Assignment # 2, 3

2020

CSE102 Computer Programming Lab

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Semester: **2ⁿᵈ**

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"On my honor, as student of University of Engineering and Technology, I have neither given nor received unauthorized assistance on this academic work."

Student Signature: _____

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Department of Computer Systems Engineering

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Bubble Sorting :

```cpp
#include<iostream>

using namespace std;

int main()
{
    int a[50],n,i,j,temp;
    cout<<"Enter the size of array: ";
    cin>>n;
    cout<<"Enter the array elements: ";

    for(i=0;i<n;++i)
        cin>>a[i];

    for(i=1;i<n;++i)
    {
        for(j=0;j<(n-i);++j)
            if(a[j]>a[j+1])
            {
                temp=a[j];
                a[j]=a[j+1];
                a[j+1]=temp;
            }
    }
```
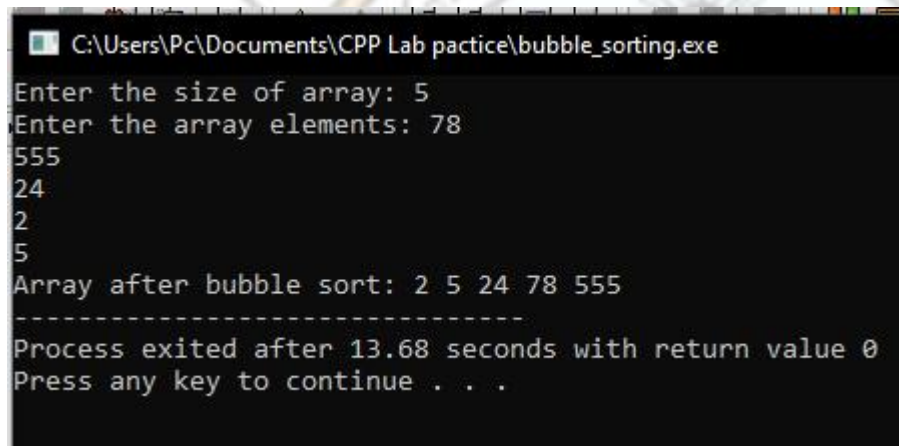
```
        cout<<"Array after bubble sort:";

        for(i=0;i<n;++i)

                cout<<" "<<a[i];


        return 0;

}
```

Output:


```
C:\Users\Pc\Documents\CPP Lab pactice\bubble_sorting.exe

Enter the size of array: 5
Enter the array elements: 78
555
24
2
5
Array after bubble sort: 2 5 24 78 555
---------------------------------
Process exited after 13.68 seconds with return value 0
Press any key to continue . . .
```

