

# Fundamentals of Programming

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## LabTask 8

### 1.Code to find average of integers of an array.

```
include<iostream>
using namespace std;
int main()
{
    int n;
    int arr[n];
    float sum=0, avg;

    cout<<"Enter lenght of array :";
    cin>>n;

    cout<<"Enter integers in the array :";
    for(int i=0; i<n; i++){
        cin>>arr[i];
    }

    for(int i=0; i<n; i++){
        sum += arr[i];
    }
```

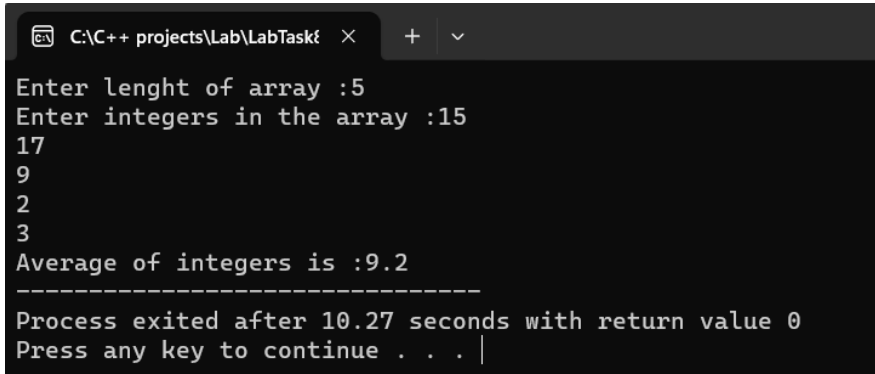
```

    avg = sum/n ;

    cout<<"Average of integers is :"<<avg;

    return 0;
}

```



The screenshot shows a C++ IDE window titled "C:\C++ projects\Lab\LabTask1". The console output is as follows:

```

Enter lenght of array :5
Enter integers in the array :15
17
9
2
3
Average of integers is :9.2
-----
Process exited after 10.27 seconds with return value 0
Press any key to continue . . . |

```

## 2.Code to implement bubble sorting on an array of 6 integers.

```

{
    int arr[5];

    cout<<"Enter Integers in the array :";

    for(int i=0; i<5; i++){
        cin>>arr[i];
    }

    int temp=0;

    for(int i=0; i<5; i++){
        for(int j=0; j<4; j++){
            if(arr[j]>arr[j+1]){
                temp=arr[j];
                arr[j]=arr[j+1];
                arr[j+1]=temp;
            }
        }
    }
}

```

```

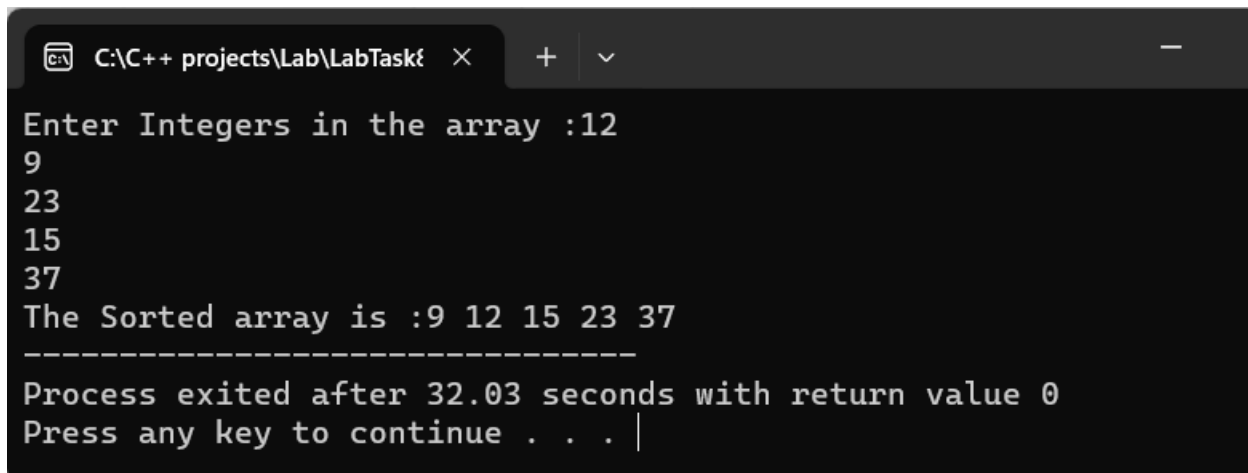
        }
    }

    cout<<"The Sorted array is :";

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

    return 0;
}

```



The screenshot shows a terminal window with a dark background and light-colored text. The window title bar indicates the file path is 'C:\C++ projects\Lab\LabTask6'. The program prompts the user to 'Enter Integers in the array :12'. The user enters the numbers 9, 23, 15, and 37 on separate lines. The program then outputs 'The Sorted array is :9 12 15 23 37'. Below this, a separator line of dashes is shown, followed by the message 'Process exited after 32.03 seconds with return value 0'. The prompt 'Press any key to continue . . .' is displayed at the bottom, with a vertical cursor line following the text.

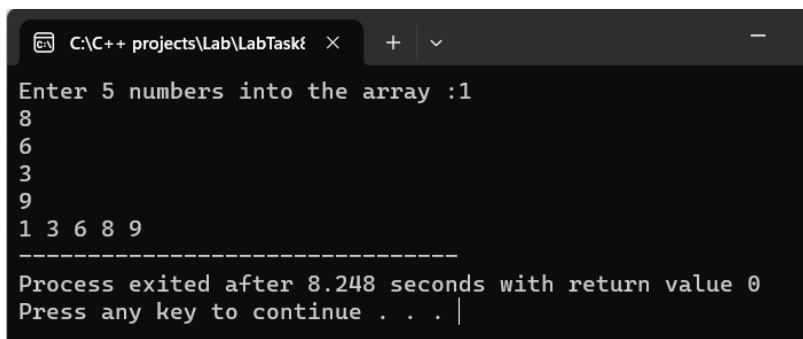
```

C:\C++ projects\Lab\LabTask6 x + v
Enter Integers in the array :12
9
23
15
37
The Sorted array is :9 12 15 23 37
-----
Process exited after 32.03 seconds with return value 0
Press any key to continue . . . |

```

### 3.Code to implement selection sorting on an array of 6 integers.

```
{  
    int arr[5];  
  
    int min;  
  
    cout<<"Enter 5 numbers into the array :";  
    for(int i=0;i<5;i++){  
        cin>>arr[i];  
    }  
  
    for (int i=0;i<5;i++){  
        min=arr[i];  
        for (int j=i;j<5;j++){  
            if(min>arr[j]){  
                min=arr[j];  
                arr[j]=arr[i];  
                arr[i]=min;  
            }  
        }  
    }  
  
    for(int i=0;i<5;i++){  
        cout<<arr[i]<<" ";  
    }  
  
    return 0;  
}
```



```
C:\C++ projects\Lab\LabTask6  X  +  v  -  
Enter 5 numbers into the array :1  
8  
6  
3  
9  
1 3 6 8 9  
-----  
Process exited after 8.248 seconds with return value 0  
Press any key to continue . . . |
```