

## Sourcecode:

eclipse-workspace - FirstProject-21-03-2022/src/com/simplilearn/demo/LIS.java - Eclipse IDE

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FirstProject-21-03-2022

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\*LIS.java ×

```
1 package com.simplilearn.demo;
2 class LIS {
3     static int max_ref;
4
5     static int _lis(int arr[], int n)
6     {
7         if (n == 1)
8             return 1;
9
10
11         int res, max_ending = 1;
12         for (int i = 1; i < n; i++) {
13             res = _lis(arr, i);
14             if (arr[i - 1] < arr[n - 1] && res + 1 > max_ending)
15                 max_ending = res + 1;
16         }
17
18         if (max_ref < max_ending)
19             max_ref = max_ending;
20         return max_ending;
21     }
22
23     static int lis(int arr[], int n)
24     {
25         max_ref = 1;
26         _lis(arr, n);
27         return max_ref;
28     }
29
30     public static void main(String args[])
31     {
32         int arr[] = { 10, 22, 9, 33, 21, 50, 41, 60, 80 };
33         int n = arr.length;
34         System.out.println("Length of lis is :"+ lis(arr, n) );
35     }
36 }
37
38
39
40
41
42
43
```

## Output:

When the array is { 10, 22, 9, 33, 21, 50, 41, 60, 80 }:

```
<terminated> LIS [Java Application] C:\Program Files\Java\jdk-17.0.2\bin\javaw.exe (Mar 29, 2022, 11:36:04 PM – 11:36:06 PM) [pid: 15840]
Length of LIS is :6
```

When the array is { 60, 18, 29, 43, 11, 70, 51, 10, 90 }:

<terminated> LIS [Java Application] C:\Program Files\Java\jdk-17.0.2\bin\javaw.exe (Mar 29, 2022, 11:40:52 PM – 11:40:57 PM) [pid: 4580]

Length of LIS is :5