

# FUNDAMENTAL OF PROGRAMMING

LAB TASK 8

HAIDER NAWAZ

480239

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

**CODE:**

```
#include<iostream>

using namespace std;

int main(){

    int x,num,sum=0;

    cout<<"Enter the number of elements: ";

    cin>>num;

    int arr[num]={};

    for(int i=1;i<=num;i++){

        cout<<"Array no "<<i<<": ";

        cin>>arr[i];

    }

    for(int j=1;j<=num;j++){

        cout<<arr[j]<<" ";

        sum=sum+arr[j];

    }

    cout<<endl;

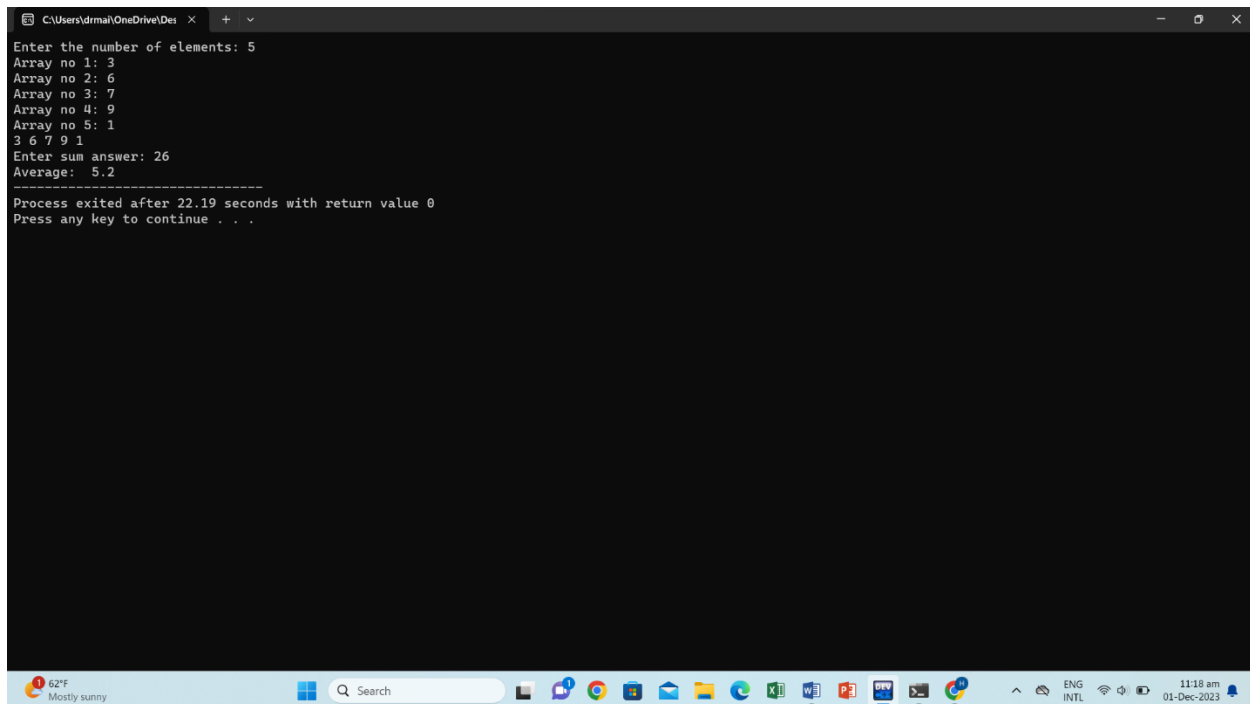
    cout<<"Enter sum answer: "<<sum<<endl;

    float z=sum,y=num;

    cout<<"Average: "<<z/y;

}
```

## OUTPUT:



```
C:\Users\drmai\OneDrive\Des
Enter the number of elements: 5
Array no 1: 3
Array no 2: 6
Array no 3: 7
Array no 4: 9
Array no 5: 1
3 6 7 9 1
Enter sum answer: 26
Average: 5.2
-----
Process exited after 22.19 seconds with return value 0
Press any key to continue . . .
```

