#include<stdio.h>

#include<stdlib.h>

#include<math.h>

#define note "maze mat lo, enter the valid operation"

void addition();

void subtraction();

void multiplication();

void division();

void modulus();

void factorial();

void power();

void square();

void cube();

void squareroot();

int main(){

printf("\t\tWelcome to the scientific calculator!!\n\n");

int choice;

printf("\n\*\*\* Press 0 to quit the program \*\*\*\*\n");

printf("Enter 1 for Addition \n");

printf("Enter 2 for Subtraction \n");

printf("Enter 3 for Multiplication \n");

printf("Enter 4 for Division \n");

printf("Enter 5 for Modulus\n");

printf("Enter 6 for Power \n");

printf("Enter 7 for Factorial \n");

printf("Enter 8 for square \n");

printf("Enter 9 for cube \n");

printf("Enter 10 for squareroot\n\n");

while(1){

printf("\n\nEnter the operation you want to do: ");

scanf("%d",&choice);

switch(choice)

{

case 1:

addition();

break;

case 2:

subtraction();

break;

case 3:

multiplication();

break;

case 4:

division();

break;

case 5:

modulus();

break;

case 6:

power();

break;

case 7:

factorial();

break;

case 8:

square();

break;

case 9:

cube();

break;

case 10:

squareroot();

break;

case 0:

exit(0);

default:

printf("\n\*\*\*\* %s \*\*\*\*\*\n",note);

}

}

return 0;

}

void addition(){

printf("Enter the numbers you want to add: ");

int a,b;

scanf("%d%d",&a,&b);

printf("The sum of a and b is %d\n",a+b);

}

void subtraction(){

printf("Enter the numbers you want to subtract: ");

int a,b;

scanf("%d%d",&a,&b);

printf("The subtraction of a and b is %d\n",a-b);

}

void multiplication(){

printf("Enter the numbers you want to multiply: ");

int a,b;

scanf("%d%d",&a,&b);

printf("The multiplication of a and b is %d\n",a\*b);

}

void division(){

printf("Enter the numbers you want to divide: ");

int a,b;

scanf("%d%d",&a,&b);

printf("The division of a and b is %f\n",(float)a/(float)b);

}

void modulus(){

printf("Enter the numbers you want to find modulus of: ");

int a,b;

scanf("%d%d",&a,&b);

printf("The modulus of a and b is %d\n",a%b);

}

void factorial(){

int n,factorial;

printf("Enter the number you want the factorial of: ");

scanf("%d",&n);

factorial=1;

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

factorial=factorial\*i; // factorial\*=i;

}

printf("\nFactorial of %d is %d",n,factorial);

}

void power(){

double b;

double p;

printf("Enter the base and the power: ");

scanf("%lf%lf",&b,&p);

double e=pow(b,p);

printf("The power is %lf",e);

}

void square(){

double b;

printf("Enter the number you want the square of: ");

scanf("%lf",&b);

double p=pow(b,2);

printf("The square of %lf is %lf",b,p);

}

void cube(){

double b;

printf("Enter the number you want the cube of: ");

scanf("%lf",&b);

double p=pow(b,3);

printf("The cube of %lf is %lf",b,p);

}

void squareroot(){

double b;

printf("Enter the number you want the square root of : ");

scanf("%lf",&b);

double s = sqrt(b);

printf("The square root of %lf is %lf",b,s);

}