//Fibonacci series

#include <stdio.h>

void main()

{

int n,a = 0,b = 1,c;

printf("Enter the number upto which you fibonacci series is to be printed = ");

scanf("%d",&n);

printf("%d",a);

printf("\n%d",b);

for(c=1;c<=n;c++){

c = a + b;

printf("\n%d",c);

a = b;

b = c;

}

}

//Factorial

#include <stdio.h>

void main()

{

int n,i,fact=1;

printf("Enter the number for calculating factorial =");

scanf("%d",&n);

if(n==0){

printf("Factorial is 1.");

}

else{

for(i=1;i<=n;++i){

fact=fact\*i;

}

printf("%d",fact);

}

}

//Sum of all digits

#include <stdio.h>

void main()

{

int n,sum = 0,rem;

printf("Enter the number = ");

scanf("%d",&n);

while(n!=0){

rem = n % 10;//We get the last digit

sum = sum + rem;

n = n / 10;//The last digit is removed

}

printf("The sum of the digits is = %d",sum);

}

//Check if a number is armstrong or not

#include <stdio.h>

#include <math.h>

void main()

{

int num,rem,result,ognum,c=0;

printf("Enter the number = ");

scanf("%d",&num);

//Count the number of digits

ognum = num;

while(ognum!=0){

ognum = ognum/10;

c++;

}

printf("The number of digits = %d",c);

printf("\nOriginal number after changes made to it = %d",ognum);

//Check if armstrong or not

ognum = num;

while(ognum!=0){

rem = ognum%10;

result = result+pow(rem,c);

ognum = ognum/10;

}

if(result==num){

printf("\nThe number is armstrong.");

}

else{

printf("\nThe number is not armstrong.");

}

}

//To print all armstrong numbers till 1000

#include <stdio.h>

#include<math.h>

void main()

{

int num,rem,result,ognum,c=0,c2=0;

for(num=1;num<=1000;num++){

c=0;

result=0;

ognum = num;

while(ognum!=0){

ognum = ognum/10;

c++;

}

ognum = num;

while(ognum!=0){

rem = ognum%10;

result = result+pow(rem,c);

ognum = ognum/10;

}

if(result==num){

printf("\nThe number %d is armstrong.",num);

}

}

}