Problem Statement:

Write C program for finding the desired k^{th} smallest element in an array.

```
#include<stdio.h>
#include<conio.h>
void main()
{
int *arr,i,j,n,temp,k;
clrscr();
printf("enter the number of elements in the array");
scanf("%d",&n);
arr=(int*)malloc(sizeOf(int)*n);
for(i=0;i<n;i++)
{
printf("enter a number");
scanf("%d",&arr[i]);
}
for(j=i+1;j<n;j++){
if(arr[i]<arr[j])
{
temp=arr[i];
arr[i]=arr[j];
arr[j]=temp;
}
}
}
printf("elements of array after sorting");
for(i=0;i<n;i++)
printf("%d",arr[i]);
printf("which smallest element do you want to determine");
scanf("%d",k);
if(k<=n)
printf("Desired smallest element is %d",arr[k-1]);
```

```
else
printf(“please enter a valid value for finding the particular smallest element”);
getch();
}
```

OUTPUT:

```
enter the number of elements in the array 5
enter a number 33
enter a number 32
enter a number 46
enter a number 68
enter a number 47
elements of array after sorting
32
33
46
47
68
which smallest element do you want to determine 3
Desired smallest element is 46
```