

# Kata 18 - Square Code

Assignment

115 - 240 minutes

✔ Status

Complete

**STRETCH ACTIVITY**  
This activity is marked as stretch. We strongly suggest you come back to it if/when you've completed all the core exercises for the prep course.

One classic method for composing secret messages is called a square code. In this activity, we will be creating our own Square Code algorithm.

## Square Code

In Square Code, the **spaces are removed** from the english text and the characters are written into a square (or rectangle). For example, the sentence "If man was meant to stay on the ground god would have given us roots" is 54 characters long, once the spaces are removed, so it is written into a rectangle with 7 rows and 8 columns.

```
ifmanwas
meanttos
tayonthe
groundgo
dwouldha
vegivenu
sroots
```

The square root of 54 (`Math.sqrt(54)`) is 7.3484692283495345. If we round this number up (`Math.ceil(Math.sqrt(54))`), we get 8. If we use that for the number of characters on each line (the number of columns), then our text will be close to a square shape.

The message is then coded by reading down the columns going left to right. For example, the message above is coded as:

```
imtgdv fearwer mayoogo anouuio nttnlvt wttdes aohghn sseoau
```

And that's the output of the algorithm. We can then reverse the process to decrypt the text and read the original message.



## Input

```
const squareCode = function(message) {
  // Put your solution here
};

console.log(squareCode("chill out"));
console.log(squareCode("feed the dog"));
console.log(squareCode("have a nice day"));
console.log(squareCode("if man was meant to stay on the ground god would have given us roots"));
```

## Expected Output

```
clu hlt io
fto ehg ee dd
hae and via ecy
imtgdv$ fearwer mayoogo anouuio nttnlvt wttdes aohghn sseoau
```

-  Create a function named `squareCode` that will receive a message, and return the secret square code version of the message.
-  Submit Your Work

- Browse to [gist.github.com](https://gist.github.com) and create a new gist.
- Copy-and-paste your code into the form
- Name the gist and the file appropriately and click `Create secret gist`.
- Finally, mark this activity as completed (at the bottom of this page) and please copy/paste the *entire* browser URL for your gist (from *gist.github.com*) into the text field.

https://gist.github.com/sa

✖ Cancel Submission

←

Kata 17 - JS Object From URL Encoded String (Stretch)

Previous

Next

Kata 19 - Queen Threat Detector (Stretch)

→

How well did you understand this content?

Thank you for your feedback

★

★

★

★

★

Got most of it























Please give us some written insight into your feedback

## Prep Work

- › 1: Welcome
- › 2: Dev Environment
- › 3: Version Control
- › 4: Programming Intro
- › 5: The Browser

▼ 6: Katas

6 hrs + 29 hrs stretch 🏆

 <u>Katas</u>	✓
 <u>Kata 1 - Sum the Largest Numbers</u>	✓
 <u>Kata 2 - Conditional sums</u>	✓
 <u>Kata 3 - Vowels</u>	✓
 <u>Kata 4 - Instructors Names</u>	✓
 <u>Kata 5 - Percent Encoded String</u>	✓
 <u>Kata 6 - SmartParking</u>	✓
 <u>Kata 7 - In the Air Tonight</u>	✓
 <u>Kata 8 - Repeating Numbers</u>	✓
 <u>Kata 9 - Case Maker</u>	✓
 <u>Kata 10 - Multiplication Table</u>	✓
 <u>Kata 11 - Bouncy Castles</u>	✓
 <u>Kata 12 - The Great Codeville Bake-off.</u>	✓
 <u>Kata 13 - Talking Calendar</u>	✓
 <u>Kata 14 - Change Calculator</u>	✓
 <u>Kata 15 - Organizing Instructors</u>	✓
 <u>Kata 16 - Case Maker II</u>	✓
 <u>Kata 17 - JS Object From URL Encoded String.</u>	✓
 <u>Kata 18 - Square Code</u>	✓
 <u>Kata 19 - Queen Threat Detector</u>	✓
 <u>Kata 20 - Taxicab Geometry.</u>	✓
 <u>Kata 21 - Number Guesser</u>	✓

- › 7: Stretch Project
- › 8: The Lab Manual
- › 9: Day One Prep
- › 10: Collab Tools Setup



