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**23.1**

## TUTORIAL 05

# Switch

**Input two numbers and display the outputs of the basic mathematic operations. The output screen should be displayed as follows;**

|  |
| --- |
| Enter two numbers \_\_\_\_ \_\_\_\_  1. +  2. –  3. \*  4. /  Please enter your Choice \_\_\_ |

#include <stdio.h>

int main ()

{

int n1,n2,sum,sub,mul;

float div;

char c;

printf("Enter the first numbers - ");

scanf ("%d",&n1);

printf ("Enter the second number - ");

scanf("%d",&n2);

printf ("\n\n");

printf("1. +\n);

printf(“2. -\n);

printf(“3. \*\n);

printf(“4. /\n");

printf("Please enter your choice \n");

scanf(" %c",&c);

sum=n1+n2;

sub=n1-n2;

div=(float)n1/n2;

mul=n1\*n2;

switch(c)

{

case '+':printf("%d",sum);break;

case '-':printf("%d",sub);break;

case '\*':printf("%d",mul);break;

case '/':printf("%f",div);break;

default:printf("the character is not valid ");

}

}

**While loop**

**1. Input 10 numbers and display the total count of odd & even numbers in the entered number series.**

#include <stdio.h>

int main ()

{

int no,odd=0,count=1,counter=1;

printf("Enter any 10 numbers\n");

while(count<=10)

{

scanf("%d",&no);

count++;

if(no%2==0)

{

even++;

}

Else

{

odd++;

}

}

printf(" %d even numbers and %d odd numbers",even,odd);

}

**2. Modify the above program in to enter series of numbers terminates when the user enter -99 and display the same expected output.**

#include<stdio.h>

int main ()

{

int no,even=0,odd=0,counter=0;

printf("Enter 10 numbers\n");

while(counter==0)

{

scanf("%d",&no);

if(no==-99)

{

break;

}

if(no%2==0)

{

even++;

}

else

{

odd++;

}

}

printf("There are %d even numbers and %d odd numbers",even,odd);

}

**Do While Loop**

**Rewrite the programs for the above while loop question 1 & 2 using do while loop**

#include <stdio.h>

int main ()

{

int no,even=0,odd=0,count=1;

printf("Enter any 10 numbers\n");

do

{

scanf("%d",&x);

count++;

if(no%2==0)

{

even++;

}

else

{

odd++;

}

}

printf(" %d even numbers and %d odd numbers",even,odd);

}

**//second one -:**

#include <stdio.h>

int main ()

{

int no,even=0,odd=0,count=0;

printf("Enter any 10 numbers \n");

do

{

if(x==99)

{

break;

}

if (no%2==0);

{

even++;

}

else

{

odd++;

}

}

while ("counter==0");

printf(" %d even numbers and %d odd numbers",even,odd);

}

**For Loop**

**1. Input 10 numbers and display the average value using the for loop**

#include <stdio.h>

int main ()

{

int no,count,total;

float avg;

printf("Enter the 10 numbers\n");

for(count=1;count<=10;count++)

{

scanf("%d",&no);

total+=no;

}

avg=(float)total/10;

printf("The average is %f",avg);

return 0;

}

**2. Display the following output using the for loop**

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#include <stdio.h>

int main ()

{

int x,y;

for(x=1;x<=5;x++)

{

for(y=1;y<=x;y++)

{

printf("\* ");

}

printf("\n");

}

return 0;

}