**Assignment – 6**

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

**Use any loop**

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

#include<stdio.h>

int main()

{

int i,n,sum=0;

printf("Enter a number");

scanf("%d",&n);

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

{

sum=sum+i;

}

printf("Sum of first %d number is %d",n,sum);

return 0;

}

Output:Enter a number5

Sum of first 5 number is 15

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

#include<stdio.h>

int main()

{

int i,n,sum=0;

printf("Enter a number");

scanf("%d",&n);

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

{

sum=sum+i\*2;

}

printf("Sum of first %d even number is %d",n,sum);

return 0;

}

Output:Enter a number5

Sum of first 5 even number is 30

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

#include<stdio.h>

int main()

{

int n,i,sum=0;

printf("Enter a value of N");

scanf("%d",&n);

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

{

if(i%2!=0)

{

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

sum=sum+i;

}

}

printf("Sum of N odd naural number is %d",sum);

return 0;

}

Output:Enter a value for N5

Sum of N odd natural number is 9

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

#include<stdio.h>

int main()

{

int n,i,x,sum=0;

printf("Enter a number");

scanf("%d",&n);

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

{

x=i\*i;

sum=sum+x;

}

printf("Sum of square of first %d number is %d",n,sum);

return 0;

}

Output:Enter a number3

Sum of square of first 3 number is 14

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

#include<stdio.h>

int main()

{

int n,i,x,sum=0;

printf("Enter a number");

scanf("%d",&n);

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

{

x=i\*i\*i;

sum=sum+x;

}

printf("Sum of cube of first %d number is %d",n,sum);

return 0;

}

Output:Enter a number3

Sum of cube of first 3 number is 36

6. Write a program to calculate factorial of a number

#include<stdio.h>

int main()

{

int n,i=1,f=1,x;

printf("Enter a number");

scanf("%d",&n);

x=n;

while(i<=n)

{

f=f\*n;

n--;

}

printf("Factorial of %d is %d",x,f);

return 0;

}

Output:Enter a number5

Factorial of 5 is 120

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

#include<stdio.h>

int main()

{

int a,b,c=0;

printf("Ente a number");

scnf("%d",&a);

while(a!=0)

{

a=a/10;

c++;

}

printf("Digit in a givin number is %d",c);

return 0;

}

Output:Enter a number349287

Digit in a givin number is 6

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

Not

#include<stdio.h>

int main()

{

int i,x;

printf("Enter a number");

scanf("%d",&x);

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

if(x%i==0)

break;

if(i==x)

printf("%d is a Prime number",x);

else

printf("%d is not a Prime number",x);

return 0;

}

Output:Enter a number19

19 is not aprime number

9. Write a program to calculate LCM of two numbers

#include<stdio.h>

int main()

{

int L,x,y;

printf("Enter two number");

scanf("%d %d",&x,&y);

for(L=1;L<=x\*y;L++)

if(L%x==0&&L%y==0)

break;

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

return 0;

}

Output: Enter two number12 13

LCM is 156

10. Write a program to reverse a given number

#include<stdio.h>

int main()

{

int i,n,rem,rev;

printf("Enter a number");

scanf("%d",&n);

while(n!=0)

{

rem=n%10;

n=n/10;

rev=rev\*10+rem;

}

printf("Reverse number is %d",rev);

return 0;

}

Output:Enter a number1234

Reverse number is 4321