PRACTCIAL – 11 CTSD

AIM:

Write a C program to read in two numbers, x and n, and then compute the sum of this geometric progression:
1+x+x^2+x^3+... x^n.
For example: if n is 3 and x is 5, then the program computes 1+5+25+125.Print x, n, the sum.
Perform error checking. For example, the formula does not make sense for negative exponents if n is less than 0. Have
your program print an error - message if n<0, then go back and read in the next pair of numbers without computing the sum.
Are any values of x also illegal? If so, test for them too.

```
#include <stdio.h>
#include <conio.h>
#include <math.h>
main(){
  int x,n,sum=0,i;
  start:
  printf("enter the values for x and n:");
  scanf("%d%d",&x,&n);
  if(n>0){
    for(i=0;i<=n;i++){
      sum = sum+pow(x,i);
    }
    printf("The sum of the geometric progression is:%d",sum);
  }
  else{
    printf("not a valid n:%d value",n);
    getch();
    goto start;
  }
}
```

OUTPUT:

enter the values for x and n:4 5

The sum of the geometric progression is:1365