**EXPERIMENT NUMBER 8**

**DSA LAB**

NAME : Aditya Jajoo

ROLL NO. : 17

BATCH : S1

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;

}

}

OUTPUT :

