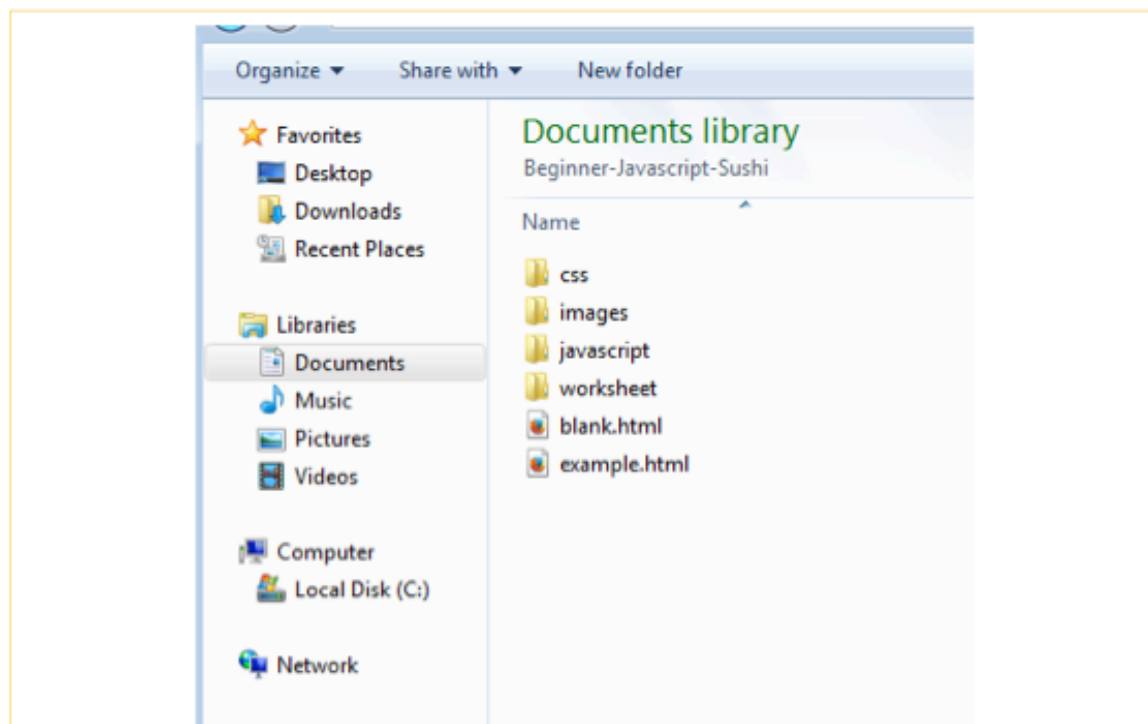




- 1 Make sure you have a text editor installed (Atom, Notepad++ or Sublime Text). If you need help, ask a mentor to install it for you. After installing, open your text editor.
- 2 Download the zip file from [kata.coderdojo.com/Beginner\\_Javascript\\_Sushi](https://kata.coderdojo.com/Beginner_Javascript_Sushi).
- 3 Unzip the compressed folder and move it to your documents folder.
- 4 **Open** the "**Beginner-Javascript-Sushi**" folder and make sure it has the same files as the screen below.



- 5 Refer to this card if you have problem finding the location of the tags throughout the exercise.

```
<!DOCTYPE html>
<html>
  <head>
    <title></title>
    <link>

    <script></script>
  </head>

  <body>
    <div>
      <img>
      <p></p>
      <p></p>
    </div>
    <button></button>
    <button></button>
    <button></button>
    <br>
    <input>
    <br>
    <input>
    <button></button>
  </body>
</html>
```

**Note:** `<p>` and `<img>` tags don't have to be inside a `<div>` tag.



- 1 **Open "example.html"** in your browser and **click** Ling Ling (Panda) to know all about scripting language and javascript.
- 2 Let's try cracking the code. **Open "example.html"** in your text editor and inside the javascript code, **remove** any bracket or semicolon. **Save** it and **refresh** your browser. What do you think happened?

