**Programming with C Language**

**Tutorial 05 – Writing switch condition, while, do while & for loops**

**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>

#include <stdlib.h>

int main()

{

char x;

float no1,no2;

printf("Enter two numbers:");

scanf("%f %f",&no1,&no2);

printf("1.+\n2.-\n3.\*\n4./\n");

printf("Please enter your choice:");

scanf("%s",&x);

switch(x)

{

case '+':printf("sum of your numbers is %.2f\n",no1+no2);break;

case '-':printf("difference of your numbers is %.2f\n",no1-no2);break;

case '\*':printf("product of your numbers is %.2f\n",no1\*no2);break;

case '/':printf("division of your numbers is %.2f\n",no1/no2);break;

default :printf("invalid");

}

}

**While loop**

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

#include <stdio.h>

#include <stdlib.h>

int main()

{

int counter=1,oddcount=0,evencount=0,no;

while(counter<=10)

{

printf("Enter the number:");

scanf("%d",&no);

if(no%2==0)

evencount=evencount+1;

else

oddcount=oddcount+1;

counter++;

}

printf("The total odd count is %d \n",oddcount);

printf("the total even count is %d",evencount);

}

1. 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>

#include <stdlib.h>

int main()

{

int oddcount=0,evencount=0,no;

while(no!=-99)

{

printf("Enter the number:");

scanf("%d",&no);

if(no%2==0 && no!=-99)

evencount=evencount+1;

if(no%2==1 && no!=-99)

oddcount=oddcount+1;

}

printf("The total odd count is %d \n",oddcount);

printf("the total even count is %d",evencount);

}

**Do while loop**

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

1. #include <stdio.h>

#include <stdlib.h>

int main()

{

int counter=1,oddcount=0,evencount=0,no;

do

{

printf("Enter the number:");

scanf("%d",&no);

if(no%2==0)

evencount=evencount+1;

else

oddcount=oddcount+1;

counter++;

}while(counter<=10);

printf("The total odd count is %d \n",oddcount);

printf("the total even count is %d",evencount);

}

1. #include <stdio.h>

#include <stdlib.h>

int main()

{

int oddcount=0,evencount=0,no;

do

{

printf("Enter the number:");

scanf("%d",&no);

if(no%2==0 && no!=-99)

evencount=evencount+1;

if(no%2==1 && no!=-99)

oddcount=oddcount+1;

}while(no!=-99);

printf("The total odd count is %d \n",oddcount);

printf("the total even count is %d",evencount);

}

**For loop**

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

#include <stdio.h>

#include <stdlib.h>

int main()

{

float x,no,total=0,avg;

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

{

printf("enter the number:");

scanf("%f",&no);

total+=no;

}

avg=total/10;

printf("Average value of numbers is %f ",avg);

}

1. Display the following output using the for loop

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int main()

{

int x,y;

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

{

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

{

printf("\*");

}

printf("\n");

}

}