**WRITE A PROGRAM IN JAVA IMPLEMENTING THE INSERTION SORT ALGORITHM**

package sorting;

import java.util.InputMismatchException;

import java.util.Scanner;

public class InsertionSort {

public void insertionSort(int arr[]) {

int size = arr.length;

for(int j=1; j<size; j++) {

int key = arr[j];

int i = j-1;

while(i>=0 && arr[i] > key) {

arr[i+1] = arr[i];

i--;

}

arr[i+1] = key;

}

}

public void printArray(int arr[]) {

System.out.print("[");

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

System.out.print(arr[i]);

if(i != arr.length-1) {

System.out.print(",");

}

}

System.out.print("]");

System.out.println();

}

public static void main(String[] args) {

Scanner sc = new Scanner(System.in);

InsertionSort obj = new InsertionSort();

try {

System.out.println("Enter the size of array: ");

int size = sc.nextInt();

if(size <= 0) {

System.out.println("Invalid input");

sc.close();

return;

}

int arr[] = new int[size];

System.out.println("Enter the array elements: ");

for(int i=0; i<size; i++) {

arr[i] = sc.nextInt();

}

System.out.println("Original array: ");

obj.printArray(arr);

obj.insertionSort(arr);

System.out.println("\nAfter sorting: ");

obj.printArray(arr);

} catch (InputMismatchException e) {

System.out.println("Invalid input");

}

catch(Exception e) {

System.out.println(e.getMessage());

}

sc.close();

}

}