A screenshot of a text editor window titled "example.html". The code is as follows:

```
1 <!DOCTYPE html>
2 <html>
3   <head>
4     <title>Javascript Example</title>
5     <link rel="stylesheet" type="text/css" href="css/layout.css"/>
6
7     <script src="javascript/jquery.js"></script>
8     <script>
9       function clicked() {
10        alert("Scripting languages, which can be embedded within HTML, commonly are used to add
11          functionality to a web page, such as different menu styles or graphic displays.");
12        alert("Javascript is an object-oriented computer programming language commonly used to create
13          interactive effects within web browsers.");
14        }
15      </script>
16    </head>
17    <body>
18      
19      <p>
20        What is a scripting language and Javascript?
21        <br>
22        <b>Poke</b> Ling-Ling to know more.
23      </p>
24    </body>
25  </html>
```

A black arrow points to the opening curly brace of the 'clicked' function on line 10.

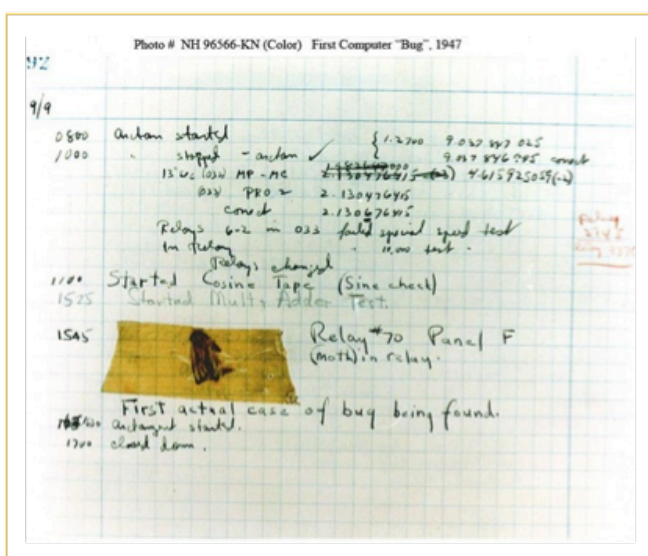
- 3 Let's assume you didn't know that you removed a bracket/semicolon in step 2. Try checking what the error is in a **"linter"**.

A **Linter** is a tool that flags for errors and suspicious usage in software written in any computer language.

**Tip:** You can copy your code and use an online linter at [www.javascriptlint.com/online\\_lint.php](http://www.javascriptlint.com/online_lint.php) to check for errors.

- 4 In your text editor, **add** the missing bracket/semicolon again. **Congratulations!** You just debugged some code!

