#include <stdio.h>

**int** GetMax(**int** nums**[]**,**int** n){

**int** max=nums[0]; **int** i;

    for (i=1;i<n;i++){

        if(nums[i]>max) max=nums[i];

    }

    return max; }

*//Count Sort*

**void** CountSort(**int** nums**[]**,**int** n, **int** exp){

**int** arr[n]; *//to store sorted array*

**int** i, count[10]={0}; *//count of values*

    for (i=0;i<n;i++)

        count[(nums[i]/exp)%10]++;*//count no. of values*

    for (i=1;i<10;i++)

        count[i]+=count[i-1]; *//counting index*

    for (i=n-1;i>=0;i--){

        arr[count[(nums[i]/exp)%10]-1]=nums[i];

        count[(nums[i]/exp)%10]--;

        }*//sorting*

    for(i=0;i<n;i++)   nums[i]=arr[i];

}

*//Radix Sort*

**void** RadixSort(**int** nums**[]**,**int** n){

**int** m=GetMax(nums,n);

    for(**int** exp=1;m/exp>0;exp \*=10)

        CountSort(nums,n,exp);

}

**void** display(**int** nums**[]**,**int** n){

    for(**int** i=0;i<n;i++)

        printf("%d\t",nums[i]);

}

**int** main(){

**int** N=0;**int** nums[N];

    printf("Enter the number of elements: ");

    scanf("%d",&N);

    printf("Enter elements: ");

    for(**int** i=0;i<N;i++)

        scanf("%d",&nums[i]);

    RadixSort(nums,N);

    printf("Sorted array: ");

    display(nums,N);

    return 0;

}

#include <stdio.h>

**int** median(**int** **[]**, **int**); */\* to get median of a sorted array \*/*

**int** getMedian(**int** ar1**[]**, **int** ar2**[]**, **int** n) {

    if (n <= 0) return -1;

    if (n == 1) return (ar1[0] + ar2[0])/2;

**int** m1 = median(ar1, n); */\* get the median of the first array \*/*

**int** m2 = median(ar2, n); */\* get the median of the second array \*/*

    if (m1 == m2) return m1;

    if (m1 < m2) {

        if (n % 2 == 0)

            return getMedian(ar1 + n/2 - 1, ar2, n - n/2 +1);

        return getMedian(ar1 + n/2, ar2, n - n/2);

    }

    if (n % 2 == 0)

        return getMedian(ar2 + n/2 - 1, ar1, n - n/2 + 1);

    return getMedian(ar2 + n/2, ar1, n - n/2);

}

**int** median(**int** arr**[]**, **int** n) {

    if (n%2 == 0)

        return (arr[n/2] + arr[n/2-1])/2;

    else return arr[n/2];

}

**int** main() {

**int** n1,n2; **int** ar1[10],ar2[10];

*//int ar1[] = {1, 2, 3, 6};*

*//int ar2[] = {4, 6, 8, 10};*

    printf("Enter the number of elements of first array: ");

    scanf("%d",&n1);

    printf("Enter elements: ");

    for(**int** i=0;i<n1;i++){

        scanf("%d",&ar1[i]);

    }

    printf("Enter the number of elements of second array: ");

    scanf("%d",&n2);

    printf("Enter elements: ");

    for(**int** i=0;i<n2;i++){

        scanf("%d",&ar2[i]);

    }

    if (n1 == n2)

        printf("Median of two sorted array is: %d",getMedian(ar1,ar2,n1));

    else

        printf("Doesn't work for arrays of unequal size");

    return 0;

}



