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**Assignment:** PF Lab 7

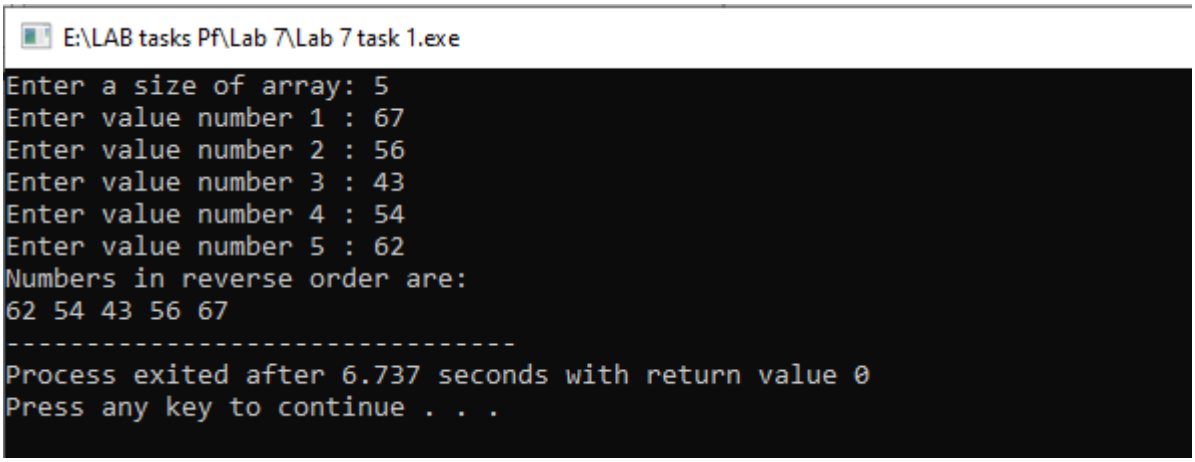
**Sec:** H

# Task 1.

## Input

```
#include<iostream>
using namespace std;
int main()
{
	int size;
	cout<<"Enter a size of array: ";
	cin>>size;

	int a[size];
	for( int i=0; i<size; i++)
	{
		cout<<"Enter value number "<<i+1<<" : ";
		cin>>a[i];
	}

	cout<<"Numbers in reverse order are: "<<endl;
	for(int i=size-1; i>=0 ; i--)
	cout<<a[i]<<" ";


return 0;
}
```

## OUTPUT

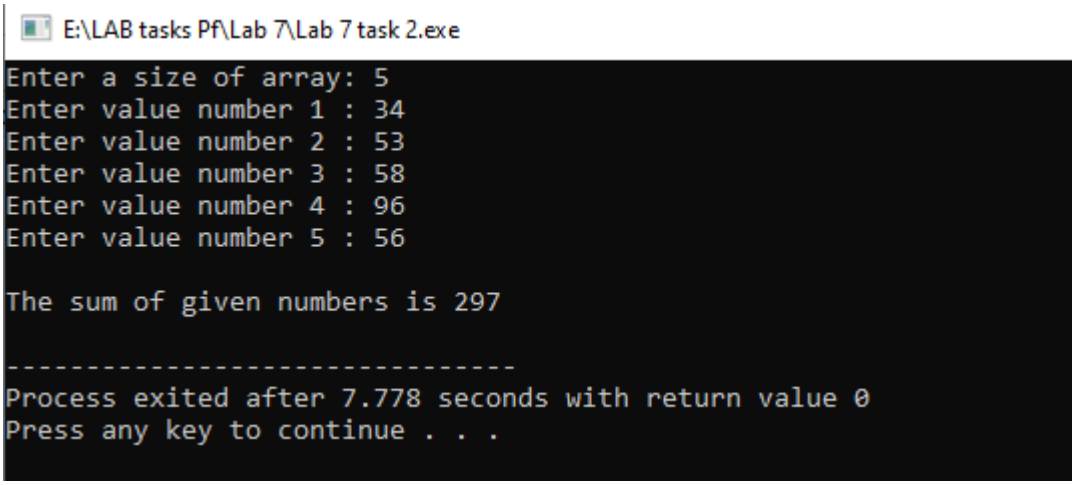



# TASK 2.

# Input

```
#include<iostream>
using namespace std;
int main()
{
	int size, sum=0;
	cout<<"Enter a size of array: ";
	cin>>size;

	int a[size];
	for( int i=0; i<size; i++)
	{
		cout<<"Enter value number "<<i+1<<" : ";
		cin>>a[i];
	}
	for(int i=0; i<size ; i++)
		sum+=a[i];
		cout<<"\nThe sum of given numbers is "<<sum<<endl;
return 0;
}
```