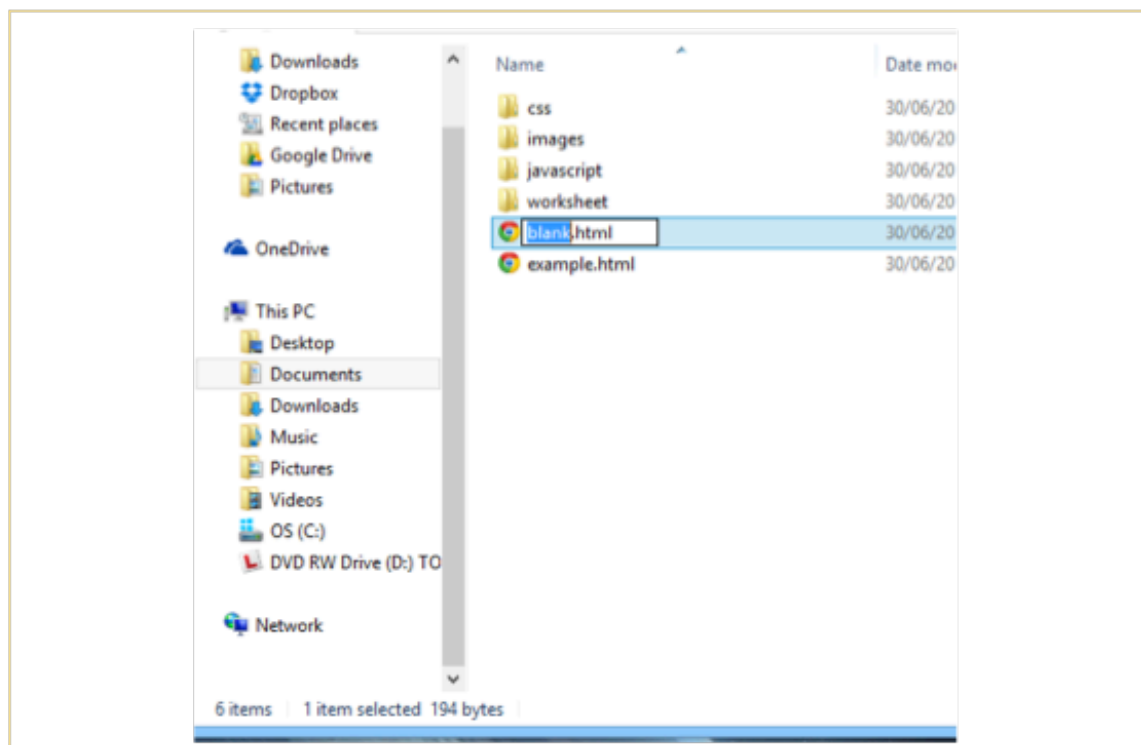
**Debugging** is the process of fixing bugs (errors) in computer program code or the engineering of a hardware device.



The term computer "bug" was coined by Grace Hopper when a moth landed on her calculator and was squashed. Hence, "squashed a bug" is often used when an error is fixed.



- 1 Go into the **"Beginner-Javascript-Sushi"** folder and copy **"blank.html"**.
- 2 **Paste** the copy of the file into the same folder.
- 3 **Click** the copied blank file to select it. Press **F2** and rename it to **"storyboard.html"**.



- 4 **Open** the **"storyboard.html"** in your browser and text editor (Atom, Notepad++ or Sublime Text).

- 5 In your text editor, **check** the "**storyboard.html**" file is like the one in the screenshot below.

```
<!DOCTYPE html>
<html>
  <head>
    <title>Ling Ling the Panda</title>
    <link rel="stylesheet" type="text/css" href="css/layout.css"/>
  </head>
  <body>
    <div class="panel">
      
      <p>Ling Ling the Panda</p>
      <p>He is an awesome panda</p>
      <p></p>
    </div>
    <button>Toggle Style</button>
    <button>Resize Image</button>
    <button>Reset</button>
    <br>
    Name: <input id="name_box" type="text" value="" />
    <br>
    Description: <input id="description_box" type="text" value="" />
    <button id="name_submit">Submit</button>
  </body>
</html>
```

**Fun Fact:** Javascript is not to be confused with Java. Java is a language used to create software including Android applications, but Javascript is mostly used for web pages.

- 6 **Save** your code in the text editor and **refresh** your web page in the browser.

**Tip:** Save your code after every step.



- 1 Inside the **<body>** tag, edit the **<img>** tag and add **onclick="alert('Hello!')"**. Your **<img>** tag will now look like this.

```

```

**Tip:** Single quotes can be used when two sets of double quotes are used close to each other to help avoid confusion.

- 2 **Save** and **refresh** the page and **click** on Ling Ling to see what he does!

**Tip:** To use scripts in your web page, you need to use **<script>** tags. You can use a script anywhere in your html file

### Fun Exercise!

Change the text inside the alert box.



- 3 **Insert** the following code **inside** the `<div>` tag, just **before** the `</div>` tag. Identify what changed.

```
<script>
    document.write("This year is " +new Date().getFullYear());
</script>
```

- 4 **Insert** the same code in step 3 **after** the `<div>` tag. Can you identify the difference between the two steps?

**Hint:** You used a script inside the `<div>` tag and another script in the `<body>` tag.

- 5 **Remove** the script code you've made in step 3 and 4 as we won't be needing it anymore.

