**A8 - WAP to find the median of two unsorted arrays**

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Description :

Sample Input :

Enter the 'n' value for Array A: 5

Enter the 'n' value for Array B: 4

Enter the elements one by one for Array A: 3 2 8 5 4

Enter the elements one by one for Array B: 12 13 7 5

Sample Output :

Median of array1 : 4

Median of array2 : 9.5

Median of both arrays : 6.75

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#include<stdio.h>

int main()

{

int n1, n2, i, j, swap;

//printf("Enter the 'n' value for Array A: ");

scanf("%d",&n1);

//printf("Enter the 'n' value for Array B: ");

scanf("%d",&n2);

int A[n1], B[n2];

float m1, m2, m3;

//printf("Enter the elements one by one for Array A: "); //Read elements for A[n1]

for(i = 0; i < n1; i++)

{

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

}

//printf("Enter the elements one by one for Array B: "); //Read elements for B[n2]

for(i = 0; i < n2; i++)

{

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

}

for(i = 0; i < n1 - 1; i++) //sort A[n1]

{

for(j = 0; j < n1 - i - 1; j++)

{

if(A[j] > A[j+1])

{

swap = A[j];

A[j] = A[j+1];

A[j+1] = swap;

}

}

}

for(i = 0; i < n2 - 1; i++) //sort B[n2]

{

for(j = 0; j < n2 - i - 1; j++)

{

if(B[j] > B[j+1])

{

swap = B[j];

B[j] = B[j+1];

B[j+1] = swap;

}

}

}

if(n1 % 2 == 0) //median of A

{

m1 = (float)(A[n1 / 2 - 1] + A[n1 / 2])/2;

}

else

{

m1 = A[n1 / 2];

}

if(n2 % 2 == 0) //median of B

{

m2 = (float)(B[n2 / 2 - 1] + B[n2 / 2])/2;

}

else

{

m2 = B[n2 / 2];

}

m3 = (float)(m1 + m2) / 2; //median of both arrays

//typecasted results

if(m1 == (int)m1)

{

printf(" Median of array1 : %d",(int)m1);

}

else

{

printf(" Median of array1 : %.1f",m1);

}

if(m2 == (int)m2)

{

printf("\nMedian of array2 : %d",(int)m2);

}

else

{

printf("\nMedian of array2 : %.1f",m2);

}

if(m3 == (int)m3)

{

printf("\nMedian of both arrays : %d",(int)m3);

}

else

{

printf("\nMedian of both arrays : %.2f",m3);

}

return 0;

}