# OUTPUT



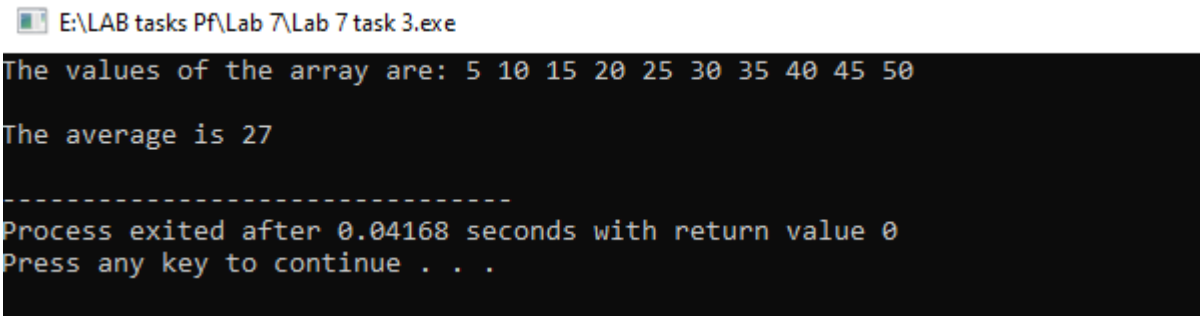

# TASK 3.

# INPUT

```
#include<iostream>
using namespace std;
int main()
{
	int sum=0;
	int average[10]={5,10,15,20,25,30,35,40,45,50};

	cout<<"The values of the array are: ";
	for(int i=0; i<10; i++)
	cout<<average[i]<<" ";
```

```
	cout<<endl;
	for(int i=0; i<10 ; i++)
		sum+=average[i];

	cout<<"\nThe average is "<<sum/10<<endl;

return 0;
}
```

# OUTPUT



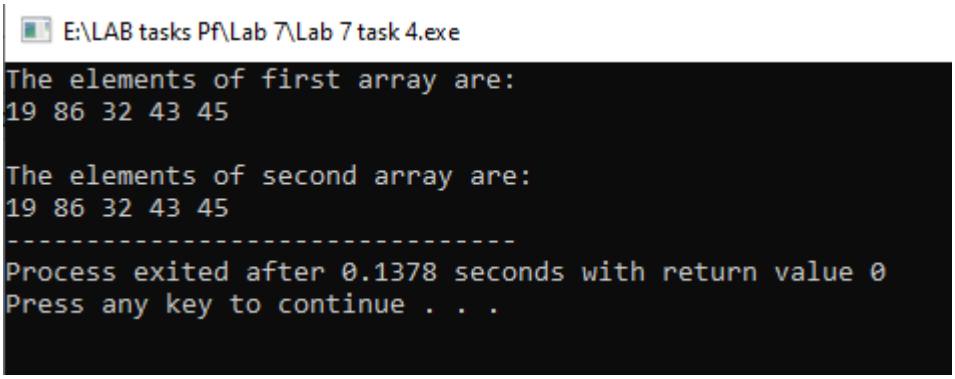

# TASK 4

# INPUT

```
#include<iostream>
using namespace std;
int main()
{
	int num[5]={19,86,32,43,45}, n[5];
	cout<<"The elements of first array are: \n";
```

```
        for(int i=0; i<5; i++)
        cout<<num[i]<<" ";

    cout<<endl<<endl;
    cout<<"The elements of second array are: \n";

        for(int i=0; i<5; i++)
        {
            n[i]=num[i];
            cout<<n[i]<<" ";
        }

    return 0;
}
```

