# Merging 2 sorted arrays

#include <stdio.h>

void main()

{

int array1[50], array2[50], array3[100], m, n, i, j, k = 0;

printf("\n Enter size of array Array 1: ");

scanf("%d", &m);

printf("\n Enter sorted elements of array 1: \n");

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

{

scanf("%d", &array1[i]);

}

printf("\n Enter size of array 2: ");

scanf("%d", &n);

printf("\n Enter sorted elements of array 2: \n");

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

{

scanf("%d", &array2[i]);

}

i = 0;

j = 0;

while (i < m && j < n)

{

if (array1[i] < array2[j])

{

array3[k] = array1[i];

i++;

}

else

{

array3[k] = array2[j];

j++;

}

k++;

}

if (i >= m)

{

while (j < n)

{

array3[k] = array2[j];

j++;

k++;

}

}

if (j >= n)

{

while (i < m)

{

array3[k] = array1[i];

i++;

k++;

}

}

printf("\n After merging: \n");

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

{

printf("\n%d", array3[i]);

}

}