Introduction to HCJ Coding

Code Set Source: https://codepen.io/gcarino/pen/LDgtn

Let's review what we know about these three sets of written code: HTML, CSS, and JavaScript (JS).

HTML (HyperText Markup Language) provides the basic content and structure of screens, which is enhanced and modified by other technologies like CSS and JavaScript.

CSS (Cascading Style Sheet) is used to control presentation, formatting, and layout.

JavaScript is used to control the behavior of different elements and the interactions with the end user.

```
/ HTML                          ⚙ ⌄
7      </head>
8      <body>
9        <div id='container'>
10         <div id='title'>
11           <h1>Learning Js Properly: Project #1 - Dynamic
    Quiz</h1>
12         </div>
13         <br/>
```

```
* CSS                          ⚙ ⌄
1  body {
2        font-family: Open Sans;
3  }
4
5  h1 {
6        text-align: center;
7  }
8
```

```
{} JS                          ⚙ ⌄
1  (function() {
2    var questions = [{
3      question: "What is 2*5?",
4      choices: [2, 5, 10, 15, 20],
5      correctAnswer: 2
6    }, {
7      question: "What is 3*6?",
8      choices: [3, 6, 9, 12, 18],
```

1. Within which language do you find the title for the quiz below?

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HTML

```
7      </head>
8    ▾ <body>
9        <div id='container'>
10   ▾     <div id='title'>
11   ▾       <h1>Learning Js Properly: Project #1 - Dynamic
     Quiz</h1>
12          </div>
13          <br/>
```

CSS

```
1    body {
2        font-family: Open Sans;
3    }
4
5    h1 {
6        text-align: center;
7    }
8
```

JS

```
1    (function() {
2      var questions = [{
3        question: "What is 2*5?",
4        choices: [2, 5, 10, 15, 20],
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6      }, {
7        question: "What is 3*6?",
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```

Learning Js Properly: Project #1 - Dynamic Quiz

Question 1:

What is 2*5?

- 2
- 5
- 10
- 15
- 20

Next

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```
HTML                                    ⚙ ▾
 7        </head>
 8        <body>
 9          <div id='container'>
10            <div id='title'>
11              <h1>Learning Js Properly: Project #1 - Dynamic
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```
CSS                                     ⚙ ▾
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```
JS                                      ⚙ ▾
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 7            question: "What is 3*6?",
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```

Learning Js Properly: Project #1 - Dynamic Quiz

Question 1:

What is 2*5?

- 2
- 5
- 10
- 15
- 20

Next

2. Within which language do you find the questions and answers?

🗑 HTML ⚙️ ⌄

```html
7      </head>
8   ▼  <body>
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10  ▼      <div id='title'>
11         <h1>Learning Js Properly: Project #1 - Dynamic
    Quiz</h1>
12         </div>
13         <br/>
```

✳️ CSS ⚙️ ⌄

```css
1 ▼  body {
2        font-family: Open Sans;
3    }
4
5 ▼  h1 {
6        text-align: center;
7    }
8
```

{} JS ⚙️ ⌄

```js
1 ▼  (function() {
2   ▼    var questions = [{
3          question: "What is 2*5?",
4          choices: [2, 5, 10, 15, 20],
5          correctAnswer: 2
6   ▼    }, {
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8          choices: [3, 6, 9, 12, 18],
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Learning Js Properly: Project #1 - Dynamic Quiz

Question 1:

What is 2*5?

- ● 2
- ● 5
- ● 10
- ● 15
- ● 20

Next

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HTML ⚙ ⌄

```html
 7        </head>
 8        <body>
 9            <div id='container'>
10                <div id='title'>
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    Quiz</h1>
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```

CSS ⚙ ⌄

```css
1  body {
2      font-family: Open Sans;
3  }
4
5  h1 {
6      text-align: center;
7  }
8
```

{} JS ⚙ ⌄

```javascript
1  (function() {
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6    }, {
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```

Learning Js Properly: Project #1 - Dynamic Quiz

Question 1:

What is 2*5?

- 2
- 5
- 10
- 15
- 20

Next

3. The actual answer to the first question is 10. Why does the JS code indicate 2 as correct?

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▌ HTML ⚙ ⌄

```html
 7        </head>
 8    <body>
 9        <div id='container'>
10            <div id='title'>
11                <h1>Learning Js Properly: Project #1 - Dynamic
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```

✳ CSS ⚙ ⌄

```css
1  body {
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7  }
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```

{ } JS ⚙ ⌄

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    }, {
7      question: "What is 3*6?",
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```

Learning Js Properly: Project #1 - Dynamic Quiz

Question 1:

What is 2*5?

