Calculator

```
using namespace std;

#include <iostream>
 int main(){     double
a,b;     cout<<"Enter A1
: ";     cin>>a;
double result=0;
int z=0;     while
(z!=1)
    {
        cout<<"\nChoose operations : \n'+', '-', '*', '/', '^'\n'e
For Exit' : ";         char ch;         cin>>ch;
switch (ch)
        {
case '+':
            if(result!=0){
cout<<"Enter B : ";
cin>>b;
                result =result+b;
            }else{
cout<<"Enter B1 : ";
cin>>b;                  result=a+b;
            }
cout<<result;
break;         case '-':
            if(result!=0){
cout<<"Enter B : ";
cin>>b;
                result =result-b;
            }else{
cout<<"Enter B1 : ";
cin>>b;                  result=a-b;
            }
```

```
            cout<<result;
break;         case '*':
            if(result!=0){
cout<<"Enter B : ";
cin>>b;
                result =result*b;
            }else{
cout<<"Enter B1 : ";
cin>>b;                 result=a*b;
            }
cout<<result;
break;            case
'/':
            if(result!=0){
cout<<"Enter B : ";
cin>>b;
                result =result/b;
            }else{
cout<<"Enter B1 : ";
cin>>b;                 result=a/b;
            }
cout<<result;
break;            case
'^':
            if(result!=0){
cout<<"Enter power : ";
cin>>b;                 double pow=1;
while (b>0)
                {
pow=pow*result;
                    --b;
}
result=pow;
            }else{
cout<<"Enter power : ";
cin>>b;                 double pow=1;
while (b>0)
```

```
                {
pow=pow*a;
                    --b;
}
              result=pow;
            }
cout<<result;
break;                case
'e':             z=1;
break;
                 default:             cout<<"Please
choose correct operation";             break;
        }
    }      cout<<"Answer :
"<<result;

}
```

```
Enter A1 : 3

Choose operations :
'+', '-', '*', '/', '^'
'e For Exit' : ^
Enter power : 3
27
Choose operations :
'+', '-', '*', '/', '^'
'e For Exit' : /
Enter B : 9
3
Choose operations :
'+', '-', '*', '/', '^'
'e For Exit' : +
Enter B : 30
33
Choose operations :
'+', '-', '*', '/', '^'
'e For Exit' : e
Answer : 33
```

File

```
using namespace std;

#include <iostream>
#include <fstream>
#include <math.h>


double cal_dif(double x1,double y1);
 int main(){     ifstream myFile;
cout<<"Enter File name : ";
string file;     cin>>file;
myFile.open(file);//point.txt
//myFile.open("point.txt");
int count=0;
if(myFile.is_open()){
double x;
        while (myFile>>x)
        {
cout<<x<<endl;
// arr[i++]=x;
count++;
        }         cout<<"Point count :
"<<count<<"\n";         myFile.close();
    }else{          cout<<"File
not found";
    }      double arr[count];
myFile.open(file);//point.txt
    //myFile.open("point.txt");

if(myFile.is_open()){
double x;         int
i=0;
        while (myFile>>x)
        {
arr[i++]=x;
```

```
     }
myFile.close();
    }else{         cout<<"File
not found";
    }      int n=count/2;
double dif_arr[n],result;
int j=0;     cout<<"\n";
     for (int i = 0; i < count; i++) {
result=cal_dif(arr[i],arr[++i]);
cout<<result<<" ";
dif_arr[j]=result;
        ++j;
    }

    // cout<<"\n";
    // for (int j = 0; j < 3; j++) {
    //     cout<<dif_arr[j]<<" ";
    // }
     double temp;     for(int
i=0;i<n;i++) {          for(int
j=i+1;j<n;j++) {
if(dif_arr[i]>dif_arr[j]){
temp=dif_arr[i];
dif_arr[i]=dif_arr[j];
dif_arr[j]=temp;
            }
        }
    }

    // cout<<"\nSorted Difference array:\n";

    // for (int j = 0; j < n; j++) {
    //     cout<<dif_arr[j]<<" ";
    // }
     ofstream
sfile;     string
file1;
```

```
    cout<<"\nEnter File name : ";
cin>>file1;
sfile.open(file1);//s_point.txt
    //sfile.open("s_point.txt");
     if(sfile.is_open()){         for
(int j = 0; j < n; j++) {
sfile<<dif_arr[j]<<endl;
        }         cout<<"\nValue Store
successfully\n";         sfile.close();
    }else{          cout<<"File
not found";
    }
cin.get();
return 0;
}  double cal_dif(double x1,double y1){     double
x=0,y=0;     return sqrt(pow(x1 - x, 2) + pow(y1 - y,
2) * 1.0); }
```

```
Enter File name : point.txt
28
11.5
14
14.5
12
12.5
13
13.5
8
16
14
7
12
28 11.5 14 14.5 12 12.5 13 13.5 8 16 14 7

16.2635 20.5061 17.6777 19.0919 22.6274 9.89949
Sorted Difference array:
9.89949 16.2635 17.6777 19.0919 20.5061 22.6274
16
14
7
Point count : 12


16.2635 20.5061 17.6777 19.0919 22.6274 9.89949
Enter File name : s_point.txt

Value Store successfully
```

```
using namespace std;

#include <iostream>
#include <fstream>
#include <conio.h>
#include <graphics.h>


int main(){
    ifstream myFile;
    myFile.open("g_point.txt");
    int count=0;
    if(myFile.is_open()){
        int x;
        while (myFile>>x){
            cout<<x<<" ";
            count++;
        }
        cout<<"\nPoint count : "<<count<<"\n";
        myFile.close();
    }else{
        cout<<"File not found";
    }
    int point[count];
    myFile.open("g_point.txt");
    if(myFile.is_open()){
        int x;
        int i=0;
        while (myFile>>x)
        {
            point[i++]=x;
        }
        myFile.close();
    }else{
        cout<<"File not found";
    }

    for (int i = 0; i < count; i++) {
        cout<<point[i]<<" ";
    }
    int gd=DETECT,gm;
```

```
    initgraph(&gd,&gm,(char*)"");
    if(count==3){
        cout<<"\nCircle Draw Successfully";
        drawpoly(3,point);
    }else if(count==8){
        cout<<"\nTriangle Draw Successfully";
        drawpoly(4,point);
    }else if(count==10){
        cout<<"\nRectangle Draw Successfully";
        drawpoly(5,point);
    }else if(count==12){
        cout<<"\nPentagon Draw Successfully";
        drawpoly(6,point);
    }else if(count==14){
        cout<<"\nHexagon Draw Successfully";
        drawpoly(7,point);
    }else if(count==16){
        cout<<"\nHeptagon Draw Successfully";
        drawpoly(4,point);
    }else if(count==18){
        cout<<"\nOctagon Draw Successfully";
        drawpoly(4,point);
    }else{
        cout<<"\nShape is not valid";
    }
    getch();
    closegraph();
    return 0;
}
```