Assignment - 6

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

```c
#include <stdio.h>

int main()
{
    int num, i, sum = 0;
    printf(" Enter a number: ");
    scanf("%d", &num);

    for (i = 0; i <= num; i++)
    {
        sum = sum + i;
    }

    printf("\n Sum of the first %d number is: %d", num, sum);
    return 0;
}
```

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

```c
#include<stdio.h>
int main()
{
    int i=1,n,s=0;
    printf("Enter number : ");
    scanf("%d",&n);
    printf("\nEven numbers in range 1 to %d :\n\n",n);
    for(i=1;i<=n;i++)
    {
```

```c
        if(i%2==0)
        {
            printf("%d  ",i);
            s=s+i;
        }
    }
    printf("\n\nSum of even numbers in range 1 to %d : %d",n,s);
    return 0;
}
```

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

```c
    #include<stdio.h>
int main()
{
    int i=1,n,s=0;
    printf("Enter number : ");
    scanf("%d",&n);
    printf("\nOdd numbers in range 1 to %d :\n\n",n);
    for(i=1;i<=n;i++)
    {
        if(i%2!=0)
        {
            printf("%d  ",i);
            s=s+i;
        }
    }
    printf("\n\nSum of Odd numbers in range 1 to %d : %d",n,s);
    return 0;
}
```

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

```c
#include <stdio.h>

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

  for (i = 1; i<= n; i++)
  {
    sum = sum + (i*i);
  }
  printf("The sum of squares of first = %d ",sum);
  return 0;
}
```

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

```c
#include <stdio.h>

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

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

```c
        sum = sum + (i*i*i);
    }
    printf("The sum of squares of first = %d ",sum);
    return 0;
}
```

6. Write a program to calculate factorial of a number

```c
        #include<stdio.h>
int main()
{
    int n,i,fact=1;
    printf("Enter the number = ");
    scanf("%d",&n);
    for(i=1;i<=n;i++)
    {
        fact = fact*i;
    }
    printf("\n\nFactorial = %d",fact);
    return 0;
}
```

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

```c
        #include <stdio.h>

int main()
{
  int Num,Rem,Count=0;

  printf("\n Enter any number\n");
  scanf("%d", &Num);
```

```c
  while(Num > 0)
  {
    Num = Num / 10;
    Count = Count + 1;
  }

  printf("\n Number of Digits in a Given Number = %d", Count);
  return 0;
}
```

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

```c
    #include <stdio.h>

int main()
{
  int n, i, flag = 0;
  printf("Enter a positive integer: ");
  scanf("%d", &n);
  if (n == 0 || n == 1)
    flag = 1;

  for (i = 2; i <= n / 2; ++i) {

    if (n % i == 0) {
      flag = 1;
      break;
    }
  }
  if (flag == 0)
```

```c
        printf("%d is a prime number.", n);
    else
        printf("%d is not a prime number.", n);

    return 0;
}
```

9. Write a program to calculate LCM of two numbers

```c
        #include <stdio.h>
int main()
{
    int n1, n2, max;
    printf("Enter two positive integers: ");
    scanf("%d %d", &n1, &n2);

    max = (n1 > n2) ? n1 : n2;

    while (1)
        {
        if (max % n1 == 0 && max % n2 == 0) {
            printf("The LCM of %d and %d is %d.", n1, n2, max);
            break;
        }
        ++max;
    }
    return 0;
}
```

10. Write a program to reverse a given number

```c
#include <stdio.h>

int main()
{
 int n, reverse = 0, rem;

 printf("Enter an number: ");
 scanf("%d", &n);

 while (n != 0)
  {
    rem = n % 10;
    reverse = reverse * 10 + rem;
    n = n/10;
 }

 printf("Reversed number = %d", reverse);

 return 0;
}
```