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

### CODE:

```
#include<bits/stdc++.h>

using namespace std;

int main(){

int ele=5;

int arr[ele]={};

for (int i = 0; i<ele; i++)

{cout<<"Enter array: ";

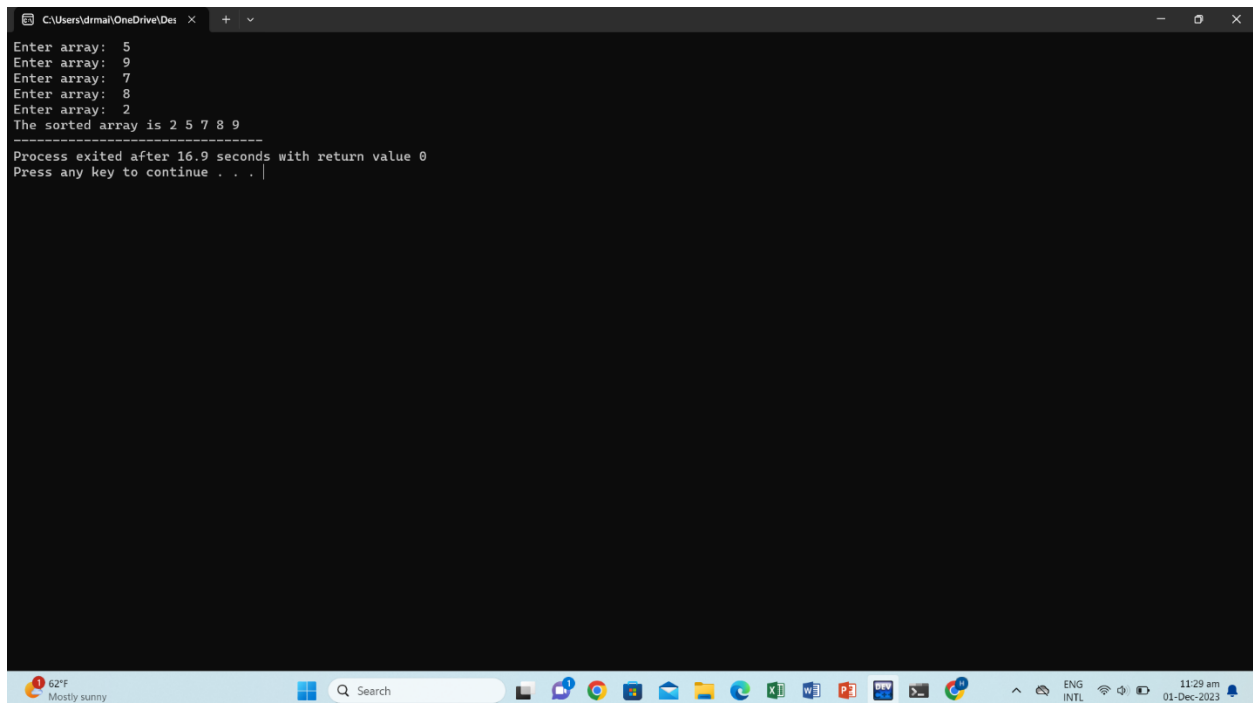
cin>>arr[i];}

cout<<"The sorted array is ";

int c=1;
```

```
while (c<5){
    for(int i=0;i<5-c;i++){
int toswap;
if(arr[i]>arr[i+1]){
toswap=arr[i];
arr[i]=arr[i+1];
arr[i+1]=toswap;} }
c++;}
for(int i=0;i<ele;i++){
cout<<arr[i]<<" ";
}
return 0;
}
```

## OUTPUT:



```
C:\Users\drmai\OneDrive\Des x + v
Enter array: 5
Enter array: 9
Enter array: 7
Enter array: 8
Enter array: 2
The sorted array is 2 5 7 8 9
-----
Process exited after 16.9 seconds with return value 0
Press any key to continue . . .
```

