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Experiment 8

```c
1   #include <stdio.h>
2   #include <stdlib.h>
3
4   int smallest(int arr[], int k, int n);
5
6   void selection_sort(int arr[], int n);
7   void main(int argc, char *argv[])
8 ▾ {
9   int arr[10], i, n;
10  printf("\n Enter the number of elements in the array: ");
11  scanf("%d", &n);
12  printf("\n Enter the elements of the array: ");
13  for(i=0;i<n;i++) {  scanf("%d", &arr[i]); }
14  selection_sort(arr, n);
15  printf("\n The sorted array is: \n");
16  for(i=0;i<n;i++) printf(" %d\t", arr[i]);
17  }
18  int smallest(int arr[], int k, int n)
19  { int pos = k, small=arr[k], i;
```

```
20   for(i=k+1;i<n;i++)
21 ▾ {
22   if(arr[i]< small)
23   {    small = arr[i];    pos = i;   }
24    }
25   return pos;
26  }
27  void selection_sort(int arr[],int n)
28 ▾ {
29   int k,pos,temp;
30   for(k=0;k<n;k++)
31 ▾ {
32   pos = smallest(arr, k, n);
33   temp = arr[k];
34   arr[k] = arr[pos];
35   arr[pos] = temp;
36   }
37  }
```

Output

```
/tmp/I7xsSaBGF9.o
Enter the number of elements in the array: 5
Enter the elements of the array: 5 13 48 20 89
The sorted array is:
 5   13  20  48  89
```