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A5SearchEngine description

function index(string,pattern,caseSensitive):

This function returns the index where pattern starts in string, if nothing is found it will return -1 instead. The search is also case sensitive. The code starts by checking the Boolean value of the caseSensitive argument, if it returns false it converts the string and pattern into lower case to make it case insensitive and then searches for the new pattern within the new string, if the pattern is present within the string it returns the index of the first instance of the pattern in the string.

Because the pattern needs to be a string if a null value or an integer or undefined is entered it will break the code.

function idxP1(contents,pattern):

This function returns the index where pattern occurs in contents, if nothing is found it will return -1 instead. The code cycles through each index of contents searching each one by calling the function index to look for the pattern within the index of contents until it finds a match. If pattern is not present the code returns -1.

Because the pattern needs to be a string if a null value, integers or undefined is entered it will break the code.

function match(string,pattern)

This function returns true if all the individual letters of pattern appear in the string, however if they don’t appear it returns false. The code starts by removing symbols and converting the string to lower case. The symbols were removed by creating another function called removesymbols which converts the string to lower case and cycles through each character making sure it’s not a symbol, when is has finished the cycles it makes sure that all of the characters are between z and a if this statement is fulfilled then the function returns the purestring. After this function has been completed the purestring is compared to the original string in lower case to see if they match.

By using the console I found that integers break the code this is because the method .toLowerCase() only works on strings.

function matchContents(contents,pattern)

This function returns an array of indexes of each page in contents that match the pattern. The code calls the function match on every index of contents and if a match is found in a particular index of contents the index of it gets added to the array. Then the array is returned.

Because it is calling the function match numbers will also break this code.

function url1(pages,pattern)

This function searches through pages and for each index of pages it separates the url from the contents within pages, with each index it calls the function index for the contents part of that index, if it matches it returns the url. If no match is found it returns an empty string

Because numbers breaks index it also breaks this function.

function urls(pages,pattern)

This function returns an array of urls from pages for which the corresponding content matches the pattern. The code checks the indexes of pages and then calls the match function to check if pattern matches the content part of each index of pages. If it does it takes the url part and adds it to a new array. When it’s done it returns the array.

Because numbers break match they also break this function.

function score(string,pattern)

This function returns the number of times a pattern occurs in a string. The code converts the string and pattern into lower case and then the while loop uses .indexOf to search for each index of pattern and each time the pattern appears it adds 1 to the counter. When it is finished it returns the counter variable.

This function uses pattern which requires a string so number break this function.

function scores(web,pattern)

This function returns an array of scores, each score is the number of times the pattern occurs in a content part in the web array. For each index of web it uses the content filled as the string argument to the score function. This returns a value and that value is added to a new array.

The function uses pattern therefore numbers break it.

function urlScores(web,pattern)

This function returns an array of records of the form derived from web. The code goes through each index of web and it calls the score function with the content filled of that index of web as the string argument for the score function which returns the score value for that index. It then adds a record to the new array which consists of the url filled of that index in web. It adds the score value for the index in web to the score filled in the new record. The new array is then returned. The if statement is used to stop the addition of any 0 score indexes being added to the new array.

Numbers break this function.

function rankedScores(web,pattern)

This function sorts the scores of the array of records into descending order using bubble sort. The code iterates through each index of the array created by calling the function urlScores. If the scores value of the current index is smaller than the score value of the next index, then the current index is assigned to a temporary variable, it is then replaced with the next index. Then the next index is replaced with the temporary variable. The Boolean swap is assigned true which continues the do while loop. When no swap has been made it returns the array in ranked descending order.

Because this function is using pattern number break it.