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An insertion sort algorithm that uses iteration to

sort an array from low to high numbers.

@author Pj Kim

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import java.util.Random;

public class InsertionIteration

{

public static void main(String[] args)

{

int[] array = new int[10];

Random randomObj = new Random();

// fills each index of array with random numbers

for (int i = 0; i < array.length; i++)

{

array[i] = randomObj.nextInt(1000);

System.out.print(array[i] + " ");

}

System.out.println();

//goes through each index starting with one to sort the array

for (int j = 1; j < array.length; j++)

{

for (int k = j; k > 0; k--)

{

if (array[k] < array[k-1]) //If the index is less than the index in front of it, swap them.

{

int temp = array[k-1];

array[k-1] = array[k];

array[k] = temp;

}

else //if k is >= to the index in front,

{ //it is sorted up to that index and comes out of second for loop.

break;

}

}

}

//This loop prints out the sorted array.

for (int a = 0; a < array.length; a++)

{

System.out.print(array[a] + " ");

}

}

}