Lab Report CSE 1103

1. **Write a C program in the following series 1+2+3+.....+n**

```
#include<stdio.h>
int main()
{
   int i,n,sum=0;
   printf("Enter the value of n= ");
   scanf("%d",&n);
   for(i=1;i<=n;i++)
   {
      sum=sum+i;
   }
   printf("The Result is: %d",sum);
}
```

Input:

Enter the value of n= 10

Output:

The Result is: 55

2. **Write a C program in the following series 1^2+2^2+3^2+.....+n^2**

```
#include<stdio.h>
int main()
{
   int i,n,sum=0;
   printf("Enter the value of n= ");
   scanf("%d",&n);
   for(i=1;i<=n;i++)
   {
      sum=sum+i*i;
   }
   printf("The Result is:  %d",sum);
}
```

Input:

Enter the value of n= 15

Output:

The Result is: 1240

3. **Write a C program in the following series 2+4+6+.....+n**

```
#include<stdio.h>
int main()
{
   int i,n,sum=0;
   printf("Enter the value of n= ");
   scanf("%d",&n);
   for(i=2;i<=n;i=i+2)
   {
      sum=sum+i;
   }
   printf("The Result is:   %d",sum);
}
```

Input:

Enter the value of n= 10

Output:

The Result is: 30

4. **Write a C program in the following series 1+3+5+.....+n**

```
#include<stdio.h>
int main()
{
   int i,n,sum=0;
   printf("Enter the value of n= ");
   scanf("%d",&n);
   for(i=1;i<=n;i=i+2)
   {
      sum=sum+i;
   }
   printf("The Result is:   %d",sum);
}
```

Input:

Enter the value of n= 10

Output:

The Result is: 25

5. **Write a C program to generate a fibonacci series**

```
#include<stdio.h>
int main()
{
 int n1=0,n2=1,n3,i,number;
 printf("Enter the number of elements: ");
 scanf("%d",&number);
 printf("\n%d %d",n1,n2);//printing 0 and 1
 for(i=2;i<number;++i)//loop starts from 2 because 0 and 1 are already printed
 {
  n3=n1+n2;
  printf(" %d",n3);
  n1=n2;
  n2=n3;
 }
  return 0;
 }
```

Input :

Enter the number of elements: 10

Output

0 1 1 2 3 5 8 13 21 34

6. **Write a C code in the following series 1+2+3+.....+n using array**

```
#include<stdio.h>
int main()
{
   int i,n,sum=0,a[10];
   printf("Enter the value of n= ");
   scanf("%d",&n);
   printf("Enter the number of the series= ");
   for(i=0;i<n;i++)
   {
      scanf("%d",&a[i]);
   }
   for(i=0;i<n;i++)
   {
```

```
        sum=sum+a[i];
    }
    printf("The Result is:  %d",sum);
}
```

Input:

Enter the value of n= 5

Enter the number of the series= 1 2 3 4 5

Output:

The Result is: 15

7. **Write a C program to check Leap Year**

```
#include<stdio.h>
int main() {
    int year;
    printf("Enter a year: ");
    scanf("%d", &year);
    if(((year%4==0) && (year%100!=0)) || (year%400==0))
    {
        printf("%d is a leap year", year);
    }
    else
     {
        printf("%d is not a leap year", year);
    }
    return 0;
}
```

Test 1:

```
Enter a year: 2004
2004 is a leap year
```

Test 2:

```
Enter a year: 1700
1700 is not a leap year
```