Assignment – 06

A Job Ready Bootcamp in C++, DSA and IOT

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1. Write a program to calculate sum of first N natural numbers

program:

#include<stdio.h>

int main(){

int n, sum=0;

printf("Enter the value of n:");

scanf("%d",&n);

for(int i=1;i<=n;i++){

sum=sum+i;

}

printf("Sum = %d",sum);

printf("\n");

return 0;

}

output:

Enter the value of n: 15

Sum = 120

--------------------------------

Process exited after 4.808 seconds with return value 0

Press any key to continue . . .

1. Write a program to calculate sum of first N even natural numbers.

Program:

#include<stdio.h>

int main(){

int n, sum=0;

printf("Enter the vaue of N for the sum of N even natural number:");

scanf("%d",&n);

for(int i=1;i<=n;i++){

sum=sum+(2\*i);

}

printf("Sum = %d",sum);

printf("\n");

return 0;

}

Output:

Enter the value of N for the sum of N odd natural number:10

Sum = 110

--------------------------------

Process exited after 1.394 seconds with return value 0

Press any key to continue . . .

1. Write a program to calculate sum of first N odd natural numbers

Program:

#include<stdio.h>

int main(){

int n, sum=0;

printf("Enter the vaue of N for the sum of N odd natural number:");

scanf("%d",&n);

for(int i=1;i<=n;i++){

sum=sum+(2\*i-1);

}

printf("Sum = %d",sum);

printf("\n");

return 0;

}

Output:

Enter the value of N for the sum of N odd natural number:3

Sum = 9

--------------------------------

Process exited after 10.26 seconds with return value 0

Press any key to continue . . .

1. Write a program to calculate sum of squares of first N natural numbers.

Program:

#include<stdio.h>

int main(){

int n, sum=0;

printf("Enter the value of N for the sum of square of N natural number:");

scanf("%d",&n);

for(int i=1;i<=n;i++){

sum=sum+(i\*i);

}

printf("Sum = %d",sum);

printf("\n");

return 0;

}

Output:

Enter the value of N for the sum of square of N natural number:5

Sum = 55

--------------------------------

Process exited after 18.96 seconds with return value 0

Press any key to continue . . .

1. Write a program to calculate sum of cubes of first N natural numbers

Program:

#include<stdio.h>

int main(){

int n, sum=0;

printf("Enter the value of N for the sum of cube of N natural number:");

scanf("%d",&n);

for(int i=1;i<=n;i++)

{

sum=sum+(i\*i\*i);

}

printf("Sum = %d",sum);

printf("\n");

return 0;

}

Output:

Enter the value of N for the sum of cube of N natural number:3

Sum = 36

--------------------------------

Process exited after 2.995 seconds with return value 0

Press any key to continue . . .

1. Write a program to calculate factorial of a number

Program:

#include<stdio.h>

int main(){

int n, fact=1;

printf("Enter a number for factorial:");

scanf("%d",&n);

while(n>0)

{

fact=fact\*n;

n--;

}

printf("Factorial is %d",fact);

printf("\n");

return 0;

}

Output:

Enter a number for factorial:5

Factorial is 120

--------------------------------

Process exited after 1.769 seconds with return value 0

Press any key to continue . . .

1. Write a program to count digits in a given number.

Program:

#include<stdio.h>

int main(){

int num, count=0;

printf("Enter a number:");

scanf("%d",&num);

while(num !=0 )

{

count++;

num=num/10;

}

printf("Total digits are %d",count);

printf("\n");

return 0;

}

Ouput:

Enter a number: 1425

Total digits are 4

--------------------------------

Process exited after 3.089 seconds with return value 0

Press any key to continue . . .

8. Write a program to check whether a given number is a Prime number or

Not.

Program:

#include<stdio.h>

int main()

{

int n,flag=0;

printf("Enter a number:");

scanf("%d",&n);

if(n==0 || n==1)

{

flag =1;

}

else

{

for(int i=2; i<n; i++)

{

if(n%i==0)

{

flag=1;

}

}

}

if(flag ==0)

printf("Prime Number");

else

printf("Not a prime.");

printf("\n");

return 0;

}

Output:

Enter a number: 1

Not a prime.

--------------------------------

Process exited after 2.391 seconds with return value 0

Press any key to continue . . .

9. Write a program to calculate LCM of two numbers

Program:

#include<stdio.h>

int main(){

int n,a,b,LCM;

printf("Enter two numbers:");

printf("\n a =");

scanf("%d",&a);

printf(" b =");

scanf("%d",&b);

int max;

max = a\*b;

for(int i=1;i<=max;i++)

{

if(i%a==0 && i%b==0)

{

LCM=i;

break;

}

}

printf("LCM= %d",LCM);

printf("\n");

return 0;

}

Output:

Enter two numbers:

a =4

b =5

LCM= 20

--------------------------------

Process exited after 2.655 seconds with return value 0

Press any key to continue . . .

10. Write a program to reverse a given number

Program:

#include<stdio.h>

int main(){

int n, remainder,reverse=0;

printf("Enter a number:");

scanf("%d",&n);

while(n!=0)

{

remainder =n%10;

n=n/10;

reverse=reverse\*10+remainder;

}

printf("\n%d",reverse);

printf("\n");

return 0;

}

Output:

Enter a number:1234

4321

--------------------------------

Process exited after 2.327 seconds with return value 0

Press any key to continue . . .