Longest Increasing Subsequence

package com.company;

public class LongestIncreasingSubsequent {

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 = { 1, 5, 8, 20, 11, 16, 60, 25, 45, 35, 15,66,19 };

System.*out*.print("The length of the LIS is "

+ *LIS*(arr, 0, arr.length, Integer.*MIN\_VALUE*));

}

}