# OUTPUT

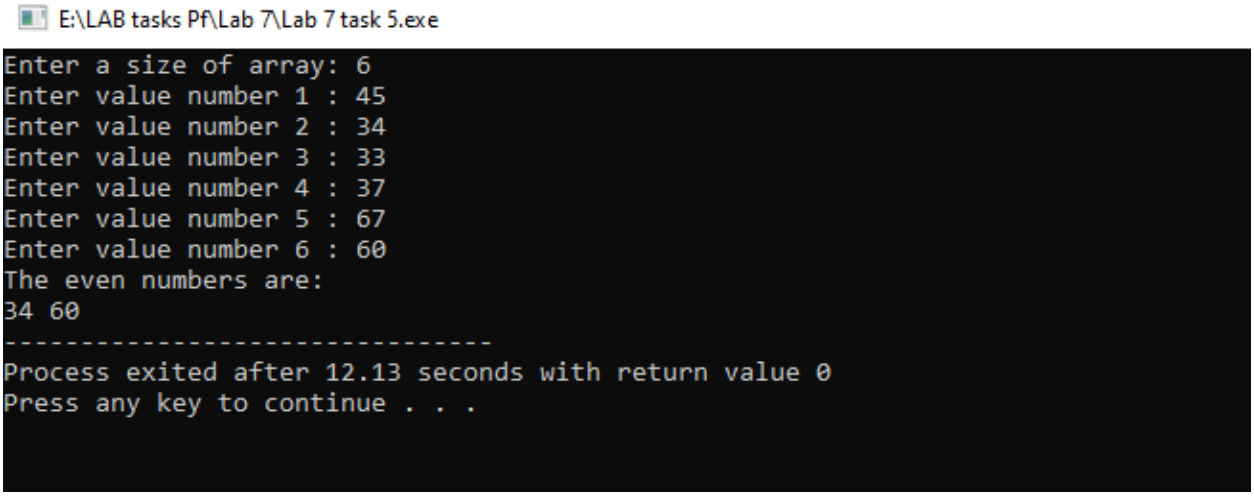


# TASK 5

# INPUT

```
#include<iostream>
using namespace std;
int main()
{
              int size;
              cout<<"Enter a size of array: ";
              cin>>size;

              int a[size];
              for( int i=0; i<size; i++)
              {
                   cout<<"Enter value number "<<i+1<<" : ";
                   cin>>a[i];
              }

              cout<<"The even numbers are: \n";
              for(int i=0; i<size ; i++)
              {
                   if(a[i]%2==0)
                   cout<<a[i]<<" ";
              }


return 0;
}
```

# OUTPUT



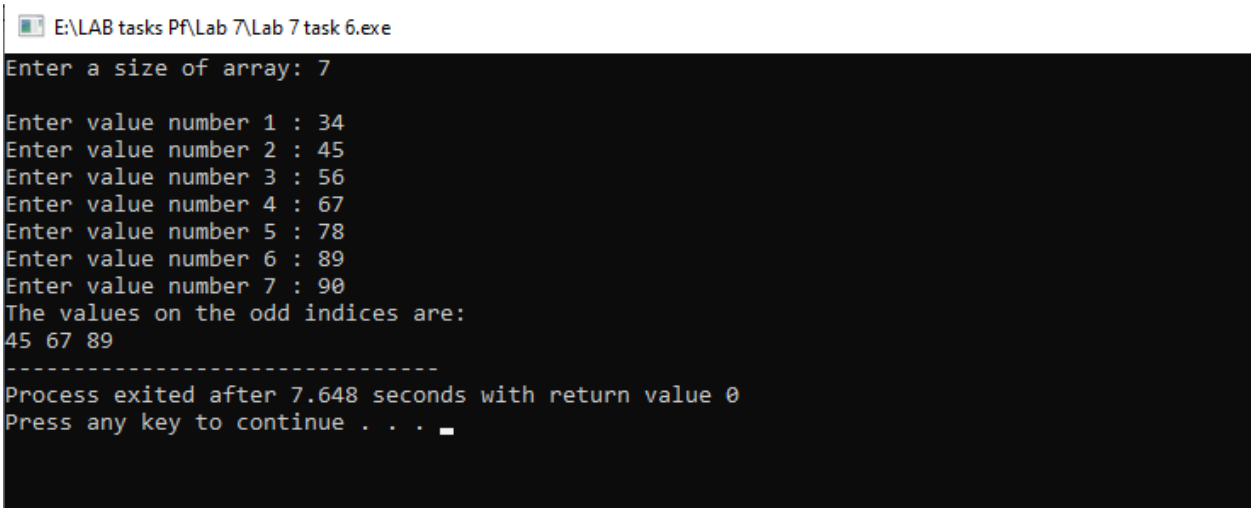

# TASK 6.

# INPUT

```
#include<iostream>
using namespace std;
int main()
{
		int size;
		cout<<"Enter a size of array: ";
		cin>>size;
		cout<<endl;

		int a[size];
```

```
        for( int i=0; i<size; i++)
        {
            cout<<"Enter value number "<<i+1<<" : ";
            cin>>a[i];
        }

        cout<<"The values on the odd indices are: \n";
        for(int i=0; i<size; i++)
        {
            if(i%2!=0)
            cout<<a[i]<<" ";
        }

return 0;
}
```

# OUTPUT



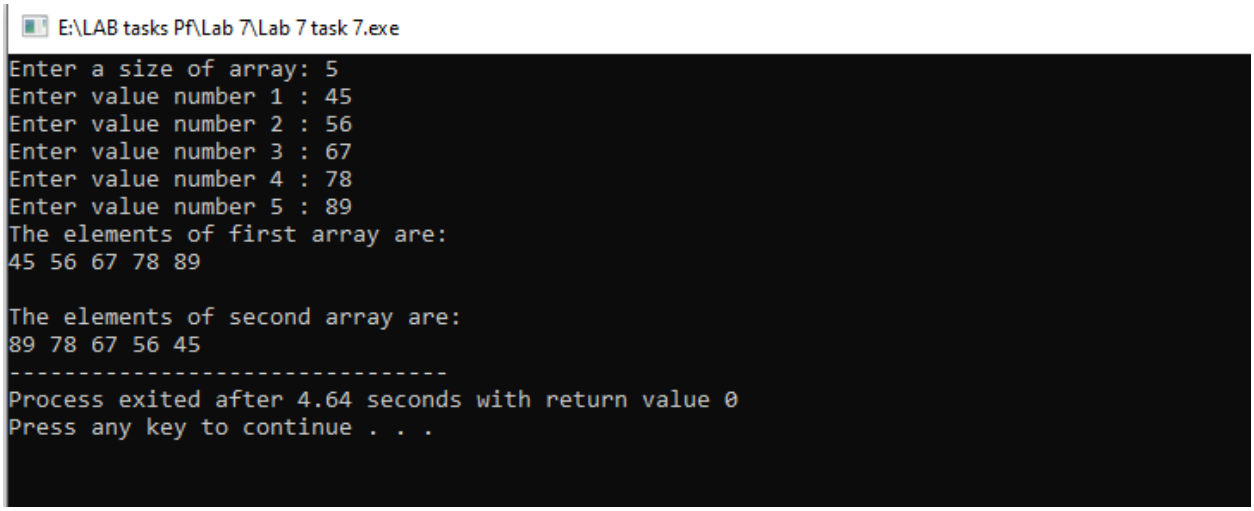
# Task 7.

