package practiceproject;

public class LIS{

public static int LIS (int[] arr, int i, int n, int prev) {

// Base case: nothing is remaining

if (i == n) {

return 0;

}

// case 1: exclude the current element and process the

// remaining elements

int excl = LIS(arr, i + 1, n, prev);

// case 2: include the current element if it is greater

// than the previous element in LIS

int incl = 0;

if (arr[i] > prev) {

incl = 1 + LIS(arr, i + 1, n, arr[i]);

}

// return the maximum of the above two choices

return Integer.max(incl, excl);

}

public static void main(String[] args) {

int[] arr = {3,67,4,35,86,33,97,90,5,78};

System.out.print("The length of the LIS is "+ LIS(arr, 0, arr.length, Integer.MIN\_VALUE));

}

}