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SY-IT

Roll No: 42

Experiment 8

Code:

```c
#include <stdio.h>
#include <stdlib.h>
#include <conio.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]);
}
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);
```

```c
temp = arr[k];
arr[k] = arr[pos];
arr[pos] = temp;
}
}
```

Output:

```c
5    void selection_sort(int arr[], int n);
6    void main(int argc, char *argv[])
7    {
8        int arr[10], i, n;
9        printf("\n Enter the number of elements in the array: ");
10       scanf("%d", &n);
```

```
PS C:\Users\USER\Desktop\Tp> cd "c:\Users\USER\Desktop\Tp\" ; if ($?) { gcc Jay.c -o Jay } ; if ($?) { .\Jay }

 Enter the number of elements in the array:
4

 Enter the elements of the array: 2
6
3
8

 The sorted array is:
 2      3      6      8
```