# Input

```
#include<iostream>
using namespace std;
int main()
{
            int size;
            cout<<"Enter a size of array: ";
            cin>>size;

            int a[size], b[size];  // array1 and array 2
            for( int i=0; i<size; i++)
            {
                cout<<"Enter value number "<<i+1<<" : ";
                cin>>a[i];
            }

            cout<<"The elements of first array are: \n";
                for(int i=0; i<size; i++)
                cout<<a[i]<<" ";

                cout<<endl<<endl;
                cout<<"The elements of second array are: \n";
                for(int i=size-1; i>=0; i--)
                {
                      b[i]=a[i];
```

```
                    cout<<b[i]<<" ";
                }

            return 0;
}
```

# Output



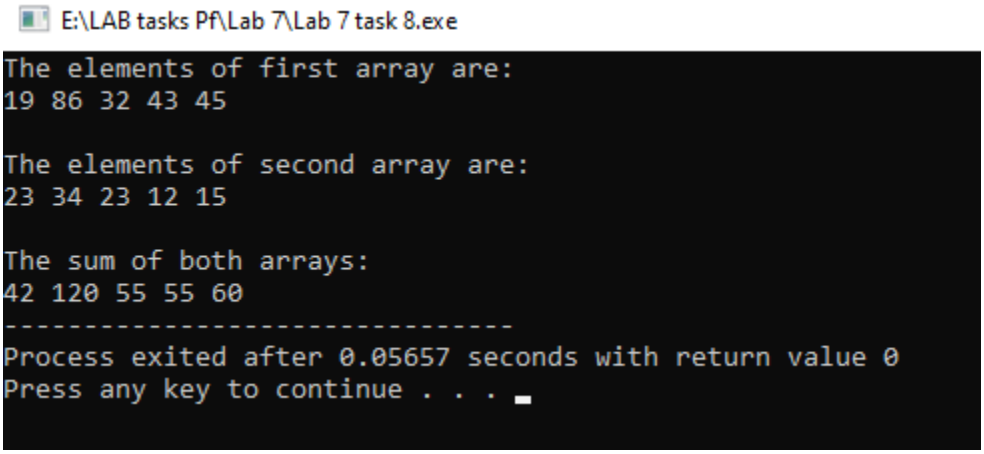

# Task 8.

# Input

```
#include<iostream>
using namespace std;
int main()
{
```

```
            int arr1[5]={19,86,32,43,45},
arr2[5]={23,34,23,12,15},sum[5];
            cout<<"The elements of first array are: \n";

                for(int i=0; i<5; i++)
                cout<<arr1[i]<<" ";

            cout<<endl<<endl;
            cout<<"The elements of second array are: \n";

                for(int i=0; i<5; i++)
                      cout<<arr2[i]<<" ";

                for(int i=0; i<5;i++)
                      sum[i]=arr1[i]+arr2[i];

            cout<<endl<<endl;
            cout<<"The sum of both arrays: \n";
                for(int i=0; i<5; i++)
                cout<<sum[i]<<" ";

            return 0;
}
```

