**Quick Sort :**

#include <stdio.h>

int partition (int a[], int start, int end) {

int pivot = a[end];

int i = (start - 1);

int j;

for ( j = start; j <= end - 1; j++) {

if (a[j] < pivot) {

i++;

int t = a[i];

a[i] = a[j];

a[j] = t;

}

}

int t = a[i+1];

a[i+1] = a[end];

a[end] = t;

return (i + 1);

}

void quick(int a[], int start, int end) {

if (start < end) {

int p = partition(a, start, end);

quick(a, start, p - 1);

quick(a, p + 1, end);

}

}

void printArr(int a[], int n) {

int i;

for (i = 0; i < n; i++) {

printf("%d ", a[i]);

}

}

int main() {

int a[20] ;

int n,i;

printf("enter the total number of elements :");

scanf("%d",&n);

for(i=0;i<n;i++) {

scanf("%d",&a[i]);

}

printf("Before sorting array elements are - \n");

printArr(a, n);

quick(a, 0, n - 1);

printf("\nAfter sorting array elements are - \n");

printArr(a, n);

return 0;

}

