

## 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 sum = 0, i, n;
    printf("Enter n: ");
    scanf("%d",&n);
    for ( i = 0; i < n+1; i++)
    {
        sum = sum + i;
    }
    printf("%d",sum);
}
```

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

```
#include<stdio.h>

int main()
{
    int sum = 0, i, n;
    printf("Enter n: ");
    scanf("%d",&n);
    for ( i = 1; i < n+1; i++)
    {
        sum = sum + i*2;
    }
    printf("%d",sum);
}
```

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

```
#include<stdio.h>

int main()
{
    int sum = 0, i, n;
    printf("Enter n: ");
    scanf("%d",&n);
    for ( i = 1; i < n+1; i++)
    {
        sum = sum + i*2-1;
    }
    printf("%d",sum);
}
```

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

```
#include<stdio.h>

int main()
{
    int sum = 0, i, n;
    printf("Enter n: ");
    scanf("%d",&n);
    for ( i = 1; i < n+1; i++)
    {
        sum = sum + i*i;
    }
    printf("%d",sum);
}
```

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

```
#include<stdio.h>

int main()
{
    int sum = 0, i, n;
    printf("Enter n: ");
    scanf("%d",&n);
    for ( i = 1; i < n+1; i++)
    {
        sum = sum + i*i*i;
    }
    printf("%d",sum);
}
```

6. Write a program to calculate factorial of a number

```
#include<stdio.h>

int main()
{
    int sum = 1, i, n;
    printf("Enter n: ");
    scanf("%d",&n);
    for ( i = 1; i <=n; i++)
    {
        sum = sum * i;
    }
    printf("%d",sum);
}
```

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

```
#include<stdio.h>

int main()
{
    int count = 0, i, n = 123;
    for ( i = 0; i < n; i++)
    {
        if (n/10!=0)
        {
            count++;
        }
        n = n/10;
    }
    printf("%d",count+1);
}
```

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

```
#include<stdio.h>

int main()
{
    int j, n = 7, flag = 0;
    for ( j = 2; j < n/2; j++)
    {
        if (n%j==0)
        {
            printf("Not a Prime No.");
            flag = 1;
            break;
        }
    }
    if (flag==0)
    {
        printf("Prime No.");
    }
}
```

9. Write a program to calculate LCM of two numbers

```
#include<stdio.h>
int main()
{
    int n1 = 12, n2 = 18,i;
    for ( i = 1; i < n1*n2; i++)
    {
        if (i%n1==0 && i%n2==0)
        {
            break;
        }
    }
    printf("LCM is: %d", i);
}
```

10. Write a program to reverse a given number

```
#include<stdio.h>
int main()
{
    int rem, n = 123, rev = 0;
    while (n!=0)
    {
        rem = n%10;
        n = n/10;
        rev = rev*10 + rem;
    }
    printf("%d", rev);
}
```