

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:-

```

Quick sort
-----
How many numbers you want to sort?: 5

Enter 5 elements:
4
8
6
2
9

Sorted elements after applying quick sort:

2 4 6 8 9
-----
Process exited after 8.533 seconds with return value 0
Press any key to continue . . . █

```