# Output



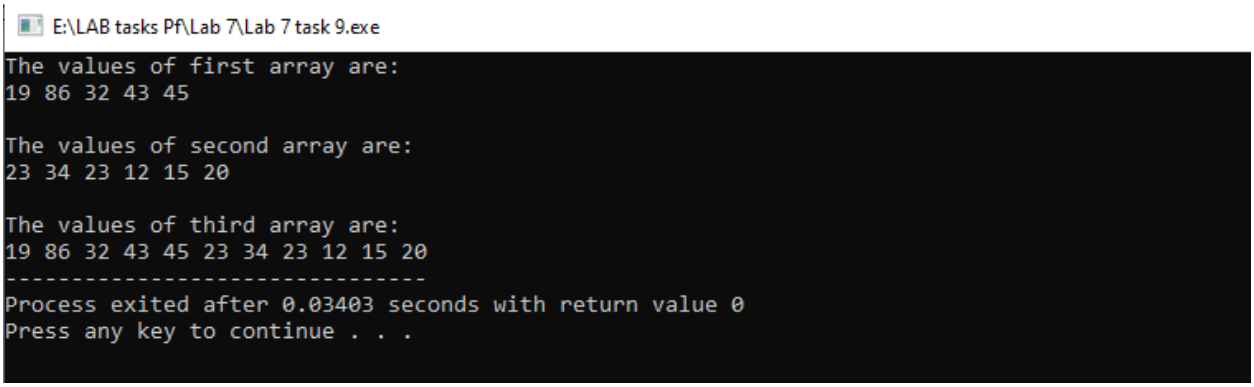

# Task 9

# Input

```
#include<iostream>
using namespace std;
int main()
{
            int N=5, M=6;       // any integers
            int arr1[N]={19,86,32,43,45},
arr2[M]={23,34,23,12,15,20},arr3[N+M];
            cout<<"The values of first array are: \n";

                for(int i=0; i<N; i++)
```

```
            cout<<arr1[i]<<" ";

        cout<<endl<<endl;
        cout<<"The values of second array are: \n";

            for(int i=0; i<M; i++)
                cout<<arr2[i]<<" ";

            for( int i=0; i<N;i++)
                arr3[i]=arr1[i];

                for( int i=0; i<M;i++)
                arr3[5+i]=arr2[i];

        cout<<endl<<endl;
        cout<<"The values of third array are: \n";
            for(int i=0; i<N+M; i++)
                cout<<arr3[i]<<" ";

        return 0;
}



return 0;
}
```

# Output




# Task 10

# Input

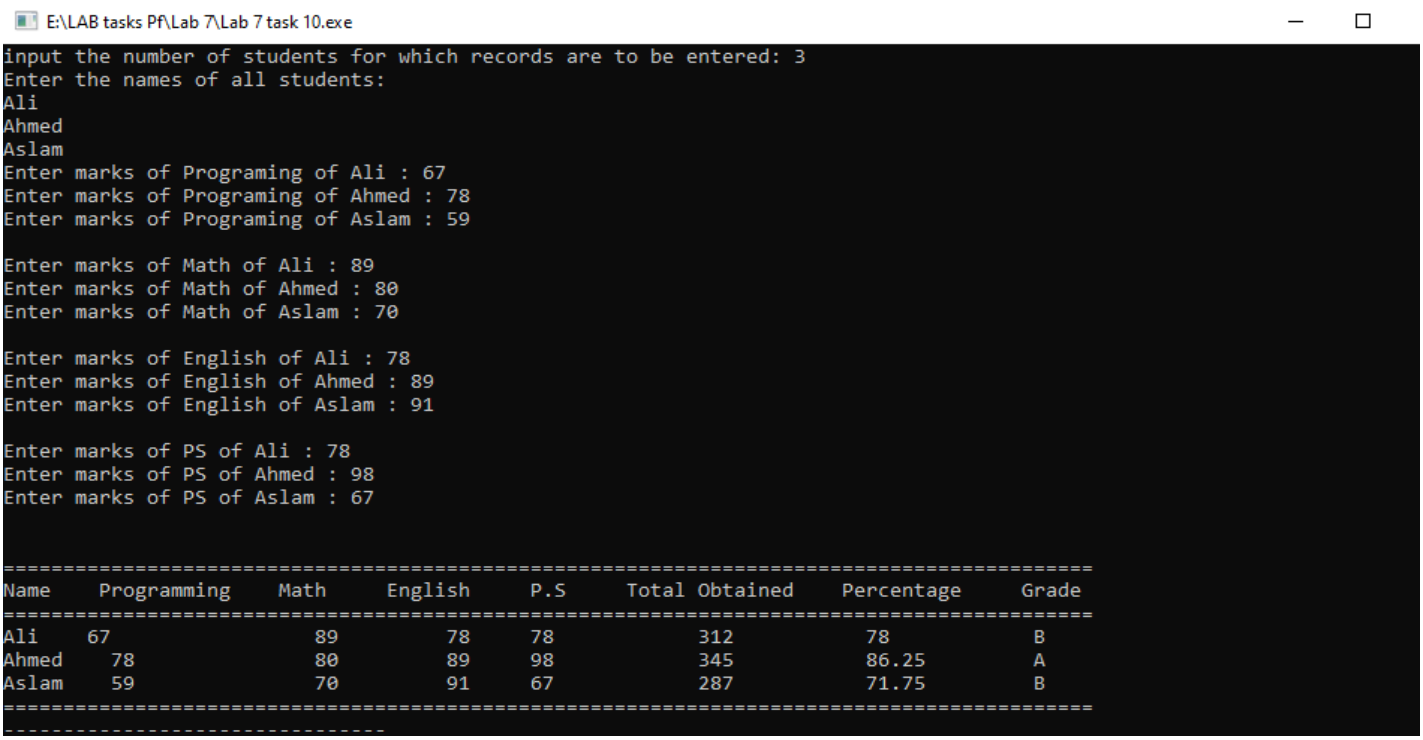
```
#include <iostream>
using namespace std;
int main ()
{
            int size;
```

```
            cout<<"input the number of students for which records are
to be entered: ";
            cin>>size;

            int
aPF[size],aMath[size],aEnglish[size],aPS[size],Totalmarks[size];
            string aName[size];
            float percentage[size];
            char grade[size];

            cout<<"Enter the names of all students:\n";
            for(int i=0; i<size; i++)
            cin>>aName[i];



            for(int i=0; i<size; i++)
            {
                cout<<"Enter marks of Programing of "<<aName[i]<<" :
";
                cin>>aPF[i];
            }

            cout<<endl;
            for(int i=0; i<size; i++)
            {
                cout<<"Enter marks of Math of "<<aName[i]<<" : ";
                cin>>aMath[i];
            }

            cout<<endl;
            for(int i=0; i<size; i++)
            {
                cout<<"Enter marks of English of "<<aName[i]<<" : ";
```

```
    cin>>aEnglish[i];
}

cout<<endl;
for(int i=0; i<size; i++)
{
    cout<<"Enter marks of PS of "<<aName[i]<<" : ";
    cin>>aPS[i];

}

for(int i=0; i<size; i++)
Totalmarks[i]=aPF[i]+aMath[i]+aEnglish[i]+aPS[i];
cout<<endl;

for(int i=0; i<size; i++)
percentage[i]=Totalmarks[i]*100.0/400;

cout<<endl;
for(int i=0; i<size; i++)
    {
          if(percentage[i]>=80 &&percentage[i]<=100)
          grade[i]='A';

          else if(percentage[i]>=70 &&percentage[i]<80)
          grade[i]='B';

          else if(percentage[i]>=60 &&percentage[i]<70)
          grade[i]='C';

          else if(percentage[i]<60)
          grade[i]='F';
```

```
                }


            for(int i=0; i<=90; i++)
            cout<<"=";


            cout<<endl;
            cout<<"Name\tProgramming    Math     English     P.S
Total Obtained    Percentage     Grade\n";


            for(int i=0; i<=90; i++)
            cout<<"=";
            cout<<endl;


            for(int i=0; i<size; i++)
            cout<<aName[i]<<"    "<<aPF[i]<<"\t\t  "<<aMath[i]<<"\t
"<<aEnglish[i]<<"\t    "<<aPS[i]<<"\t\t
"<<Totalmarks[i]<<"\t\t"<<percentage[i]<<"\t      "<<grade[i]<<"\n";


            for(int i=0; i<=90; i++)
            cout<<"=";


return 0;
}
```

