

# Functional Programming Challenge

This challenge consists of 4 exercises that you should answer with JS functions using the given restrictions. Your submission must consist of a single .js file with the answers' implementation **without using any external libraries**.

You might use any JS version above 4 you feel comfortable with. Feel free to use tools such as JSFiddle, but **remember to submit everything in a single file**.

## Exercise 1

Write a function `countWordLengths` that receives a list of words and returns an object with the length of a word as key and the number of occurrences as value. You **cannot** use explicit iterators.

```
function countWordLengths(wordArray){
  // YOUR CODE GOES HERE
}

// Example invocation
countWordLengths(['foo', 'bar', 'hello', 'good', 'no'])
>>> {
  2: 1, // 'no'
  3: 2, // 'foo', 'bar'
  4: 1, // 'good'
  5: 1  // 'hello'
}
```

## Exercise 2

Write a function `getBriefMessages` that takes an array of objects with `.message` properties and returns an array of messages that are less than < 60 characters long.

You **cannot** use explicit iterators. The function should return an array containing the messages themselves, without their containing object.

```
function getBriefMessages(objectArray){
  // YOUR CODE GOES HERE
}

// Example invocation
getBriefMessages([{message: 'Short and brief message', id:1}, {message: 'A
very very long message that is way above 80 characters and should be left
out.', id:2},])
```

```
>>> ['Short and brief message']
```

## Exercise 3

Write a function `fillSummaries` that takes an array of objects with `.message` properties and returns an array of those objects, plus a property containing an 60 character trimmed version of the message named `.trimmed`.

You **cannot** use explicit iterators. Messages that are shorter should be copied as if.

```
function fillSummaries(objectArray){
    // YOUR CODE GOES HERE
}

// Example invocation
fillSummaries([{message: 'Short and brief message', id:1}, {message: 'A
very very long message that is way above 80 characters and should be left
out.', id:2},])
>>> [{message: 'Short and brief message', id:1, trimmed: 'Short and brief
message'}, {message: 'A very very long message that is way above 80
characters and should be left out.', id:2, trimmed: 'A very very long
message that is way above 80 characters and'}],]
```

## Exercise 4

Write a function `addSummaries` that takes an array of strings and returns an array of objects containing an object for each string as the value for the property `.message`, plus a property containing an 60 character trimmed version of the message named `.trimmed`.

You **cannot** use explicit iterators. Messages that are shorter should be copied as if.

```
function addSummaries(stringArray){
    // YOUR CODE GOES HERE
}

// Example invocation
addSummaries(['Short and brief message', 'A very very long message that is
way above 80 characters and should be left out.'])
>>> [{message: 'Short and brief message', trimmed: 'Short and brief
message'}, {message: 'A very very long message that is way above 80
characters and should be left out.', trimmed: 'A very very long message
that is way above 80 characters and'}],]
```