*Object:* Code a menu based program (Continues) of Scientific Calculator which have the following options:

1. Addition
2. Subtraction
3. Multiplication
4. Division
5. Power
6. Square
7. Cube
8. Factorial
9. Log
10. Sin
11. Cos
12. Tan
13. Summation
14. Square Root
15. Floor
16. Ceil
17. Exit

*Code:*

**#include<iostream>**

**#include<conio.h>**

**#include<math.h>**

**using namespace std;**

**void main()**

**{**

**start:**

**int choice,pow=1;**

**float average=0;**

**cout<<"SCIENTIFIC CALCULATOR"<<endl;**

**cout<<"Select The Choice: "<<endl;**

**cout<<"\n1.Addition";**

**cout<<"\n2.Subtraction";**

**cout<<"\n3.Multiplication";**

**cout<<"\n4.division";**

**cout<<"\n5.Power";**

**cout<<"\n6.Square";**

**cout<<"\n7.Cube";**

**cout<<"\n8.Factorial";**

**cout<<"\n9.Log";**

**cout<<"\n10.Sin";**

**cout<<"\n11.Cos";**

**cout<<"\n12.Tan";**

**cout<<"\n13.Summation";**

**cout<<"\n14.Square Root";**

**cout<<"\n15.Floor";**

**cout<<"\n16.Ceil";**

**cout<<"\n17.Exit";**

**cout<<"\nEnter your Choice: ";**

**cin>>choice;**

**system("cls");**

**switch(choice)**

**{**

**case 1:**

**int a,b,c;**

**cout<<"Addition";**

**cout<<"\nEnter 1st Number: ";**

**cin>>a;**

**cout<<"Enter 2nd Number: ";**

**cin>>b;**

**c=a+b;**

**cout<<"\nSum is: "<<c;**

**cout<<endl<<endl;**

**break;**

**case 2:**

**int f,s,sub;**

**cout<<"Subtraction";**

**cout<<"\nEnter 1st Number: ";**

**cin>>f;**

**cout<<"Enter 2nd Number: ";**

**cin>>s;**

**sub=f-s;**

**cout<<"\nAnswer is: "<<sub;**

**cout<<endl<<endl;**

**break;**

**case 3:**

**int frs,sec,pro;**

**cout<<"Multiplication";**

**cout<<"\nEnter 1st Number: ";**

**cin>>frs;**

**cout<<"Enter 2nd Number: ";**

**cin>>sec;**

**pro=frs\*sec;**

**cout<<"\nProduct is: "<<pro;**

**cout<<endl<<endl;**

**break;**

**case 4:**

**float fst,scn,div;**

**cout<<"Subtraction";**

**cout<<"\nEnter 1st Number: ";**

**cin>>fst;**

**cout<<"Enter 2nd Number: ";**

**cin>>scn;**

**div=fst/scn;**

**cout<<"\nAnswer is: "<<div;**

**cout<<endl<<endl;**

**break;**

**case 5:**

**int frst,snd,i;**

**cout<<"Power";**

**cout<<"\nEnter The Number: ";**

**cin>>frst;**

**cout<<"Enter the Power: ";**

**cin>>snd;**

**for(i=snd;i>0;i--)**

**{**

**pow=pow\*frst;**

**}**

**cout<<"\nAnswer is: "<<pow;**

**cout<<endl<<endl;**

**break;**

**case 6:**

**int square,ans;**

**cout<<"Square";**

**cout<<"\nEnter The Number: ";**

**cin>>square;**

**ans=square\*square;**

**cout<<"\nAnswer is: "<<ans;**

**cout<<endl<<endl;**

**break;**

**case 7:**

**int cube,an;**

**cout<<"Cube";**

**cout<<"\nEnter The Number: ";**

**cin>>cube;**

**an=cube\*cube\*cube;**

**cout<<"\nAnswer is: "<<an;**

**cout<<endl<<endl;**

**break;**

**case 8:**

**int h,fac,num;**

**cout<<"Factorial";**

**cout<<"\nEnter Number: ";**

**cin>>num;**

**fac=num;**

**for(h=1;h<num;h++)**

**{**

**fac=fac\*h;**

**}**

**cout<<"\nFactorial is: "<<fac;**

**cout<<endl<<endl;**

**break;**

**case 9:**

**float LOG;**

**cout<<"Log";**

**cout<<"\nEnter Number: ";**

**cin>>LOG;**

**cout<<"\nLog is: "<<log(LOG);**

**cout<<endl<<endl;**

**break;**

**case 10:**

**float number;**

**cout<<"Sin";**

**cout<<"\nEnter Number: ";**

**cin>>number;**

**cout<<"\nAnswer is: "<<sin(number);**

**cout<<endl<<endl;**

**break;**

**case 11:**

**float nbr;**

**cout<<"Cos";**

**cout<<"\nEnter Number: ";**

**cin>>nbr;**

**cout<<"\nAnswer is: "<<cos(nbr);**

**cout<<endl<<endl;**

**break;**

**case 12:**

**float n;**

**cout<<"Tan";**

**cout<<"\nEnter Number: ";**

**cin>>n;**

**cout<<"\nAnswer is: "<<tan(n);**

**cout<<endl<<endl;**

**break;**

**case 13:**

**float nmb,value;**

**float avg;**

**cout<<"Summation";**

**cout<<"\nEnter the number of values you want to input: ";**

**cin>>nmb;**

**for(int i=1;i<=nmb;i++)**

**{**

**cout<<"Enter value "<<i<<": ";**

**cin>>value;**

**average+=value;**

**}**

**cout<<"Sum is: "<<average;**

**avg=average/nmb;**

**cout<<"\nAverage is: "<<avg<<endl;**

**cout<<endl<<endl;**

**break;**

**case 14:**

**double root;**

**cout<<"Square Root";**

**cout<<"\nEnter Number: ";**

**cin>>root;**

**cout<<"\nSquare Root is: "<<sqrt(root);**

**cout<<endl<<endl;**

**break;**

**case 15:**

**double flr;**

**cout<<"Floor";**

**cout<<"\nEnter Number: ";**

**cin>>flr;**

**cout<<"\nAnswer is: "<<floor(flr);**

**cout<<endl<<endl;**

**break;**

**case 16:**

**double cl;**

**cout<<"Ceil";**

**cout<<"\nEnter Number: ";**

**cin>>cl;**

**cout<<"\nAnswer is: "<<ceil(cl);**

**cout<<endl<<endl;**

**break;**

**case 17:**

**exit(0);**

**break;**

**default:**

**cout<<"Invalid Selection";**

**cout<<endl<<endl;**

**break;**

**}**

**goto start;**

**getch();**

**}**

*Output:*