# OUTPUT

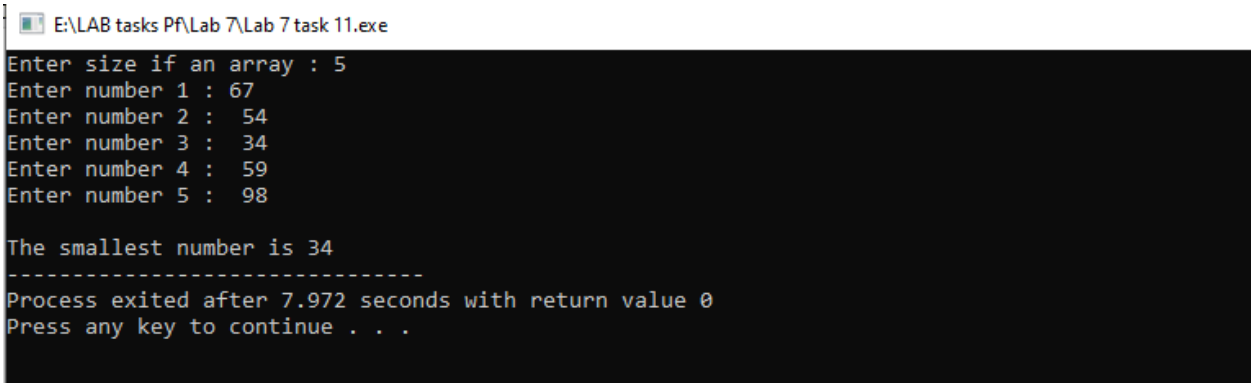

E:\LAB tasks Pf\Lab 7\Lab 7 task 10.exe
input the number of students for which records are to be entered: 3
Enter the names of all students:
Ali
Ahmed
Aslam
Enter marks of Programing of Ali : 67
Enter marks of Programing of Ahmed : 78
Enter marks of Programing of Aslam : 59
Enter marks of Math of Ali : 89
Enter marks of Math of Ahmed : 80
Enter marks of Math of Aslam : 70
Enter marks of English of Ali : 78
Enter marks of English of Ahmed : 89
Enter marks of English of Aslam : 91
Enter marks of PS of Ali : 78
Enter marks of PS of Ahmed : 98
Enter marks of PS of Aslam : 67
Name Programming Math English P.S Total Obtained Percentage Grade
Ali 67 89 78 78 312 78 B
Ahmed 78 80 89 98 345 86.25 A
Aslam 59 70 91 67 287 71.75 B

