Fop Lab Task 8

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Section: B

TASK 1

```cpp
#include <bits/stdc++.h>
using namespace std;

int main()
{
    int length;
    float sum=0;
    cout<<"Enter the size of array: ";
    cin>>length;
    float nums[length];

    cout<<"Enter the elements of array: ";
    for (int i=0; i<length; i++) {
        cin>>nums[i];
    }

    for (int i=0; i<length; i++)
        sum+=nums[i];

    cout<<"The average is "<<sum/length;
    return 0;
}
```

```
"C:\Users\Hp\Downloads\Documents\NUST Content\Semester 1\Computer Systems & Programming Lab\week 10\week10\bin\Debu...   —   □   X
Enter the size of array: 7
Enter the elements of array: 3
5
3
75
8
53

2
The average is 21.2857
Process returned 0 (0x0)   execution time : 48.116 s
Press any key to continue.
```

TASK 2

```cpp
#include <bits/stdc++.h>
using namespace std;

int main()
{
    int len=5, nums[len], temp;
    for (int i=0; i<len; i++) {
        cout<<"Enter element "<<i+1<<": ";
        cin>>nums[i];
    }

    for (int i=0; i<len-1; i++) {
        for (int j=0; j<len-1; j++) {
            if (nums[j]>nums[j+1]) {
                temp = nums[j];
                nums[j] = nums[j+1];
                nums[j+1] = temp;
            }
        }
    }

    cout<<"Sorted array is: {";
    for (int i=0; i<len; i++) {
        cout<<nums[i];
        if (i==len-1)
            continue;
        cout<<", ";
    }
    cout<<"}";
    return 0;
}
/* TASK 3
```

```
"C:\Users\Hp\Downloads\Documents\NUST Content\Semester 1\Computer Systems & Programming Lab\week 10\week10\bin\Debu...   —   □   X
Enter element 1: 6
Enter element 2: 4
Enter element 3: 8
Enter element 4: 3
Enter element 5: 1
Sorted array is: {1, 3, 4, 6, 8}
Process returned 0 (0x0)   execution time : 6.509 s
Press any key to continue.
```

TASK 3

```cpp
#include <bits/stdc++.h>
using namespace std;

int main()
{
    int len=5, nums[len], indOfMin, temp;
    for (int i=0; i<len; i++) {
        cout<<"Enter element "<<i+1<<": ";
        cin>>nums[i];
    }

    for (int i=0; i<len; i++) {
        indOfMin = i;
        for (int j=i+1; j<len; j++) {
            if (nums[j]<nums[indOfMin])
                indOfMin = j;
        }

        temp = nums[i];
        nums[i] = nums[indOfMin];
        nums[indOfMin] = temp;
    }

    cout<<"Sorted array is: {";
    for (int i=0; i<len; i++) {
        cout<<nums[i];
        if (i==len-1)
            continue;
        cout<<", ";
    }
    cout<<"}";
    return 0;
}
```

```
Enter element 1: 8
Enter element 2: 4
Enter element 3: 7
Enter element 4: 2
Enter element 5: 0
Sorted array is: {0, 2, 4, 7, 8}

Process returned 0 (0x0)   execution time : 9.259 s
Press any key to continue.
```