

Fundamentals of Programming

Lab Task: 8

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Task:1

Code:

```
#include <iostream>
using namespace std;
int main(){
    int x;
    cout<<"Enter length of Array"<<endl;
    cin >> x;
    int arr[x];
    int sum,avg=0;
    for(int i=0;i<x;++i){
        cout<<"Input Number at position:"<<(i+1)<<": ";
        cin>>arr[i]; }
    cout<<"Entered integers are:\n{ ";
    for (int i=0;i<x;++i){
        cout<<arr[i]<<" ";
        sum=sum+arr[i];
    }
    cout << "}" << endl;
    avg=sum/x;
    cout<<endl;
    cout<<"Mean of these numbers is: "<<avg;
    return 0;
}
```

Output:

```
Enter length of Array
10
Input Number at position:1: 45
Input Number at position:2: 34
Input Number at position:3: 67
Input Number at position:4: 56
Input Number at position:5: 98
Input Number at position:6: 34
Input Number at position:7: 67
Input Number at position:8: 54
Input Number at position:9: 37
Input Number at position:10: 92
Entered integers are:
{ 45 34 67 56 98 34 67 54 37 92 }

Mean of these numbers is: 58
```

Task: 2

Code:

```
#include <iostream>
using namespace std;

int main() {
    int MAX;
    MAX=5;
    int arr[MAX];
    int temp;
    int i,j;
    for(i=0;i<MAX;i++)
    {
        cout<<"Enter the Number " <<(i+1)<<endl;
        cin>>arr[i];
    }
    cout<<"Your Array is \n[";
    for(i = 0; i < MAX; i++) {
        cout << arr[i] << " ";
    }
    cout << "]" <<endl;
    for(i = 0; i < MAX-1; i++) {

        for(j = 0; j < MAX-1-i; j++) {

            if(arr[j] > arr[j+1]) {
                temp = arr[j];
                arr[j] = arr[j+1];
                arr[j+1] = temp;
            }
        }
    }
    cout<<"Sorted Array is " <<endl;
    cout << "[";

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

    return 0;
}
```

Output:

```
Enter the Number 1
45
Enter the Number 2
87
Enter the Number 3
21
Enter the Number 4
15
Enter the Number 5
96
Your Array is
[45 87 21 15 96 ]
Sorted Array is
[15 21 45 87 96 ]
```

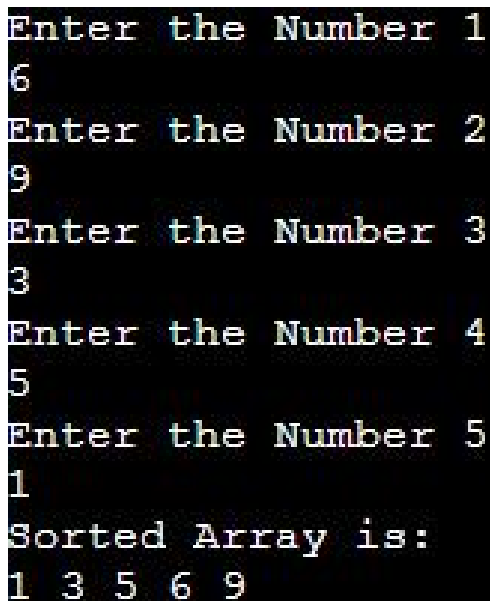
Task: 3

Code:

```
#include <iostream>
using namespace std;
int main() {
    int n=5, arr[n], temp;
    for(int i=0;i<n;i++)
    {
        cout<<"Enter the Number " <<(i+1)<<endl;
        cin>>arr[i];
    }
    for(int i=0; i<n; i++){
        for(int j=i; j<n; j++){
            if(arr[j]<arr[i]){
                temp=arr[j];
                arr[j]=arr[i];
                arr[i]=temp;
            }}cout << "Sorted Array is:" << endl;
    for(int i=0; i<n; i++){
        cout<<arr[i]<<" ";
    }

    return 0;
}
```

Output:



```
Enter the Number 1
6
Enter the Number 2
9
Enter the Number 3
3
Enter the Number 4
5
Enter the Number 5
1
Sorted Array is:
1 3 5 6 9
```