### Fun fact!

2.4 of the 7 billion people on the planet use the Internet. Over 8.7 billion machines are currently connected to the Internet.





### Syntax

#### HTML:

```
<p id="paragraph"></p>
```

#### jQuery:

```
<script>
    $("#paragraph").action();
</script>
```

**Tip:** jQuery is accessed using the "\$" sign. It is used to access HTML elements.

- 1 To access jQuery library, **insert** the following code inside the **<head>** tag. Refer to card 1 to identify where the **<head>** tag is.

```
<script src="javascript/jquery.js"></script>
```

- 2 To start using jQuery, write the following code inside the **<head>** tag. **All your script code will be written inside.**

```
<script>
    $(document).ready(function() {
        //your script code goes here
    });
</script>
```

The **ready()** function is always used first to ensure the script doesn't run until the page is ready.

**Tip:** Comments are used for to remind a coder about what the code does, like a "note to self". Can also be used so browser ignores a section of your code.

#### Syntax:

```
// This is a single line comment
/* This is a
   multi-line comment */
```

- 3 Now let's try writing into your web page using jQuery. In the first paragraph (**<p>**) tag inside the **<div>** tag, add **id="title"**. Your first **<p>** tag will now look like this.

```
<p id="name">Ling Ling the Panda</p>
```

- 4 In the second paragraph (**<p>**) tag inside the **<div>** tag, add an id attribute and name it as **"description"**. Your code will now look like this."

```
<p id="description">This is the description</p>
```

- 5 **Write** the following code into your current script code. **Save** your code and **refresh** your webpage.

```
$("#name_submit").click(function() {  
    $("#name").html($("#name_box").val());  
    $("#description").html($("#description_box").val());  
});
```

- 6 In your browser, **type** a new name and description in the input boxes then **click** the submit button.

# BEGINNER JAVASCRIPT



## CHANGE TEXT COLOUR AND SIZE

Card 6 of 9  
I'm Learning: JavaScript

```
3 <head>
4 <title>Ling Ling the Panda</title>
5 <link rel="stylesheet" type="text/css" href="css/layout.css"/>
6 <script src="javascript/jquery.js"></script>
7 <script>
8     $(document).ready(function() {
9         //Your code goes here
10         $("#name_submit").click(function() {
11             $("#name").html($("#name_box").val());
12             $("#description").html($("#description_box").val());
13         });
14     });
15 </script>
16 </head>
17 --
```



- 1 **Write** the following code below in your script code to change the **Size** of the text in the paragraph when clicked.

```
$("#name").click(function() {
    $("#name").css("font-size","50px");
});
```

- 2 **Write** the following code below in your script code to change the **colour** of the text in the paragraph when clicked.

```
$("#description").click(function() {
    $("#description").css("color","orange");
});
```

- 3 Did you know you can use any CSS rule here? Let's try changing the opacity of your description text. **Edit** the code in step 2 so that it will look like this.

```
$("#description").click(function() {  
  $("#description").css("color","orange");  
  $("#description").css("opacity","0");  
  $("#description").css("transition","opacity 2s ease-in-out");  
});
```

- 4 **Save** your code and **refresh** your browser. **Click** on the title and description text to see what happens.

### Fun Exercise!

Add more css rules in your description text using the properties below.

Property	Values
text-decoration	overline, line-through, underline
text-transform	uppercase, lowercase, capitalize
text-shadow	5px 5px blue
text-align	center, left, right
letter-spacing	20px to -10px

# BEGINNER JAVASCRIPT



## TOGGLE BETWEEN CSS CLASSES

Card 7 of 9  
I'm Learning: Javascript

**Toggle** means to turn something on and off.

- 1 **Edit** the first button (`<button>`) tag and **add** an id attribute named `"toggle_button"`. It will look like this.

```
<button id="toggle_button">Toggle Style</button>
```

- 2 In your script code, **add** the following code. **Save** and **refresh** your browser.

```
$("#toggle_button").click(function() {  
    $(".panel").toggleClass("layout-grass");  
});
```

