**Insertion Sort**

package com.java2novice.algos;

public class MyInsertionSort {

    public static void main(String[] args) {

        int[] input = { 4, 2, 9, 6, 23, 12, 34, 0, 1 };

        insertionSort(input);

    }

    private static void printNumbers(int[] input) {

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

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

        }

        System.out.println("\n");

    }

    public static void insertionSort(int array[]) {

        int n = array.length;

        for (int j = 1; j < n; j++) {

            int key = array[j];

            int i = j-1;

            while ( (i > -1) && ( array [i] > key ) ) {

                array [i+1] = array [i];

                i--;

            }

            array[i+1] = key;

            printNumbers(array);

        }

    }

}

|  |
| --- |
| Output: |
| 2, 4, 9, 6, 23, 12, 34, 0, 1,  2, 4, 9, 6, 23, 12, 34, 0, 1,  2, 4, 6, 9, 23, 12, 34, 0, 1,  2, 4, 6, 9, 23, 12, 34, 0, 1,  2, 4, 6, 9, 12, 23, 34, 0, 1,  2, 4, 6, 9, 12, 23, 34, 0, 1,  0, 2, 4, 6, 9, 12, 23, 34, 1,  0, 1, 2, 4, 6, 9, 12, 23, 34, |