71. Program to check Harshad number (Niven number).

```
#include<stdio.h>
#include<conio.h>
void main()
{
   int n, d, a, sum = 0;
   clrscr();
   printf("Enter the number : ");
   scanf("%d", &n);

   a = n;

   while (a > 0)
   {
      d = a % 10;
      sum = sum + d;
      a = a / 10;
   }

   if (n % sum == 0)
      printf("\nThe number is Niven Number.");
   else
      printf("\nThe number is not a Niven Number.");
   getch();
}
```

72. Program to check whether the number is palindrome or not.

```
#include<stdio.h>
#include<conio.h>
void main()
{
   int n, rev = 0, temp;
   clrscr();
   printf("Enter a number : ");
   scanf("%d", &n);

   temp = n;

   while (temp != 0)
   {
      rev = rev * 10;
      rev = rev + temp % 10;
      temp = temp / 10;
   }

   if (n == rev)
      printf("\n%d is palindrome number.", n);
   else
```

```
      printf("\n%d is not palindrome number.", n);
   getch();
}
```

73. Program to check perfect number.

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

void main()
{
 int n, i = 1, sum = 0;
 clrscr();
 printf("Enter a number : ");
 scanf("%d", &n);

/*The first perfect number is 6, because 1, 2, and 3 are its proper positive divisors,
and 1 + 2 + 3 = 6.*/

 while (i < n)
 {
  if (n % i == 0)
  {
   sum = sum + i;
  }
  i++;
 }

 if (sum == n)
 {
  printf("\n%d is a perfect number.", i);
 }
 else
 {
  printf("\n%d is not a perfect number.", i);
 }
 getch();
}
```

74. Program to find the square root of a number.

```
#include<math.h>
#include<stdio.h>
#include<conio.h>
void main()
{
   double num, result;
   clrscr();
   printf("Enter number : ");
```

```
   scanf("%lf", &num);
   result = sqrt(num);
   printf("Square root of %lf is %lf.", num, result);
   getch();
}
```

75. Program to print sum of 'n' prime numbers.

```
#include<stdio.h>
#include<conio.h>
void main()
{
   int n, i = 3, count, c, sum = 2;
   clrscr();
   printf("Enter total number of prime numbers for addition : ");
   scanf("%d", &n);

   if (n >= 1)
   {
      printf("\nFirst %d prime numbers are :", n);
      printf("\n2 ");
   }
   for (count = 2; count <= n;)
   {
      for (c = 2; c <= i - 1; c++)
      {
         if (i % c == 0)
            break;
      }
      if (c == i)
      {
         sum = sum + i;
         printf("%d ", i);
         count++;
      }
      i++;
   }
   printf("\nSum : %d", sum);
   getch();
}
```

76. Program to print sum of factorial series 1/1! + 2/2! +...1/N!

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

double sumseries(double);

void main()
```

```
{
   double number, sum;
   clrscr();

   printf("Enter the number : ");
   scanf("%lf", &number);
   sum = sumseries(number);

   printf("\nSum of the above series = %lf ", sum);

   getch();
}

double sumseries(double m)
{
   double sum2 = 0, f = 1, i;
   for (i = 1; i <= m; i++)
   {
      f = f * i;
      sum2 = sum2 + (i / f);

      if (i == m)
      {
         printf("%.2lf / %.2lf = %lf", i, f, sum2);
      }
      else
      {
         printf("%.2lf / %.2lf + \n", i, f);
      }
   }
   return(sum2);
}
```

77. Program to calculate the sum of 'n' terms in Taylor series.

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

void main()
{
   int x, i;
   int fact = 1, n;
   float sum = 0;
   clrscr();
   printf("Enter the value of x : ");
   scanf("%d", &x);
   printf("Enter the number of terms : ");
   scanf("%d", &n);
```

```
   for (i = 1; i < n; i++)
   {
      fact = fact * i;
      sum = sum + (pow(x, i) / fact);
   }
   sum = sum + 1;
   printf("The sum of taylor series is : ");
   printf("%f", sum);
   getch();
}
```

78. Program to swap two numbers without using third variable.

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

void main()
{
   int x = 10, y = 5;
   clrscr();
   printf("Enter x : ");
   scanf("%d", &x);
   printf("Enter y : ");
   scanf("%d", &y);

   printf("\nBefore Swapping : \n x = %d \n y = %d", x, y);

   // Code to swap x and y
   x = x + y;
   y = x - y;
   x = x - y;

   printf("\nAfter Swapping : \n x = %d \n y = %d", x, y);
   getch();
}
```

79. Program to swap two numbers using bitwise XOR.

```
#include<stdio.h>
#include<conio.h>
void main()
{
   long i, k;
   clrscr();
   printf("Enter two integers : \n");
   scanf("%ld %ld", &i, &k);

   printf("\n Before swapping i : %ld and k : %ld", i, k);
   i = i ^ k;
```

```
    k = i ^ k;
    i = i ^ k;
    printf("\nAfter swapping i : %ld and k : %ld", i, k);
    getch();
}
```

80. Program to swap two numbers using pointer.

```
#include<stdio.h>
#include<conio.h>
void main()
{
    int a, b;
    int *ptra, *ptrb, *temp;
    clrscr();
    printf("Enter a : ");
    scanf("%d", &a);
    printf("Enter b : ");
    scanf("%d", &b);

    printf("\nBefore swapping : a : %d, b : %d", a, b);

    ptra = &a;
    ptrb = &b;

    temp = ptra;
    *ptra = *ptrb;
    *ptrb = *temp;

    printf("\nAfter swapping : a : %d, b : %d", a, b);
    getch();
}
```