Assignment – 6

1.Write a program to calculate sum of first N natural numbers.
```c
#include<stdio.h>
int main()
{
    int i,n,sum=0;
    printf("Enter a number :");
    scanf("%d",&n);
    for(i=1;i<=n;i++)
    {
        sum+=i;
    }
    printf("Sum of first %d number is %d",n,sum);

    return 0;
}
```

2. Write a program to calculate sum of first N even natural numbers.
```c
#include<stdio.h>
int main()
{
    int i,n,sum=0;
    printf("Enter a number :");
    scanf("%d",&n);
    for ( i = 1; i <= 2*n; i++)
    {
        if(i%2==0)
        {
            sum+=i;
        }
    }
    printf("Sum of first %d even number is %d",n,sum);

    return 0;
}
```

3. Write a program to calculate sum of first N odd natural numbers.
```c
#include<stdio.h>
int main()
{
    int i,n,sum=0;
    printf("Enter a number :");
    scanf("%d",&n);
    for ( i = 1; i <= 2*n; i++)
    {
        if(i%2==1)
        {
            sum+=i;
        }
    }
    printf("Sum of first %d odd number is %d",n,sum);
```

```c
    return 0;
}
```

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

```c
#include<stdio.h>
int main()
{
    int i,n,sum=0;
    printf("Enter a number :");
    scanf("%d",&n);
    for ( i = 1; i <= n; i++)
    {
        sum+=(i*i);
    }
    printf("Sum of squares first %d number is %d",n,sum);

    return 0;
}
```

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

```c
#include<stdio.h>
int main()
{
    int i,n,sum=0;
    printf("Enter a number :");
    scanf("%d",&n);
    for ( i = 1; i <= n; i++)
    {
        sum+=(i*i*i);
    }
    printf("Sum of cubes first %d number is %d",n,sum);

    return 0;
}
```

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

```c
#include<stdio.h>
int main()
{
    int i,n,fact=1;
    printf("Enter a number :");
    scanf("%d",&n);
    for ( i = 1; i <= n; i++)
    {
        fact*=i;
    }
    printf("Factorial of %d is %d",n,fact);

    return 0;
}
```

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

```c
#include<stdio.h>
int main()
{
    int i,n,count=0;
    printf("Enter a number :");
    scanf("%d",&n);
    while (n)
    {
        n=n/10;
        count++;
    }
    printf("Number of digits in given number is %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 i,n,flag=0;
    printf("Enter a number :");
    scanf("%d",&n);
    for(i=2;i<n;i++)
    {
        if(n%i==0)
        {
            flag=1;
        }
    }
    if(flag==0)
    {
        printf("Given number is prime");
    }
    else
    {
        printf("Given number is not prime");
    }
    return 0;
}
```

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

```c
#include<stdio.h>
int main()
{
    int a,b,max;
    printf("Enter two numbers :");
    scanf("%d%d",&a,&b);
    max=(a>b)?a:b;
```

```c
    while (1)
    {
        if(max%a==0 && max%b==0)
        {
            printf("The LCM of %d and %d is %d",a,b,max);
            break;
        }
        max++;
    }

    return 0;
}
```

10. Write a program to reverse a given number.
```c
#include<stdio.h>
int main()
{
    int n,rev=0,mod;
    printf("Enter a number :");
    scanf("%d",&n);
    while (n)
    {
        mod=n%10;
        n/=10;
        rev=rev*10+ mod;
    }
    printf("Reverse of given number is %d",rev);

    return 0;
}
```