the System. Here you can print any kind of table with up to the 10 multiples of the user input number. kindly give it a try and know how the table's program is





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```
#include<stdio.h>

int main(){
    int i1=1,number1=0;
    printf("Enter number to print its table : ");
    scanf("%d",&number1);
    printf("=====\n");
    do{
        printf("%d X ",number1);
        printf("%d = ",i1);
        printf("%d \n",(number1*i1));
        i1++;
    }while(i1<=10);
    printf("=====\n");
    return 0;
}
```

**Output:**

```
Enter number to print its table : 5
=====
5 X 1 = 5
5 X 2 = 10
5 X 3 = 15
```





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## Example #4

Below C Program is to print the sum of natural numbers using do while loop in my way. Check it you will get a small idea to build many big projects of programming in the future.

**Code:**

```
#include<stdio.h>

int main(){
    int i1=1,number2=0,number1,a1;
    printf("Enter number to print sum of the natural numbers in my way
    : ");
    scanf("%d",&number1);
    printf("=====\n");
    do{
        printf("%d \n",i1);
        number2=number2+i1;
        a1=number2;
        a1=a1+number2;
        i1++;
    }while(i1<=number1);
    printf("=====\n");

    printf("Sum of the above natural numbers ==> %d",number2);
    printf("\n=====\n");
    return 0;
```







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```
1
2
3
4
5

=====
Sum of the above natural numbers ==> 15
=====
```

## Example #5

Infinite Loop program in do while loop syntax of C programming language.

Code:

```
#include <stdio.h>

int main(){
    int i=1;
    do{
        printf("%d.",i);
        // prints numbers from 1
        printf("pavan kumar sake ");
        // prints pavan kumar sake
        i=i+1;
        //incrementing the I value

    }while(1); //it is true every time so the statements inside w
    be executed everytime
}
```





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```
.pavan kumar sake 88109.pavan kumar sake 88110.pavan kumar sake 88111.
sake 88114.pavan kumar sake 88115.pavan kumar sake 88116.pavan kumar s
van kumar sake 88120.pavan kumar sake 88121.pavan kumar sake 88122.pav
e 88125.pavan kumar sake 88126.pavan kumar sake 88127.pavan kumar sake
kumar sake 88131.pavan kumar sake 88132.pavan kumar sake 88133.pavan
8136.pavan kumar sake 88137.pavan kumar sake 88138.pavan kumar sake 88
mar sake 88142.pavan kumar sake 88143.pavan kumar sake 88144.pavan kum
7.pavan kumar sake 88148.pavan kumar sake 88149.pavan kumar sake 88150
sake 88153.pavan kumar sake 88154.pavan kumar sake 88155.pavan kumar
avan kumar sake 88159.pavan kumar sake 88160.pavan kumar sake 88161.pa
ke 88164.pavan kumar sake 88165.pavan kumar sake 88166.pavan kumar sak
n kumar sake 88170.pavan kumar sake 88171.pavan kumar sake 88172.pavan
```

## Example #6

The below example of the C Syntax Program will Print natural numbers, odd numbers, prime numbers, and its sum in a well-illustrated way.

Code:

```
#include<stdio.h>
#include<conio.h>
int main()
{
int nums1=1,nums2,nums3=1,nums4=0,nums5=0, nums6=0, nums7=1;
//initializing the variable
printf("List of Even Numbers \n");
do //do-while loop
{
printf("%d ",2*nums1);
nums4=nums4+(2*nums1);
```





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```
printf("\n"),
printf("List of Odd Numbers \n");
do          //do-while loop
{
    nums2= (2*nums3)+1;
    nums5 = nums5+nums2;
    printf("%d ",nums2);
    nums3++;                                //incrementing operation
}while(nums3<=10);
printf("\n");
printf("Sum of Odd numbers : %d \n",nums5);
printf("\n");
printf("List of 1st 10 Natural Numbers \n");
do          //do-while loop
{
    nums6 = nums6+nums7;
    printf("%d ",nums7);
    nums7++;                                //incrementing operation
}while(nums7<=10);
printf("\n");
printf("Sum of 1st 10 Natural numbers : %d \n",nums6);
return 0;
}
```



**Output:**

```
List of Even Numbers
```



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```
List of 1st 10 Natural Numbers
1 2 3 4 5 6 7 8 9 10
Sum of 1st 10 Natural numbers : 55
```

## Example #7

This is the example to print the perfect numbers using DO WHILE program with C Language syntax.

**Code:**

```
#include<stdio.h>

int main()
{
    int n,k,l;
    printf("Enter how many perfect nums you want to print:: ");
    scanf("%d",&n);
    int c=0;
    int i=1;
    do{
        l=0;
        for(k=1;k<i;k++){
            if (i%k==0){
                l=l+k;
            }
        }
        if(i==l){
            printf("\n %d is a perfect number.\n",i);
        }
    } while(i<=n);
}
```





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```
,  
i=i+1;  
}while(i>0);  
return 0;  
getchar();  
}
```

### Output:

```
Enter how many perfect nums you want to print:: 3  
  
6 is a perfect number.  
  
28 is a perfect number.  
  
496 is a perfect number.
```

## Example #8

Basic simple calculator program using do while and switch case condition

[\(https://www.educba.com/python-switch-case/\)](https://www.educba.com/python-switch-case/). Check the syntax. Everything is mostly simple in the do while c program which is listed below.

### Code:

```
#include <stdio.h>  
  
int main()  
{
```





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```
{
printf("Enter 1st integer: ");
scanf("%d", &a1);
printf("Enter 2nd integer: ");
scanf("%d", &b1);
printf("\n Add (1), Subtract (2), Multiply (3), Divide (4) :: ");
scanf("%d", &choice1);
printf("\n");
switch(choice1)
{
case(1):
c1 = a1 + b1;
printf("%d + %d = %d\n", a1, b1, c1);
break;
case(2):
c1 = a1 - b1;
printf("%d - %d = %d\n", a1, b1, c1);
break;
case(3):
c1 = a1 * b1;
printf("%d * %d = %d\n", a1, b1, c1);
break;

case(4):
c1 = a1 / (float)b1;
printf("%d / %d = %d\n", a1, b1, c1);
```





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```
printf("Choose option \n 1. YES \n 2. NO : ",
scanf("%d", &yes1);
}while(yes1 == 1);
return 0;
}
```

### Output:

```
Enter 1st integer: 2
Enter 2nd integer: 1

Add (1), Subtract (2), Multiply (3), Divide (4) :: 2
2 - 1 = 1

Choose Option
1. YES
2. NO : 1
Enter 1st integer: 2
Enter 2nd integer: 1

Add (1), Subtract (2), Multiply (3), Divide (4) :: 3
2 * 1 = 2

Choose Option
1. YES
2. NO : 2
```

## Recommended Articles

This is a guide to Do While Loop in C. Here we discuss the basic concept and parameters of do-while loop in C along with different examples and its code implementation. You may also look at the following articles to learn more –





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