18.QUICK SORT:-

Code:-

```
#include<stdio.h>
void quicksort(int x[20],int first,int last)
{
int pivot,j,temp,i;
if(first<last)
{
pivot=first;
i=first;
j=last;
while(i<j)
{
while(x[i]<=x[pivot]&&i<last)
i++;
while(x[j]>x[pivot])
j--;
if(i<j)
{
temp=x[i];
x[i]=x[j];
x[j]=temp;
}
  }
temp=x[pivot];
x[pivot]=x[j];
x[j]=temp;
quicksort(x,first,j-1);
quicksort(x,j+1,last);
  }
```

```
}
int main()
{
int x[20],size,i;
printf("\tQuick sort\n");
printf("---------------------------------\n");
printf(" How many numbers you want to sort?: ");
scanf("%d",&size);
printf("\n Enter %d elements: \n",size);
for(i=0;i<size;i++)
scanf("%d",&x[i]);
quicksort(x,0,size-1);
printf("\n Sorted elements after applying quick sort: \n\n");
for(i=0;i<size;i++)
printf(" %d",x[i]);
return 0;
}
```

OUTPUT:-