

## **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,s=0,N;
    printf("Enter number");
    scanf("%d",&N);

    for(i=1;i<=N;i++)
    {
        s=s+i;
    }
    printf("Sum of first N natural numbers is %d",s);
}
```

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

```
int main()
{
    int i=1,N,s=0;
    printf("Enter number ");
    scanf("%d",&N);

    for(i=1;i<=N;i++)
    {
        s=s+2*i;
    }
    printf("Sum of first N even numbers is %d",s);
}
```

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

```
#include<stdio.h>
```

```
int main()
{
    int i=1,N,s=0;
    printf("Enter number ");
    scanf("%d",&N);

    for(i=1;i<=N;i++)
    {
        s=s+2*i-1;
    }
    printf("Sum of first N odd numbers is %d",s);
}
```

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

```
int main()
{
    int i=1,N,a,s=0;
    printf("Enter number ");
    scanf("%d",&N);

    for(i=1;i<=N;i++)
    {
        a=i*i;
        s=s+a;
    }
    printf("Sum of squares of first N natural numbers is %d",s);
}
```

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

```
int main()
{
    int i=1,N,a,s=0;
    printf("Enter number ");
    scanf("%d",&N);

    for(i=1;i<=N;i++)
    {
        a=i*i*i;
        s=s+a;
    }
    printf("Sum of cubes of first N natural numbers is %d",s);
}
```

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

```
#include<stdio.h>

int main()
{
    int i=1,a,N,s=1;
    printf("Enter number ");
    scanf("%d",&N);

    for(i=1;i<=N;i++)
    {
        a=N+1-i;
        s=s*a;
    }
    printf("Factorial of N is %d",s);
}
```

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

```
int main()
{
    int i=0,n;
    printf("Enter number ");
    scanf("%d",&n);

    while(n!=0)
    {
        n=n/10;
        i++;
    }

    printf("%d",i);
}
```

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

```
int main()
{
    int i,n,flag=0;
    printf("Enter a number ");
    scanf("%d",&n);

    for(i=2;i<=n/2;i++)
    {
        if(n%i==0)
        {
            flag=1;
            break;
        }
    }
    if(flag==1)
        printf("Not a prime number");
    else
        printf("Prime Number");

    return 0;
}
```

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

```
#include<stdio.h>
```

```
int main()
{
    int i,a,b;
    printf("Enter two number ");
    scanf("%d %d",&a,&b);
```

```

for(i=1;i<=a*b;i++)
{
    if((i%a==0) && (i%b==0))
    {
        break;
    }
}
printf("LCM is %d",i);

return 0;
}

```

10. Write a program to reverse a given number.

```
#include<stdio.h>
```

```

int main()
{
    int n,i,remainder,reverse=0;
    printf("Enter a number ");
    scanf("%d",&n);

    while(n != 0)
    {
        remainder = n%10;
        n = n/10;
        reverse = reverse*10 + remainder ;
    }
    printf("Reverse number is %d",reverse);

    return 0;
}

```