

PROGRAM FOR SELECTION SORT

```
1    #include <stdio.h>

2    void main()

3    {

4        int i,j,n,small,temp=0,t=0;

5        t+2;

6        printf("enter array size: ");

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

8        t+2;

9        int a[n];

10

11        printf("enter array elements:\n");

12        t+2;

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

14        {

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

16            t+2;

17        }
```

```
18         t++;

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

20             t++;

21             small=i;

22             t+2;

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

24                 t+2;

25                 if(a[small]>a[j])

26                     {

27                         small=j;

28                         t++;

29                     }

30             }

31             t++;

32

33             if(i!=small)

34                 {

35                     temp=a[i];

36                     a[i]=a[small];
```

```
37             a[small]=temp;

38             t+3;

39         }

40     }

41

42     printf("sorted array:\n");

43     t++;

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

45         printf("%d\t",a[i]);

46         t+2;

47     }

48     printf("\n");

49     t++;

50     t+2;

51

52     printf("\n time complexity =%d\n",t);

53     printf("\n space complexity =%d\n",(24+(n*4)));

54 }
```