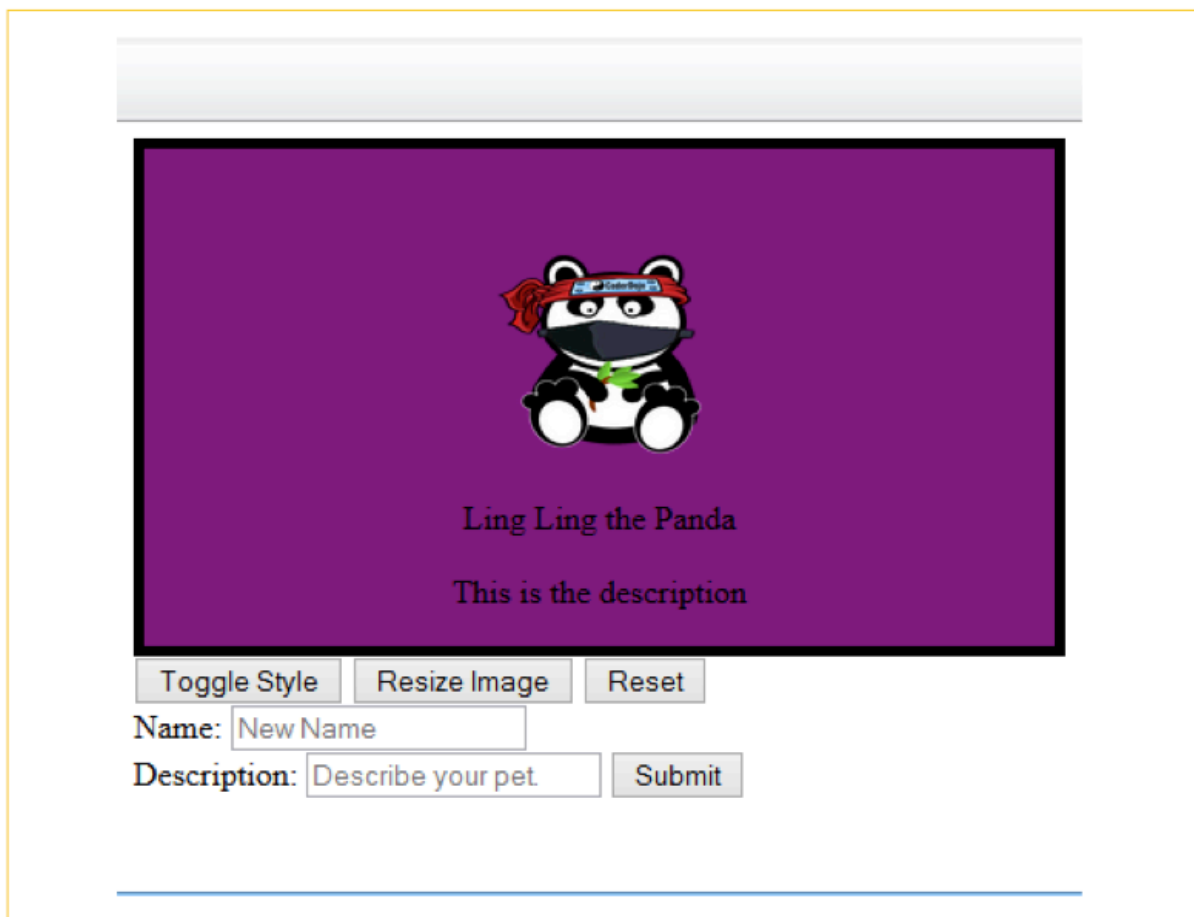
### Fun Exercise!

You can use the functions below instead of the `toggleClass()` function.

`toggle()`  
`fadeToggle()`



- 3 **Save** your code and **refresh** your browser. **Click** the toggle button twice and see what happens!
- 4 Change the class name of the css in the code you wrote in step 2 to "**spring-fairies**". **Save** your code and **refresh** your browser. Your web page will now look like the screenshot below.





