

DATA STRUCTURE PRACTICAL NO. :-03

AIM :- [A]: Create an array of size n and write a program to sort a given array by selection sort and bubble sort.

PROGRAM:-

1. Selection sort

```
#include <stdio.h>
```

```
void main()
```

```
{
```

```
    int a[50], i, j, n, temp;
```

```
    printf("Enter number of elements in the array\n");
```

```
    scanf("%d", &n);
```

```
    printf("Enter %d elements\n", n);
```

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

```
    {
```

```
        scanf("%d", &a[i]);
```

```
    }
```

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

```
    {
```

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

```
        {
```

```

        if (a[i] > a[j])
        {
            temp = a[i];
            a[i] = a[j];
            a[j] = temp;
        }
    }
}

printf("After sorting:\n");
for (i = 0; i < n; i++)
{
    printf("%d ", a[i]);
}
}

```

```

PS D:\Class code> cd "d:\Class code\" ; if ($?) { gcc 2B.c -o 2B } ; if ($?) { .\2B }
Enter number of elements in the array
5
Enter 5 elements
1
2
3
4
5
After sorting:
1 2 3 4 5
PS D:\Class code>

```

2. Bubble Sort

```
#include <stdio.h>
```

```
void main()
```

```
{
```

```
int a[50], i, j, n, temp;
```

```
printf("Enter number of elements in the array\n");
```

```
scanf("%d", &n);
```

```
printf("Enter %d elements\n", n);
```

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

```
{
```

```
    scanf("%d", &a[i]);
```

```
}
```

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

```
{
```

```
    for (j = 0; j < n-i; j++)
```

```
    {
```

```
        if (a[j] > a[j+1])
```

```
        {
```

```
            temp = a[j];
```

```
            a[j] = a[j+1];
```

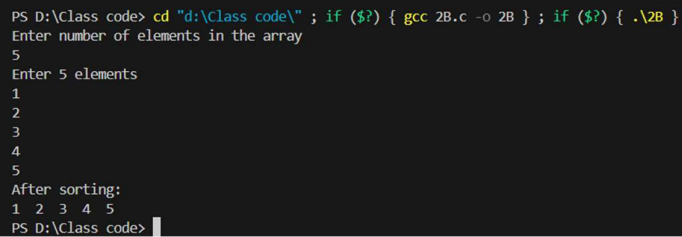
```
            a[j+1] = temp;
```

```
        }
```

```
    }
```

```
}
```

```
printf("After sorting:\n");  
for (i = 0; i < n; i++)  
{  
    printf("%d ", a[i]);  
}  
}
```



```
PS D:\Class code> cd "d:\Class code\" ; if ($?) { gcc 2B.c -o 2B } ; if ($?) { .\2B }  
Enter number of elements in the array  
5  
Enter 5 elements  
1  
2  
3  
4  
5  
After sorting:  
1 2 3 4 5  
PS D:\Class code>
```

GITHUB LINK OF PRACTICAL No. 03 :-

https://github.com/sidheshwar2005/Data_structre_practical.git