**Assignment - 6 A Job Ready Bootcamp in C++, DSA and IOT MySirG**

**Use any loop**

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

#include<stdio.h>

int main()

{

int i=1,n,sum=0;

printf("Enter N natural number: ");

scanf("%d",&n);

printf("Sum of first %d natural number: ",n);

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

{

sum=sum+i;

}

printf("%d",sum);

return 0;

}

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

#include<stdio.h>

int main()

{

int i=1,n,sum=0;

printf("Enter N natural number: ");

scanf("%d",&n);

printf("Sum of first %d even natural number: ",n);

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

{

sum=sum+2\*i;// n=5 , 2+4+6+8+10=30

}

printf("%d",sum);

return 0;

}

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

#include<stdio.h>

int main()

{

int i=1,n,sum=0;

printf("Enter N natural number: ");

scanf("%d",&n);

printf("Sum of first %d odd natural number: ",n);

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

{

sum=sum+2\*i-1;// n=5, 1+3+5+7+9=25

}

printf("%d",sum);

return 0;

}

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

#include<stdio.h>

int main()

{

int i=1,n,sum=0;

printf("Enter N natural number: ");

scanf("%d",&n);

printf("Sum of first %d squre natural number: ",n);

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

{

sum=sum+i\*i;//or sum of n squre no.=n(n+1) Ex:- n=5, 1+4+9+16+25=55

}

printf("%d",sum);

return 0;

}

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

#include<stdio.h>

int main()

{

int i=1,n,sum=0;

printf("Enter N natural number: ");

scanf("%d",&n);

printf("Sum of first %d cube natural number: ",n);

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

{

sum=sum+i\*i\*i; //or sum=(n\*(n+1)/2) Ex:- n=5, 1+8+27+64+125=225

}

printf("%d",sum);//printf("%d",sum\*sum); because , Sum of cube N natural no.=[n(n+1)/2]2

return 0;

6. Write a program to calculate factorial of a number.

#include<stdio.h>

int main()

{

int i,n,fact=1;

printf("Enter a number: ");

scanf("%d",&n);

printf("factorial %d=: ",n);

for(i=n; i>=1; i--)

{

fact=fact\*i;

}

printf("%d",fact);

return 0;

}

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

#include<stdio.h>

int main()

{

int n,count=0;

printf("Enter a number: ");

scanf("%d",&n);

while(n!=0)

{

n=n/10;

count++;

}

printf("Total digit=%d",count);

return 0;

}

8. Write a program to check whether a given number is a Prime number or not.

#include<stdio.h>

int main()

{

int i=2,n;

printf("Enter a number: ");

scanf("%d",&n);

for(i=2;i<=n-1;i++)

if(n%i==0)

break;

if(i==n)

printf("Prime number ");

else

printf("Not Prime number");

return 0;

}

9. Write a program to calculate LCM of two numbers.

#include<stdio.h>

int main()

{

int a,b,L;

printf("Enter two number: ");

scanf("%d%d",&a,&b);

for(L=1;L<=a\*b;L++)

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

break;

printf("LCM is %d",L);

return 0;

}

10. Write a program to reverse a given number.

#include<stdio.h>

int main()

{

int i,n,rem,rev=0;

printf("Enter a number: ");

scanf("%d",&n);

while(n>0)

{

rem=n%10;

rev=rev\*10+rem;

n=n/10;

}

printf("Reverse=%d",rev);

return 0;

}