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Roll no. : 04
SYIT
Program:

```c
#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]);
}
int smallest(int arr[], int k, int n)
{ int pos = k,file:///home/dl0414/ray-so-export.png 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:

```
dl0414@itadmin:~$ gcc exp9.c
dl0414@itadmin:~$ ./a.out
         --- WELCOME TO IMPLEMENTATION OF BINARY SEARCH ---

 Enter the number of elements of the array [maximum size = 100] : 10

 Enter 10 elements of the array :
4
2
65
324
3
6
8
4
3
5


 !! -- Operations available -- !!
 1. Display Sorted List          2. Search a particular value    3. Exit
 Please Enter your choice : 1


 The sorted array is :
 2       3       3       4       4       5       6       8       65      324

 !! -- Operations available -- !!
 1. Display Sorted List          2. Search a particular value    3. Exit
 Please Enter your choice : 2

 Enter the number to be searched : 6

 6 is present in the sorted array at index : 6
```