OBJECT ORIENTED PROGRAMMING IN C++
WINTER SEMESTER 2021-22
LAB ASSESSMENT-06

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Question:

Design a class template by name Vector and perform the following:

- **Find the smallest of the element in the Vector.**
- **Search for an element in the Vector.**
- **Find the average of the element in the array.**

Program:

```
#include <iostream>
#include <vector>                                   //NAME: M. DHANUSHRAJ
using namespace std;                                //REG.NO: 21BAI10111.
template<class Vector>

Vector solve(Vector a[], int size, int value)
{
   Vector smallest = a[0];
   Vector pos;
   Vector total = 0;
   for(int i=0; i<size; i++)
   {
      if (a[i] < smallest)
                  {
         smallest = a[i];
      }

      if (a[i] == value)
                  {
         pos = i + 1;
      }
      total += a[i];
   }
   cout<<"The smallest element in the array is: "<<smallest;
   cout<<endl<<"The element "<<value<<" was found at position: "<<pos;
   cout<<endl<<"The average of the array is: "<<total/size;
   return 0;
}

int main()
{
   int size = 10;
   cout<<"Enter the size of the array:";
```

```
    cin>>size;
    int a[size];
    int value;
    cout<<"Start enterting values: "<<endl;

    for (int i = 0; i < size; i++)
          {
       cin>>value;
       a[i] = value;
    }

    cout<<"Enter the value to be searched: ";
    cin>>value;

    solve(a, size, value);
    return 0;
}
```

Output:

```
Enter the size of the array:5
Start enterting values:
4 16 24 35 7
Enter the value to be searched: 35
The smallest element in the array is: 4
The element 35 was found at position: 4
The average of the array is: 17
--------------------------------
Process exited after 23.86 seconds with return value 0
Press any key to continue . . .
```

*******THE END*********