Lab manual 8(Lab tasks)

Submitted to: M. Affan

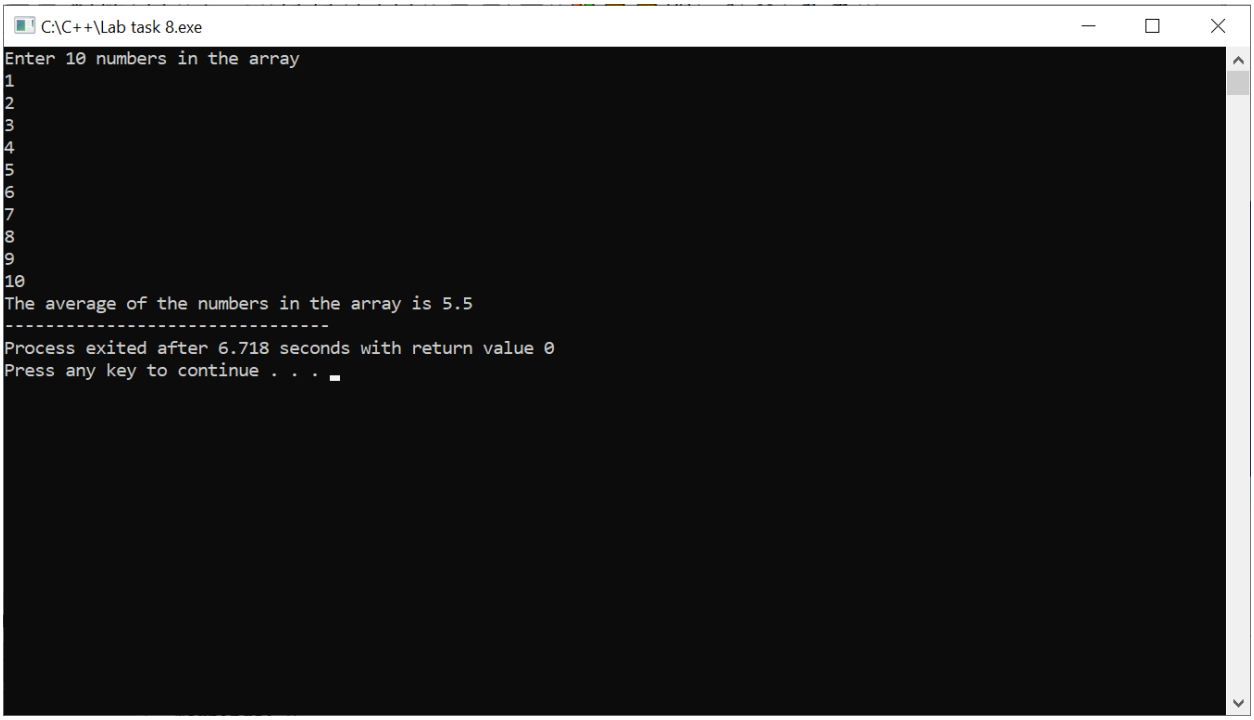
Name: Muhammad Bin Ahmad

ME-15(A)

Roll No: 480779

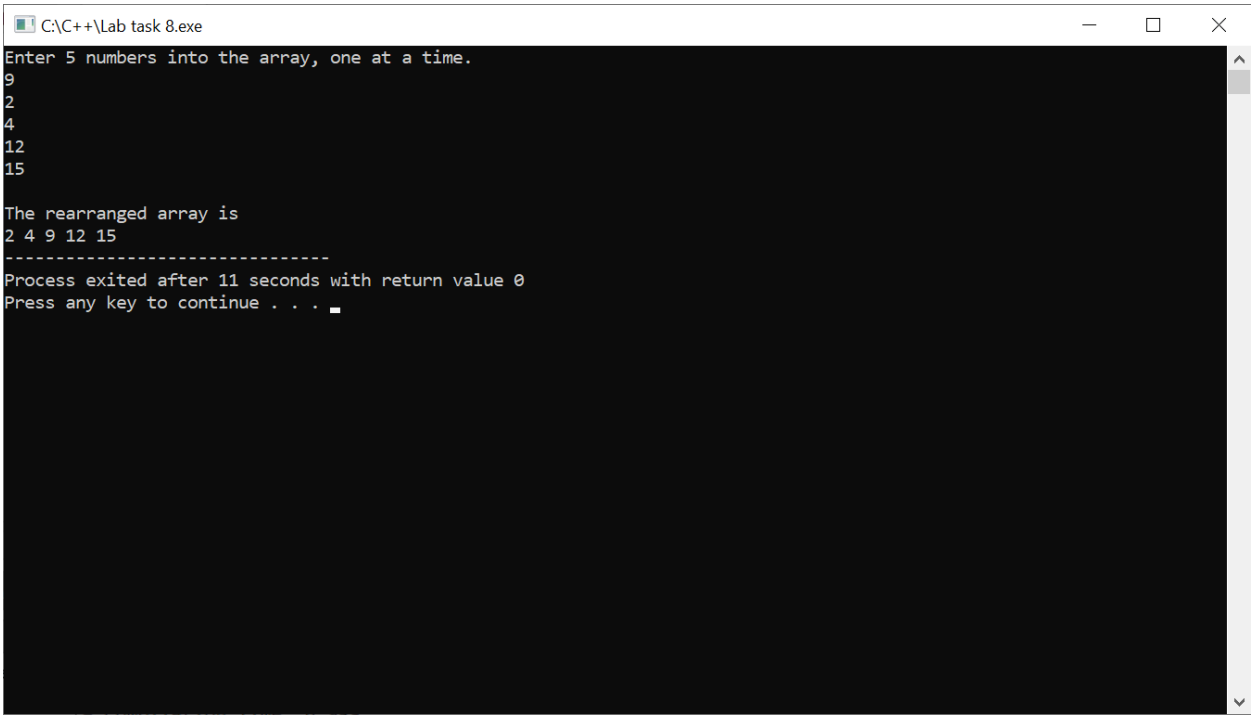
1. **Write a C++ program to calculate average of numbers of array.**

```
int num_array[10];
float sum=0;
cout<<"Enter 10 numbers in the array"<<endl;
for (int i=0;i<10;i++){
        cin>>num_array[i];
}
for(int j=0;j<10;j++){
        sum+=num_array[j];
}
cout<<"The average of the numbers in the array is "<<sum/10;
```



