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SETUP

Card 1 of 9

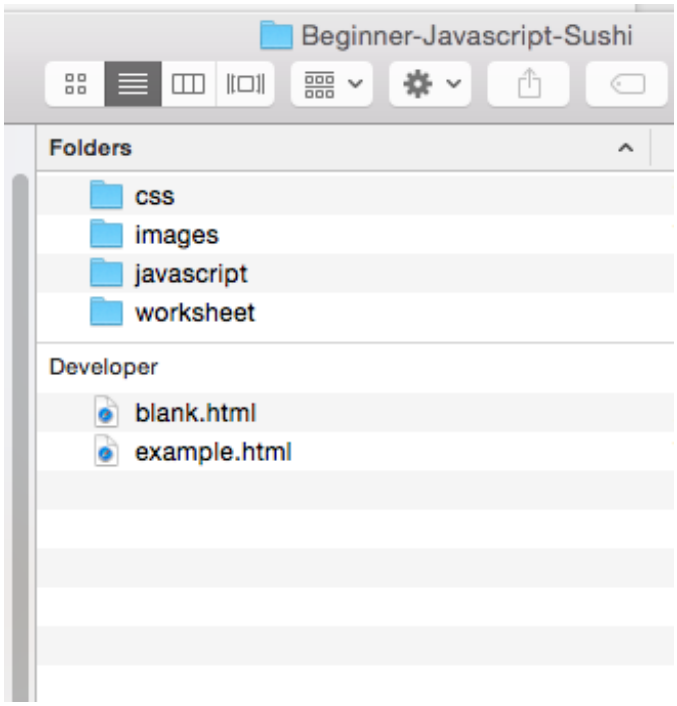
I'm Learning: Javascript

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**.

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>

      <scipt></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 tag.

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SCRIPTING AND DEBUGGING

Card 2 of 9

I'm Learning: Javascript

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?

example.html

```
<!DOCTYPE html>
<html>
    <head>
        <title>Javascript Example</title>
        <link rel="stylesheet" type="text/css" href="css/layout.css"/>

        <script src="javascript/jquery.js"></script>
        <script>
            function clicked() {
                alert("Scripting languages, which can be embedded within HTML, commonly are used to add
                    functionality to a web page, such as different menu styles or graphic displays.");
                alert("Javascript is an object-oriented computer programming language commonly used to create
                    interactive effects within web browsers.");
            }
        </script>
    </head>

    <body>
        <img src="images/ling-ling.png" onclick="clicked()" height="350" width="350"/>
        <p>
            What is a scripting language and Javascript?
            <br>
            <b>Poke</b> Ling-Ling to know more.
        </p>
    </body>
</html>
```

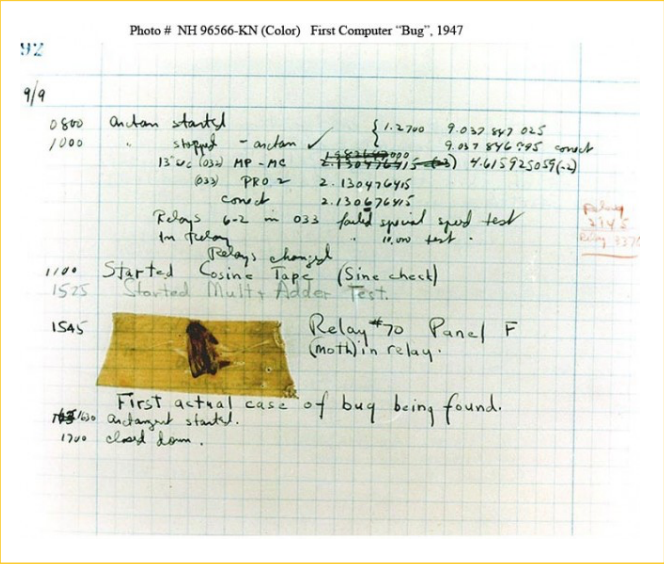
3 Let's assume you didn't know that you removed a bracket/semicolon in step 2. Try checking what the error is in a **"linter"**.

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** 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.