Selection Sorting:

```
#include<iostream>

using namespace std;

int main()
{
```

```cpp
int i,j,n,loc,temp,min,a[30];

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

cin>>n;

cout<<"\nEnter the elements\n";


for(i=0;i<n;i++)

{

    cin>>a[i];

}


for(i=0;i<n-1;i++)

{

    min=a[i];

    loc=i;

    for(j=i+1;j<n;j++)

    {

        if(min>a[j])

        {

            min=a[j];

            loc=j;

        }

    }


    temp=a[i];

    a[i]=a[loc];
```
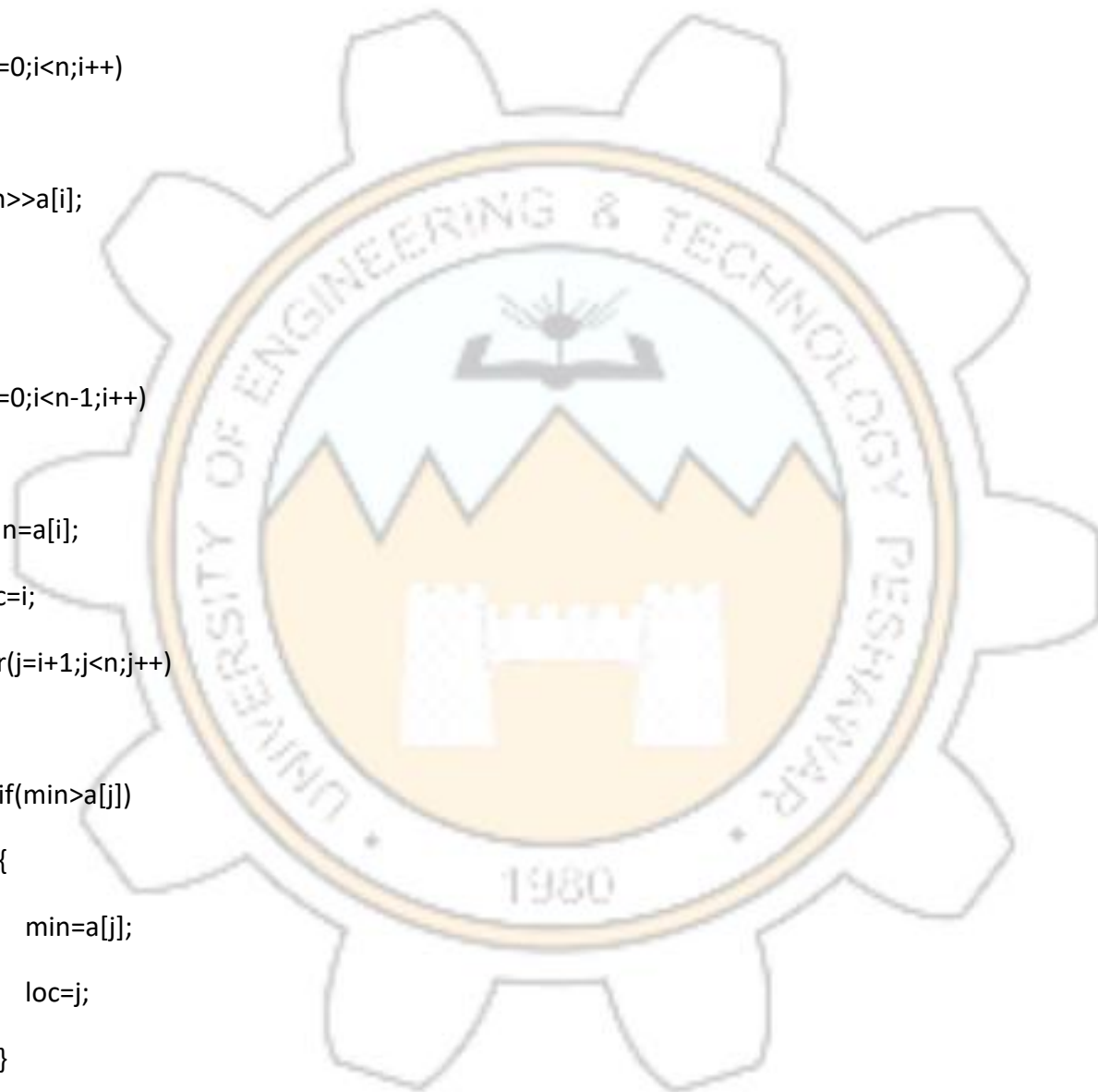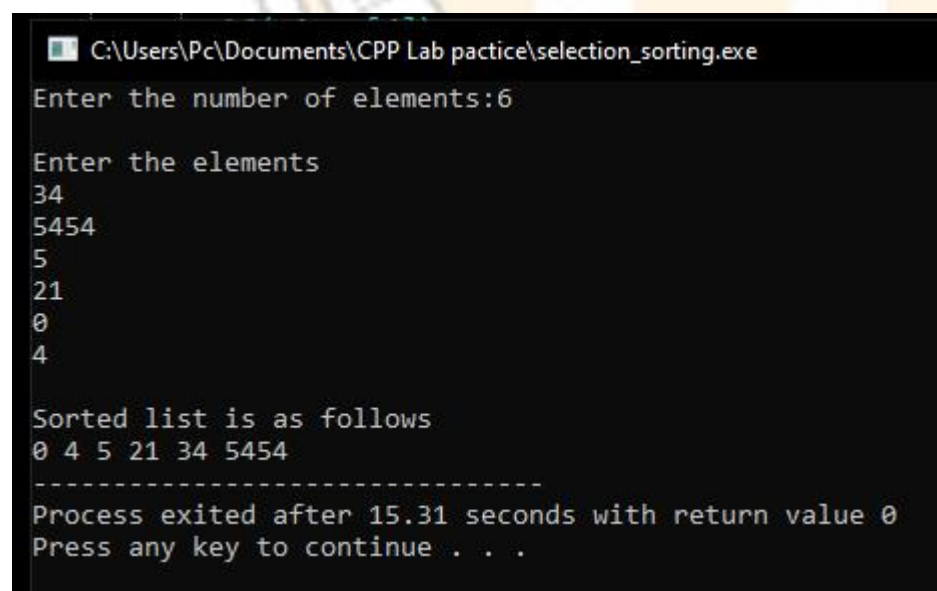
```cpp
    a[loc]=temp;

}


cout<<"\nSorted list is as follows\n";

for(i=0;i<n;i++)

{

    cout<<a[i]<<" ";

}


return 0;

}
```

Output:

```
C:\Users\Pc\Documents\CPP Lab pactice\selection_sorting.exe

Enter the number of elements:6

Enter the elements
34
5454
5
21
0
4

Sorted list is as follows
0 4 5 21 34 5454
--------------------------------
Process exited after 15.31 seconds with return value 0
Press any key to continue . . .
```