

1 Programming

Given an unordered array of integers of length $N > 0$, calculate the length of the longest ordered (ascending from left [lower index] to right [higher index]) subsequence within the array.

Example 1

Input: [1,4,1,4,2,1,3,5,6,2,3,7]

Expected Output: 4

Example 2

Input: [3,1,4,1,5,9,2,6,5,3,5]

Expected Output: 3

Example 3

Input: [2,7,1,8,2,8,1]

Expected Output: 2

2 Web Front-End Test

Automate the following functional test using Selenium:

1. Navigate to the Wikipedia home page, <http://www.wikipedia.org/>.
2. Search for a given string in English:
 - (a) Type in a string given as parameter in the search input field.
 - (b) Select English as the search language.
 - (c) Click the search button.
3. Validate that the first heading of the search results page matches the search string (ignoring case).

4. Verify that the search results page is has link in another language defined as a parameter.
5. Navigate to the search results page in the other language.
6. Validate that the search results page in the other language includes a link to the version in English.

3 Web Service Test

Given the following specification:

1. Endpoint: Calculator
(<http://www.dneonline.com/calculator.asmx?WSDL>).
2. Service Type: SOAP (any version).
3. Operation: Any.

Automate the calculation of two integers given as parameters and validate that the result matches a third integer, also given as parameter.