#include<iostream>

#include<math.h>

#include<Windows.h>

using namespace std;

int main ()

{

system("color b5");

float a,b,PI;

int c;

cout<<endl;

bilal:

cout<<"\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Calculator \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\n";

cout<<"================================================================================\n";

cout<<"Operations\t"<<"\tTrigonometric Functions"<<"\t\tLogarithmic Functions\n";

cout<<"================================================================================\n";

////////////////////////////////////////////////////////////////////////////////////////////////////////

cout<<"1: Division\t\t"<<"7: Sin\t\t"<<"\t\t13: Log"<<endl;

cout<<endl;

cout<<"2: Multiplication\t"<<"8: Cos\t\t"<<"\t\t14: Log with base 10"<<endl;

cout<<endl;

cout<<"3: Subtraction\t\t"<<"9: Tan\t\t"<<endl;

cout<<endl;

cout<<"4: Addition\t\t"<<"10: Inverse of Sin"<<endl;

cout<<endl;

cout<<"5: Exponent\t\t"<<"11: Inverse of Cos"<<endl;

cout<<endl;

cout<<"6: Square root\t\t"<<"12: Inverse of Tan"<<endl;

cout<<endl;

cout<<"Enter the function that you want to perform : ";

cin>>c;

cout<<endl;

PI=3.14159265;

system("cls");

switch(c)

{

case 1:

cout<<"Enter 1st number : ";

cin>>a;

cout<<endl;

cout<<"Enter 2nd number : ";

cin>>b;

cout<<endl;

cout<<"Division = "<<a/b<<endl;

break;

case 2:

cout<<"Enter 1st number : ";

cin>>a;

cout<<endl;

cout<<"Enter 2nd number : ";

cin>>b;

cout<<endl;

cout<<"Multiplication = "<<a\*b<<endl;

break;

case 3:

cout<<"Enter 1st number : ";

cin>>a;

cout<<endl;

cout<<"Enter 2nd number : ";

cin>>b;

cout<<endl;

cout<<"Subtraction = "<<a-b<<endl;

break;

case 4:

cout<<"Enter 1st number : ";

cin>>a;

cout<<endl;

cout<<"Enter 2nd number : ";

cin>>b;

cout<<endl;

cout<<"Addition = "<<a+b<<endl;

break;

case 5:

cout<<"Enter the number : ";

cin>>a;

cout<<endl;

cout<<"Enter the exponent : ";

cin>>b;

cout<<endl;

cout<<"Exponent = "<<pow(a,b)<<endl;

break;

case 6:

cout<<"Enter the number : ";

cin>>a;

cout<<endl;

cout<<"Square Root = "<<sqrt(a)<<endl;

break;

case 7:

cout<<"Enter the number : ";

cin>>a;

cout<<endl;

cout<<"Sin = "<<sin(a)<<endl;

break;

case 8:

cout<<"Enter the number : ";

cin>>a;

cout<<endl;

cout<<"Cos = "<<cos(a)<<endl;

break;

case 9:

cout<<"Enter the number : ";

cin>>a;

cout<<endl;

cout<<"Tan = "<<tan(a)<<endl;

break;

case 10:

cout<<"Enter the number : ";

cin>>a;

cout<<endl;

cout<<"Inverse of Sin = "<<asin(a)\*180.0/PI<<endl;

break;

case 11:

cout<<"Enter the number : ";

cin>>a;

cout<<endl;

cout<<"Inverse of Cos = "<<acos(a)\*180.0/PI<<endl;

break;

case 12:

cout<<"Enter the number : ";

cin>>a;

cout<<endl;

cout<<"Inverse of tan = "<<atan(a)\*180.0/PI<<endl;

break;

case 13:

cout<<"Enter the number : ";

cin>>a;

cout<<endl;

cout<<"Log = "<<log(a)<<endl;

break;

case 14:

cout<<"Enter the number : ";

cin>>a;

cout<<endl;

cout<<"Log with base 10 = "<<log10(a)<<endl;

break;

default:

cout<<"Wrong Input"<<endl;

}

goto bilal;

system("pause");

}