**Sorting Lab 1 Introduction**

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**Generics**

**<T extends Comparable<? super T>> void insertionSort(T[ ] a )**

**public interface Comparable<T> {**

**int compareTo(T var1);**

**}**

**T void sort(T sequence)**

**Inversion**

For a sequence S = { 4, 3, 1, 6, 5, 3, 2}

(4,3) is an inversion because S[0]= 4 and S[1] = 3 and 0 < 1 but S[0] > S[1]

An inversion Is any ordered pair (n, k) s.t n < k and S[n] >S[k].

This is important because it is the number of swaps that needed for the Insertion sort.

Lab 1

Compute the number of distinct values in array of N integers. You can use Java Collection types

and comparators if required.