# Task 11

# Input

```
#include <iostream>
using namespace std;
int main ()
{
            int size, smallest;
            cout<<"Enter size if an array : ";
            cin>>size;

            cout<<"Enter number "<<1<<" : ";
            cin>>smallest;

            int arr[size];
            for(int i=1; i<size; i++)
            {
                cout<<"Enter number "<<i+1<<" :  ";
                cin>>arr[i];

                if(arr[i]<smallest)
                smallest=arr[i];

            }
cout<<endl<<"The smallest number is "<<smallest;

return 0;
}
```

# OUTPUT



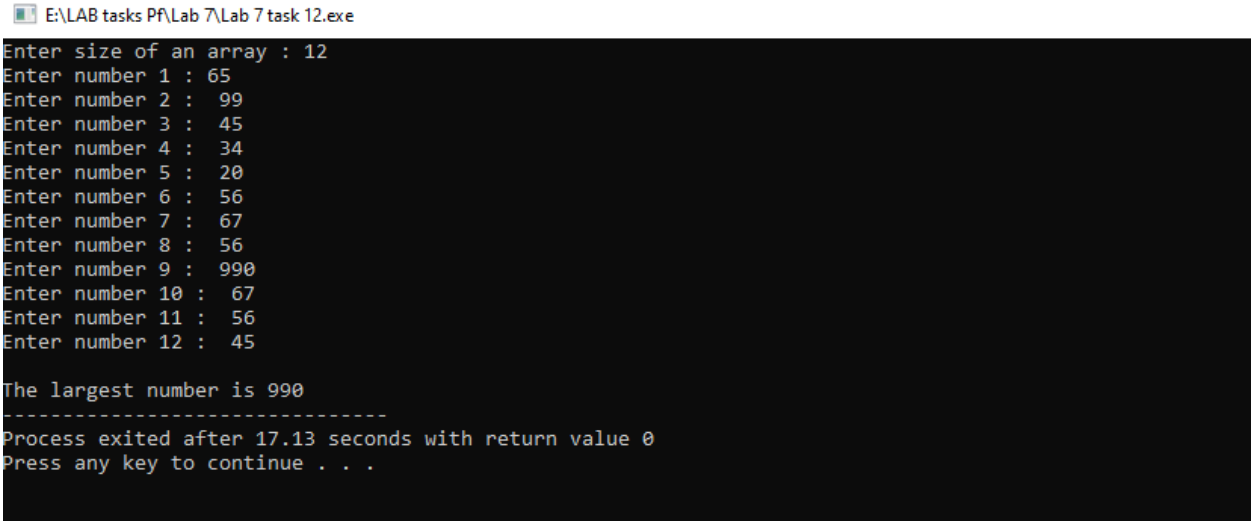

# Task 12

# Input

```
#include <iostream>
using namespace std;
int main ()
{
            int size, largest;
            cout<<"Enter size of an array : ";
            cin>>size;

            cout<<"Enter number "<<1<<" : ";
            cin>>largest;

            int arr[size];
```

```
            for(int i=1; i<size; i++)
            {
                cout<<"Enter number "<<i+1<<" :  ";
                cin>>arr[i];

                if(arr[i]>largest)
                largest=arr[i];

            }
cout<<endl<<"The largest number is "<<largest;

return 0;
}
```

