EXPERIMENT NUMBER 8
DSA LAB

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ROLL NO.:16
BATCH:S1,SY-IT

CODE:

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



int smallest(int arr[], int k, int n);

void selection_sort(int arr[], int n);
void main(int argc, char *argv[])
{
int arr[10], i, n;
printf("\n Enter the number of elements in the array: ");
scanf("%d", &n);
printf("\n Enter the elements of the array: ");
for(i=0;i<n;i++) {  scanf("%d", &arr[i]); }
selection_sort(arr, n);
printf("\n The sorted array is: \n");
for(i=0;i<n;i++) {printf(" %d\t", arr[i]);}
printf("\n");
}
int smallest(int arr[], int k, int n)
{ int pos = k, small=arr[k], i;
for(i=k+1;i<n;i++)
{
if(arr[i]< small)
{   small = arr[i];   pos = i;  }
 }
return pos;
}
void selection_sort(int arr[],int n)
{
int k,
pos,
temp;
for(k=0;k<n;k++)
{
pos = smallest(arr, k, n);
temp = arr[k];
arr[k] = arr[pos];
arr[pos] = temp;
}
}
```

SCREENSHOT:


itadmin@itadmin-HP-ProDesk-400-G7-Microtower-PC:~$ gcc tr.c
itadmin@itadmin-HP-ProDesk-400-G7-Microtower-PC:~$ ./a.out
Enter the number of elements in the array: 5
Enter the elements of the array: 1
8
11
6
12
The sorted array is:
1 6 8 11 12
itadmin@itadmin-HP-ProDesk-400-G7-Microtower-PC:~$