# Assignment-6

**Use any loop**

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

#include<stdio.h>

int main(){

 int i,n,s;

 printf("enter a number:");

 scanf("%d",&n);

 for(i=1,s=0;i<=n;i++){

   printf("%d \n",i);

   s=s+i;

 }

 printf("sum : %d",s);

  return 0;

}

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

#include<stdio.h>

int main(){

 int i,n,s;

 printf("enter a number:");

 scanf("%d",&n);

 for(i=2,s=0;i<=n;i+=2){

   printf("%d \n",i);

   s=s+i;

 }

 printf("sum of even number: %d",s);

  return 0;

}

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

#include<stdio.h>

int main(){

 int i,n,s;

 printf("enter a number:");

 scanf("%d",&n);

 for(i=1,s=0;i<=n;i+=2){

   printf("%d \n",i);

   s=s+i;

 }

 printf("sum : %d",s);

  return 0;

}

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

#include<stdio.h>

int main(){

 int i,n,s;

 printf("enter a number:");

 scanf("%d",&n);

 for(i=2,s=0;i<=n;i\*=i){

   printf("%d \n",i);

   s=s+i;

 }

 printf("sum : %d",s);

  return 0;

}

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

#include<stdio.h>

int main(){

 int i,n,s;

 printf("enter a number:");

 scanf("%d",&n);

 for(i=2,s=0;i<=n;i=i\*i\*i){

   printf("%d \n",i);

   s=s+i;

 }

 printf("sum : %d",s);

  return 0;

}

6.write a program to calculate factorial of a given number

#include<stdio.h>

int main(){

 int i,n,factor;

 printf("enter a number:");

 scanf("%d",&n);

 for(i=1,factor=1;i<=n;i++){

   factor=factor\*i;

 }

 printf("factorial of given number %d",factor);

  return 0;

}

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

#include<stdio.h>

int main(){

 int i=0,n;

 printf("enter a number:");

 scanf("%d",&n);

 while(n!=0){

  n=n/10;

  i++;

 }

 printf("digits of given number:%d",i);

  return 0;

}

8. write a program to check whether a given number is a prime number or not

#include<stdio.h>

int main(){

 int i,n,c;

 printf("enter a number:");

 scanf("%d",&n);

for(i=1,c=0;i<=n;i++){

    if(n%i==0)

      c++;

}

 if(c==2){

printf("%d number is prime",n);

 }

 else{

   printf("%d is not prime number",n);

 }

  return 0;

}

9.write a program to calculate LCM of two numbers

#include<stdio.h>

int main(){

 int i,n,m;

 printf("enter two number:");

 scanf("%d%d",&n,&m);

 i=(n>m)?n:m;

while(1){

 if(i%n==0&&i%m==0){

   printf("LCM of two given numbers %d",i);

   break;

 }

 i++;

}

  return 0;

}

10. write a program to calculate to reverse a given number

#include<stdio.h>

int main(){

 int i,n;

 printf("enter two number:");

 scanf("%d",&n);

 for(i=n;i>0;i--){

 printf(" %d",i);

 }

  return 0;

}