# OUTPUT



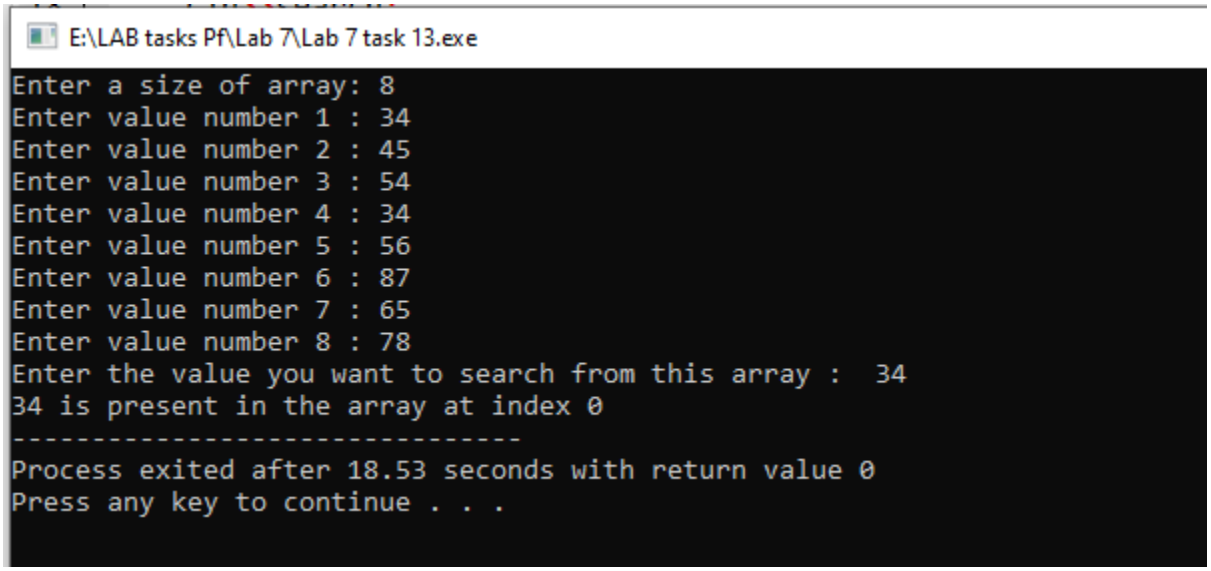
# Task 13

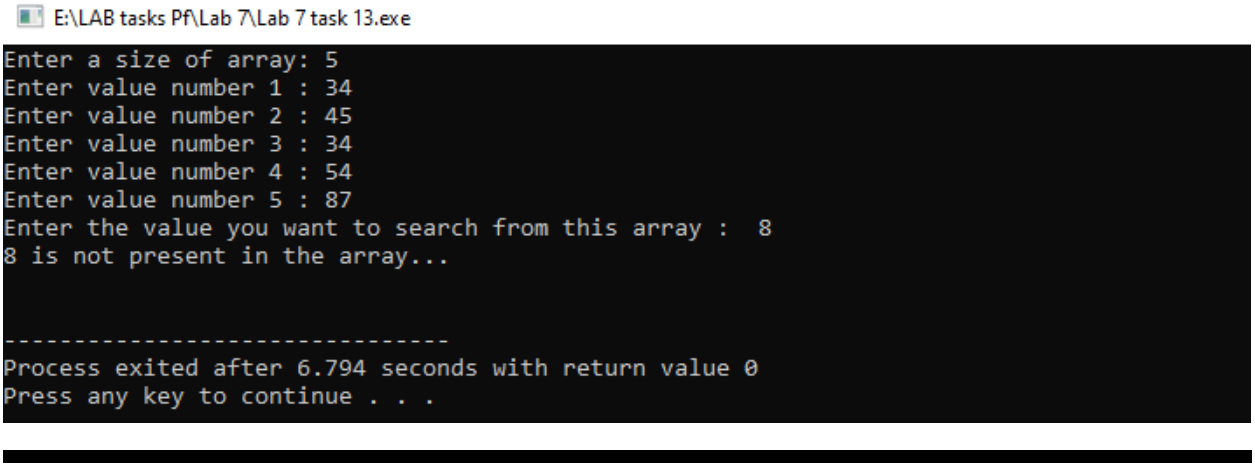
# Input

```
#include<iostream>
using namespace std;
int main()
{
            int size, search, temp;
            bool found=false;
            cout<<"Enter a size of array: ";
            cin>>size;

            int arr[size];
            for( int i=0; i<size; i++)
            {
                cout<<"Enter value number "<<i+1<<" : ";
                cin>>arr[i];
            }

            cout<<"Enter the value you want to search from this array
:  ";
            cin>>search;


            for(int i=0; i<size ; i++)
            {
```

```
            if(arr[i]==search)
            {
                   temp=i;
                  found=true;
                  break;
            }

      }

      if(found)
      cout<<search<<" is present in the array at index "<<temp;
      else
      cout<<search<<" is not present in the array...\n\n";

return 0;
}
```

# OUTPUT


E:\LAB tasks Pf\Lab 7\Lab 7 task 13.exe
Enter a size of array: 8
Enter value number 1 : 34
Enter value number 2 : 45
Enter value number 3 : 54
Enter value number 4 : 34
Enter value number 5 : 56
Enter value number 6 : 87
Enter value number 7 : 65
Enter value number 8 : 78
Enter the value you want to search from this array : 34
34 is present in the array at index 0
--------------------------------
Process exited after 18.53 seconds with return value 0
Press any key to continue . . .


E:\LAB tasks Pf\Lab 7\Lab 7 task 13.exe
Enter a size of array: 5
Enter value number 1 : 34
Enter value number 2 : 45
Enter value number 3 : 34
Enter value number 4 : 54
Enter value number 5 : 87
Enter the value you want to search from this array : 8
8 is not present in the array...
--------------------------------
Process exited after 6.794 seconds with return value 0
Press any key to continue . . .

# The End