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Assignment 4 Report

Challenges:

* Taking account of the possible failures (when the number of interesting items is less than 0 or if there are two arrays to be compared and there’re some specific restriction)
* Using past function (rotateLeft) to write additional function (separate) in order to avoid creating new array
* Thinking of algorithm that avoids using new array (rotateLeft, flip, separate)
* Making sure returning something every time the code runs

Test cases:

appendToAll

* Return -1 when n is invalid (n < 0)
* When the array of strings is empty (n = 0)
* When value is blank (“”), the function still runs but with no effect
* Always return n
* When value has space, number, or other combination of characters

lookup

* Return -1 when n is invalid (n < 0)
* When the array of strings is empty (n = 0)
* Return -1 if no interesting item is the same as target
* Return the first position when multiple strings are the same as target

positionOfMax

* Return -1 when n is invalid (n < 0)
* When the array of strings is empty (n = 0)
* When all number is the same
* When the first or last is max

rotateLeft

* Return -1 when n or pos is invalid (n < 0) or if the position is equal to or greater than n (pos >= n)
* When the array of strings is empty (n = 0)
* When pos is 0 or n-1

countRuns

* Return -1 when n is invalid (n < 0)
* When the array of strings is empty (n = 0)
* When all the beginning and end are different than the rest (test edge cases)

flip

* Return -1 when n is invalid (n < 0)
* When the array of strings is empty (n = 0)
* When n = odd number -> don’t need to flip the middle number
* When n = even number -> flip everything

differ

* Return -1 when n1 or n2 is invalid (n < 0)
* When the arrays of strings are empty (n1 or n2 = 0)
* When the first and last string of the array is different (test edge cases)

subsequence

* Return -1 when n1 or n2 is invalid or when the testing array (n2) is greater than the tested array (n1)
* When the arrays of strings are empty (n1 or n2 = 0)
* When n2 = 0 for any n1
* When a1 equals to a2 (all the same interesting items - strings)

lookupAny

* Return -1 when n1 or n2 is invalid (n < 0)
* When the arrays of strings are empty (n1 or n2 = 0)
* When all items in the arrays are different

separate

* Return -1 when n1 or n2 is invalid (n < 0)
* When the arrays of strings are empty (n1 or n2 = 0)
* When an item in the array is the same as separator or if none is greater than it