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_strucutre_practical.git