Lab Manual #08

(Lab Tasks)

Course: Fundamentals of Programming (CS 114)

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Section	**C**

Task-01

"Average Of Numbers Of Array"

Input

```cpp
1    #include <iostream>
2    using namespace std;
3
4    int main ()
5    {int n,i;
6    float num[100],sum=0,average;
7    cout<<"enter the numbers: ";
8    cin>>n;
9        while(n>100 || n<=0)
10       {cout<<"ERROR wrong range of number"<<endl;
11       cout<<"enter correct range of number: ";
12       cin>>n;
13       }
14       for(i=0;i<n;i++)
15       {cout<<i+1<<"enter number: ";
16       cin>>num[i];
17       sum+=num[i];
18       }
19       average=sum/n;
20       cout<<"average= "<< average;
21
22       return 0;
23    }
```

Output

C:\Users\muabdullah.ug23smme\Documents\Lab Manual 8 Task 1.exe

```
enter the numbers: 5
1enter number: 4
2enter number: 5
3enter number: 6.2
4enter number: 1
5enter number: 4
average= 4.04
-------------------------------
Process exited after 13.72 seconds with return value 0
Press any key to continue . . .
```

Task-02

"Bubble Sort"

Input

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

int main()
{
    int a[5];
    cout <<"enter any 5 integers: ";

    for (int i=0;i<5;i++)
    {
        cout <<"enter integer "<<i+1<< ": ";
        cin >> a[i];
    }

    cout << " input list  ";
    for (int i=0;i<5;i++)
    {
        cout <<a[i]<< " ";
    }
    cout << endl;

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

    cout <<"sorted element list: ";
    for (int i=0;i<5;i++)
    {
        cout << a[i] << " ";
    }cout << " ";

    return 0;
}
```

Output

```
C:\Users\muabdullah.ug23smme\Documents\Lab Manual 8 Task 2.exe

enter any 5 integers: enter integer 1: 88
enter integer 2: 55
enter integer 3: 88
enter integer 4: 73
enter integer 5: 64
 input list  88 55 88 73 64
sorted element list: 55 64 73 88 88
------------------------------
Process exited after 8.364 seconds with return value 0
Press any key to continue . . .
```

Task-03

"Selection Sort"

Input

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

int main()
{
    int a[5];
    cout <<"enter 5 integers: ";

    for (int i=0;i<5;i++)
    {
        cout <<"enter integer " <<i+1<< ": ";
        cin >> a[i];
    }

    cout << "input list   ";
    for (int i=0;i<5;i++)
    {
        cout <<a[i]<< " ";
    }
    cout << endl;

    for (int i=0;i<5-1;i++)
    {
        for (int j=i+1;j<5;j++)
        {
            if (a[j] < a[i])
            {
                int temp =a[j];
                a[j] =a[i];
                a[i] =temp;
            }
        }
    }

    cout << "sorted elment List   ";
    for (int i=0;i<5;i++)
    {
        cout <<a[i]<< " ";
    }

    cout << " ";
    return 0;
}
```

Output

```
C:\Users\muabdullah.ug23smme\Documents\Lab Manual 8 Task 3.exe

enter 5 integers: enter integer 1: 4
enter integer 2: 6
enter integer 3: 8
enter integer 4: 2
enter integer 5: 7
input list   4 6 8 2 7
sorted elment List   2 4 6 7 8
--------------------------------
Process exited after 6.858 seconds with return value 0
Press any key to continue . . .
```