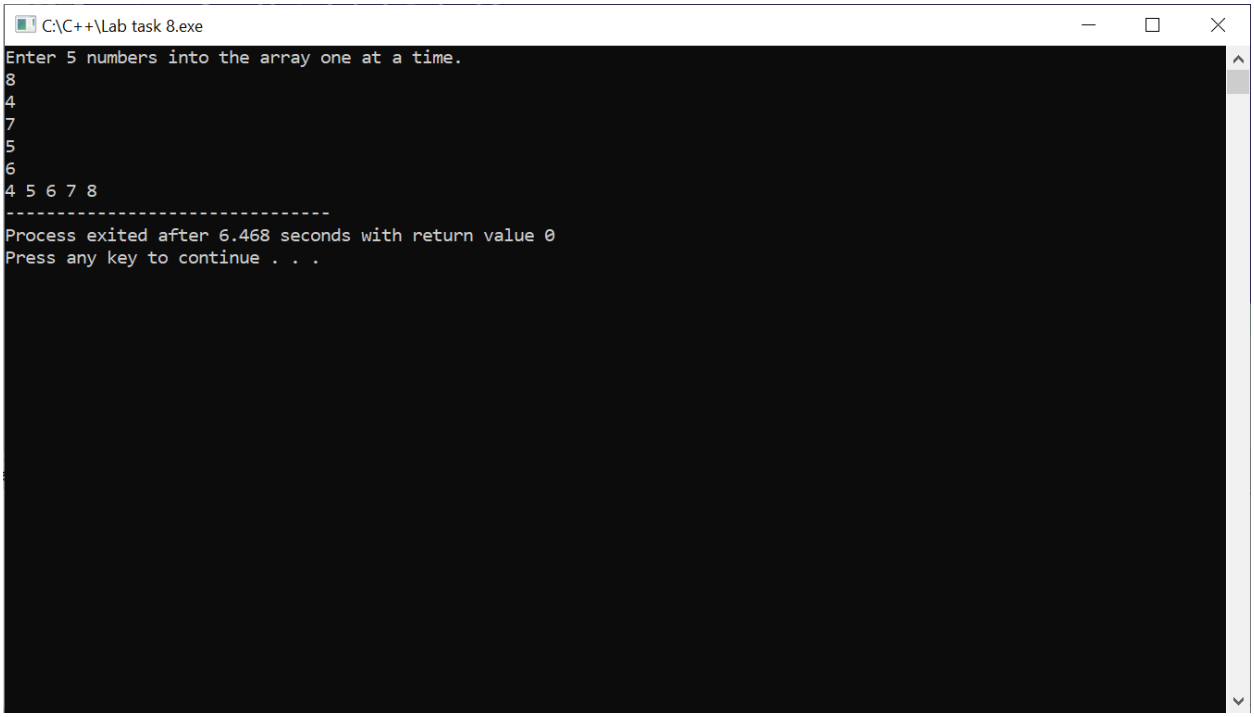
2. **Implement Bubble sort on an array of 5 integers.**

```
int temp;
        int num_array[5];
        cout<<"Enter 5 numbers into the array, one at a time."<<endl;
        for (int i=0;i<5;i++){
                cin>>num_array[i];
        }
        for (int j=0;j<5;j++){
                for(int k=0;k<4;k++){
                        if(num_array[k]>num_array[k+1]){
                                temp=num_array[k];
                                num_array[k]=num_array[k+1];
                                num_array[k+1]=temp;
                        }
                }
        }
        cout<<endl;
        cout<<"The rearranged array is "<<endl;
        for (int n=0;n<5;n++){
                cout<<num_array[n]<<" ";
        }
```


C:\C++\Lab task 8.exe
Enter 5 numbers into the array, one at a time.
9
2
4
12
15
The rearranged array is
2 4 9 12 15
Process exited after 11 seconds with return value 0
Press any key to continue . . .

3. **Implement Selection Sort on an array of 5 integers.**

```
int numbers[5];
        int min;
        cout<<"Enter 5 numbers into the array one at a time."<<endl;
        for(int i=0;i<5;i++){
                cin>>numbers[i];
        }
        for (int i=0;i<5;i++){
                min=numbers[i];
                for (int j=i;j<5;j++){
                        if(min>numbers[j]){
                                min=numbers[j];
                                numbers[j]=numbers[i];
                                numbers[i]=min;
                        }
                }
        }
        for(int i=0;i<5;i++){
                cout<<numbers[i]<<" ";
        }
```


C:\C++\Lab task 8.exe
Enter 5 numbers into the array one at a time.
8
4
7
5
6
4 5 6 7 8

Process exited after 6.468 seconds with return value 0
Press any key to continue . . .