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

#### CODE:

```
#include<iostream>

using namespace std;

int main(){

int x=5;

int arr[x]={};

for (int i = 1; i<=x; i++)

{ cout<<"Enter no"<<i<<": ";

cin>>arr[i]; }

cout<<"Ascending order: ";

for(int j=1;j<=x;j++)

{ for(int k=j+1; k<=x; k++)

{ int swap;

if(arr[j]>arr[k]){

swap=arr[j];

arr[j]=arr[k];

arr[k]=swap; } }

cout<<arr[j]<<" "; }

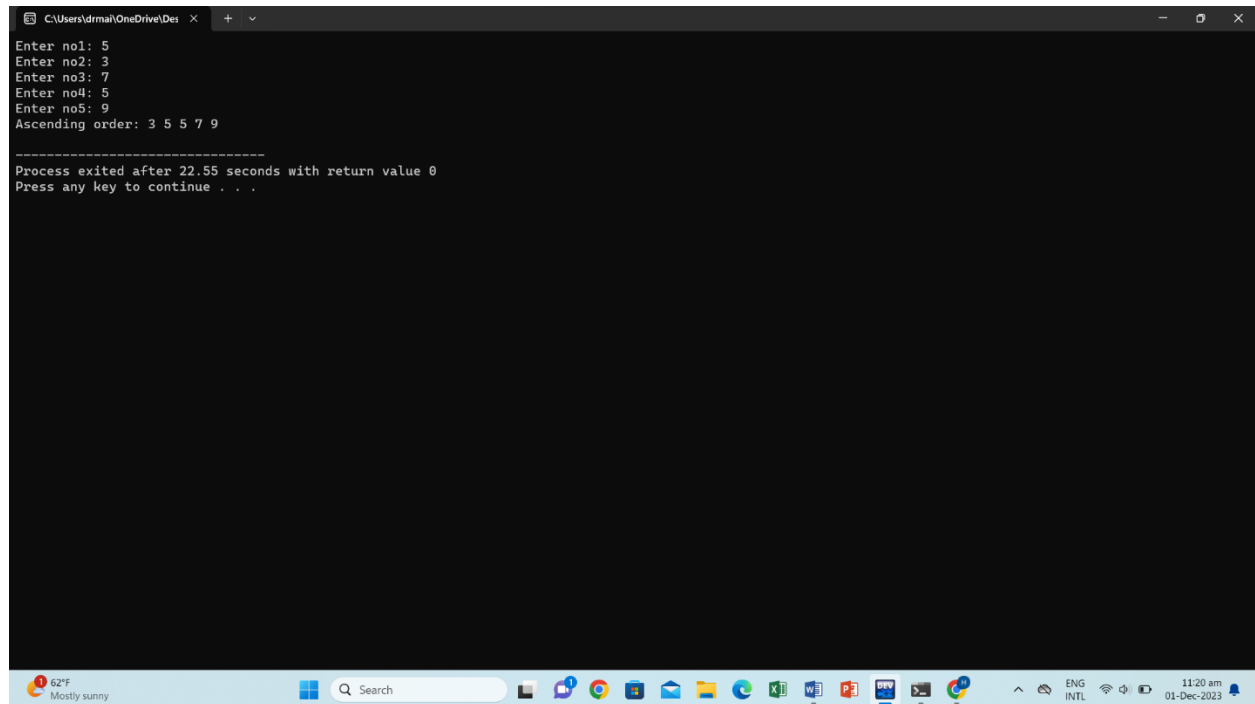
cout<<endl;

return 0; }
```

## OUTPUT:

```
C:\Users\drmai\OneDrive\Des  x  +  v
Enter no1: 5
Enter no2: 3
Enter no3: 7
Enter no4: 5
Enter no5: 9
Ascending order: 3 5 5 7 9

-----
Process exited after 22.55 seconds with return value 0
Press any key to continue . . .
```

A screenshot of a Windows 11 desktop environment. A black command prompt window is open, displaying the output of a program. The program prompts the user to enter five numbers: no1: 5, no2: 3, no3: 7, no4: 5, and no5: 9. It then outputs the ascending order: 3 5 5 7 9. A separator line of dashes follows. The program then displays a message: "Process exited after 22.55 seconds with return value 0" and "Press any key to continue . . .". The Windows taskbar is visible at the bottom, showing the Start button, a search bar, and several application icons including File Explorer, Microsoft Edge, and various office applications. The system tray on the right shows the date and time as 11:20 am on 01-Dec-2023, along with network and volume icons.