- 1 Add an id attribute on the second button (`<button>`) tag and call it **"image\_button"**. Your second `<button>` code will now look like this.

```
<button id="image_button">Resize Image</button>
```

- 2 In your script code, **add** the following code.

```
$("#image_button").click(function() {  
    $("#img").animate({height: 300, width: 300}, "slow");  
});
```

**Tip:** You can use percentage (%) as values in height and width attributes. e.g. height: 75%, width: 50%

- 3 **Save** your code and **refresh** your browser. **Click** the resize image button to see the animation of the image.

### World Wide Web

The WorldWideWeb (W3) is a wide-area [hypermedia](#) information retrieval initiative aiming to give universal access to a large universe of documents. Everything there is online about W3 is linked directly or indirectly to this document, including an [executive summary](#) of the project, [Mailing lists](#), [Policy Questions](#).

[What's out there?](#)  
Pointers to the world's online information, [subjects](#), [W3 servers](#), etc.

[Help](#)  
on the browser you are using

[Software Products](#)  
A list of W3 project components and their current state. (e.g. [Line Mode](#), [X11 Viola](#), [NeXTStep](#), [Servers](#), [Tools](#), [Mail robot](#), [Library](#))

[Technical](#)  
Details of protocols, formats, program internals etc

[Bibliography](#)  
Paper documentation on W3 and references.

[People](#)  
A list of some people involved in the project.

[History](#)  
A summary of the history of the project.

[How can I help?](#)  
If you would like to support the web.

[Getting code](#)  
Getting the code by [anonymous FTP](#), etc.

The first website by CERN

### Did you know?

Javascript was created in 1995 while the World Wide Web begun in 1989. Back then, only HTML was used to create web pages.





- 4 Let's change the transparency of the image. **Edit** the code in step 2 and make it's like the one below.

```
$("#image_button").click(function() {  
    $("img").animate({height: 300, width:300, opacity:0.4},"slow");  
});
```

- 5 **Save** your code and **refresh** your browser. **Click** the **"resize image"** button to see the changes.

**Tip:** Changing the second parameter in the animate() function from "slow" to "fast" will make it animate faster.

- 6 You can also change the image by changing the image path using the **attr()** function. **Edit** the code in step 4 so that it's the same as the one below.

```
$("#image_button").click(function() {  
    $("img").animate({height: 300, width:300, opacity:0.4},"slow");  
    $("img").attr("src", "images/tito.png");  
});
```

**Selectors** are used to allow you to select and manipulate HTML elements.

**ID** selectors are used to change **unique** elements.

**Class** selectors are used to change **multiple** elements at the same time.

- 1 Inside the **<body>** tag, **edit** the **<img>** tag and **add** an id attribute and name it as **"image"**. Your code will look like this.

```

```

- 2 **Edit** the title and description paragraph (**<p>**) and **add** a class attribute and name both **"text"**. Your code will look like this.

```
<p class="text" id="name">Ling Ling the Panda</p>
<p class="text" id="description">He is an awesome panda.</p>
```

- 3 **Add** an id attribute in the third button (**<button>**) tag and name it **"reset\_button"**. Your code will look like this.

```
<button id="reset_button">Reset</button>
```

4 In your script code, **add** the following code.

```
$("#reset_button").click(function() {  
    $("#name").html("Ling Ling the Panda");  
    $("#description").html("This is the description");  
    $("#description").css("opacity", "1");  
    $(".text").css({"font-size": "16px", "color": "black"});  
});
```

5 **Refresh** your web page and **click** the reset button. What do you think the button does?

6 **Edit** the code in step 4 so it looks like this. Identify what changed when you click the reset button.

```
$("#reset_button").click(function() {  
    $("#name").html("Ling Ling the Panda");  
    $("#description").html("This is the description");  
    $("#description").css("opacity", "1");  
    $(".text").css({"font-size": "16px", "color": "black"});  
    $("#image").animate({height: 100, width: 100}, "fast");  
    $("#image").css("opacity", "1");  
});
```