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CREATING A WEB PAGE

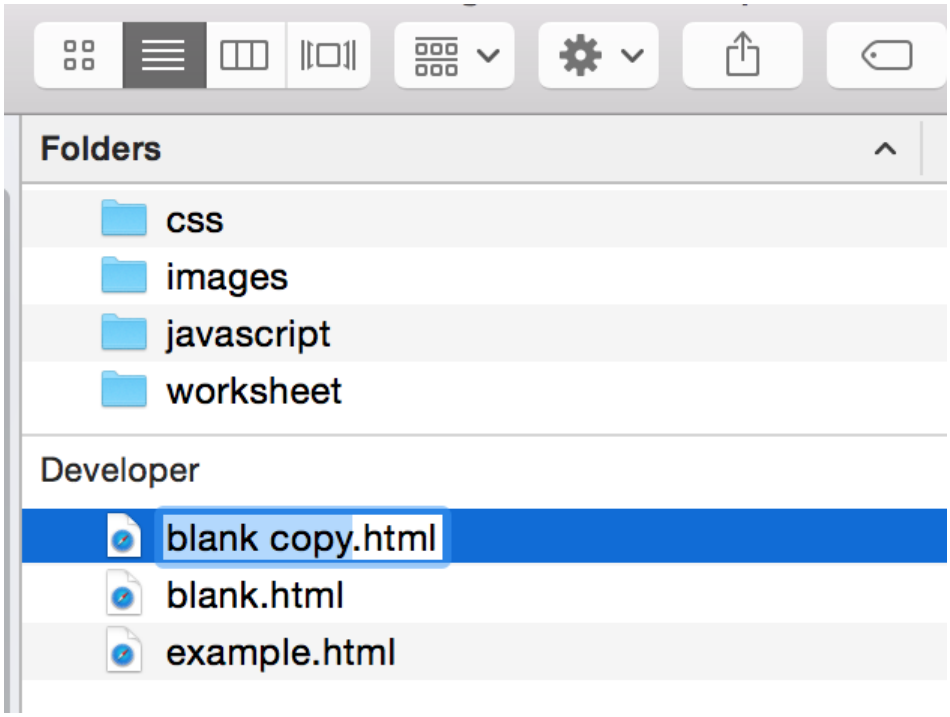
Card 3 of 9

I'm Learning: Javascript

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 **enter** 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">
           <img src="images/ling-ling.png" height="100" width="100"/>
           <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.

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USING JAVASCRIPT IN A WEB PAGE

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

```
<img src="images/ling-ling.png" height="100" width="100"
    onclick="alert('Hello!')"/>
```

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 tag, just **before** the tag. Identify what changed.

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

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

Hint: You used a script inside the ** ** 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.

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USING JQUERY LIBRARY

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 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 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.

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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            });
16        </script>
17    </head>
```

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

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TOGGLE BETWEEN CSS CLASSES

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");
});
```

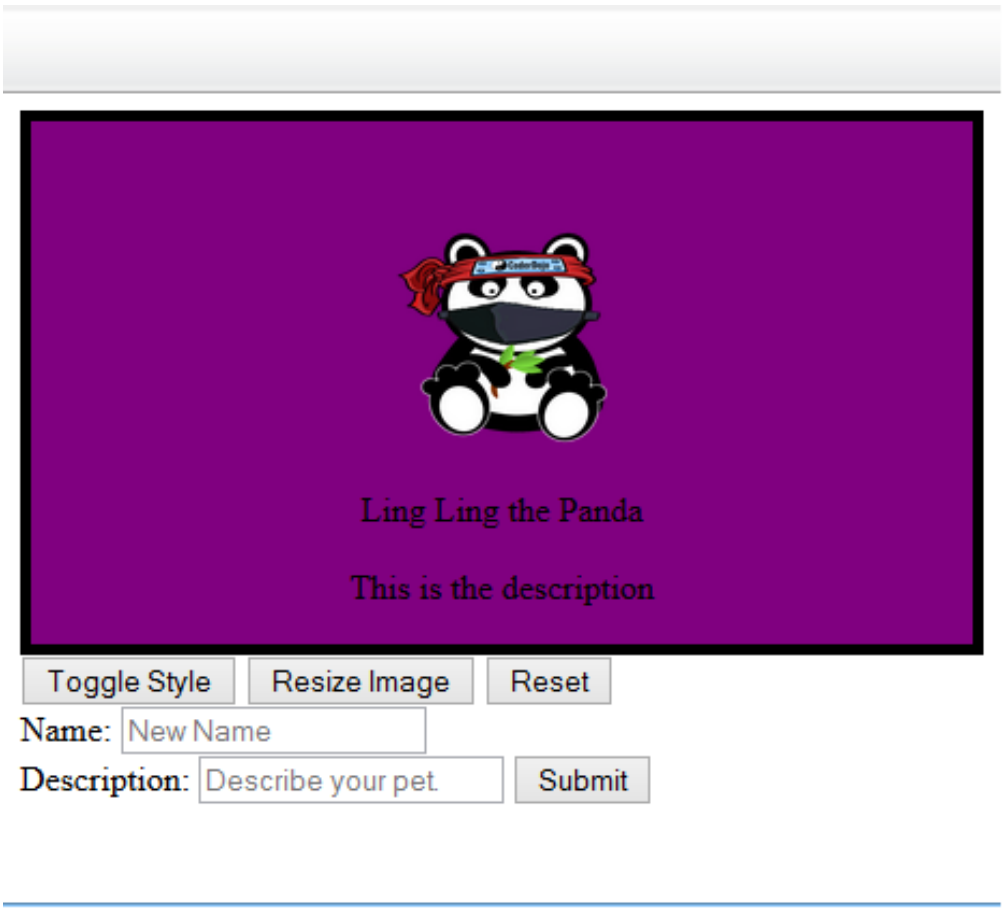
Fun Exercise!

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.



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ANIMATE AN IMAGE

Card 8 of 9

I'm Learning: Javascript

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.

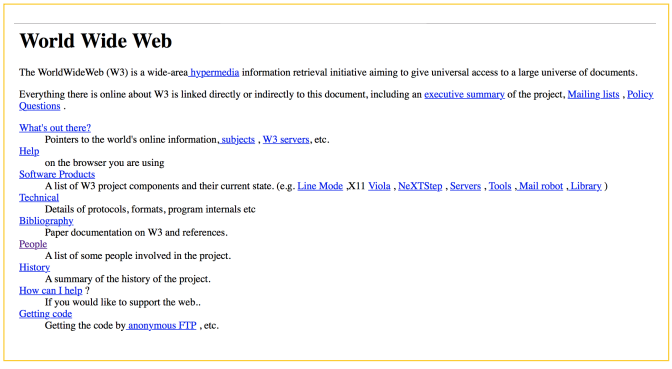
```
<button id="image_button">Resize Image</button>
```

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");
});
```

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JQUERY SELECTORS

Card 9 of 9

I'm Learning: Javascript

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.

```
<img id="image" src= "images/ling-ling.png" height="100"
     width="100" onclick="alert('Hello!')"/>
```

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");
});
```