- 2
- 5
- 10
- 15
- 20

Next

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/ HTML ⚙ ∨

```
 7          </head>
 8      <body>
 9          <div id='container'>
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```

✳ CSS ⚙ ∨

```
1  body {
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```

{} JS ⚙ ∨

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6      }, {
7          question: "What is 3*6?",
8          choices: [3, 6, 9, 12, 18],
```

Learning Js Properly: Project #1 - Dynamic Quiz

Question 1:

What is 2*5?

● 2
● 5
● 10
● 15
● 20

Next

4. Based on #3, what will be the correct answer to the second question, shown below?

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▮ HTML

```
 7        </head>
 8    ▼  <body>
 9    ▼    <div id='container'>
10    ▼      <div id='title'>
11    ▼        <h1>Learning Js Properly: Project #1 - Dynamic
      Quiz</h1>
12           </div>
13           <br/>
```

❄ CSS

```
1   body {
2        font-family: Open Sans;
3   }
4
5   h1 {
6        text-align: center;
7   }
8
```

⟨⟩ JS

```
1   (function() {
2      var questions = [{
3        question: "What is 2*5?",
4        choices: [2, 5, 10, 15, 20],
5        correctAnswer: 2
6      }, {
7        question: "What is 3*6?",
8        choices: [3, 6, 9, 12, 18],
```

Learning Js Properly: Project #1 - Dynamic Quiz

Question 2:

What is 3*6?

● 3
● 6
● 9
● 12
● 18

Prev Next

Answer: 4, because the correct answer is in the #4 slot (remember, the slots are designated 0-4).

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/ HTML

```
 7        </head>
 8    <body>
 9      <div id='container'>
10        <div id='title'>
11          <h1>Learning Js Properly: Project #1 - Dynamic
    Quiz</h1>
12        </div>
13        <br/>
```

✳ CSS

```
1   body {
2       font-family: Open Sans;
3   }
4
5   h1 {
6       text-align: center;
7   }
8
```

() JS

```
 1  (function() {
 2    var questions = [{
 3      question: "What is 2*5?",
 4      choices: [2, 5, 10, 15, 20],
 5      correctAnswer: 2
 6    }, {
 7      question: "What is 3*6?",
 8      choices: [3, 6, 9, 12, 18],
 9      correctAnswer: 4
10    }, {
11      question: "What is 8*9?",
12      choices: [72, 99, 108, 134, 156],
13      correctAnswer: 0
14    }, {
15      question: "What is 1*7?",
16      choices: [4, 5, 6, 7, 8],
17      correctAnswer: 3
18    }, {
19      question: "What is 8*8?",
20      choices: [20, 30, 40, 50, 64],
21      correctAnswer: 4
22    }];
23
24    var questionCounter = 0; //Tracks question
    number
```

Learning Js Properly: Project #1 - Dynamic

Question 2:

What is 3*6?

- 3
- 6
- 9
- 12
- 18

Pr

5. What kinds of elements are controlled by the CSS code, based on what you see here?

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▲ HTML ⚙ ⌄

```
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 8     <body>
 9        <div id='container'>
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11              <h1>Learning Js Properly: Project #1 - Dynamic
    Quiz</h1>
12           </div>
13           <br/>
```

✳ CSS ⚙ ⌄

```
 1  body {
 2        font-family: Open Sans;
 3  }
 4
 5  h1 {
 6        text-align: center;
 7  }
 8
 9  #title {
10        text-decoration: underline;
11  }
12
13  #quiz {
14        text-indent: 10px;
15        display:none;
16  }
17
18  .button {
19        border:4px solid;
20        border-radius:5px;
21        width: 40px;
22        padding-left:5px;
23        padding-right: 5px;
24        position: relative;
25        float:right;
```

{} JS ⚙ ⌄

```
 1  (function() {
 2     var questions = [{
 3        question: "What is 2*5?",
 4        choices: [2, 5, 10, 15, 20],
 5        correctAnswer: 2
 6     }, {
 7        question: "What is 3*6?",
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```

Learning **c Quiz**

Question 1:

What is 2*5?

● 2
● 5
● 10
● 15
● 20

Next

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HTML   ⚙ ▾

```
 7        </head>
 8    <body>
 9        <div id='container'>
10            <div id='title'>
11                <h1>Learning Js Properly: Project #1 - Dynamic
   Quiz</h1>
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```

✿ CSS   ⚙ ▾

```
 1  body {
 2      font-family: Open Sans;
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 5  h1 {
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 7
 8
 9  #title {
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11  }
12
13  #quiz {
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18  .button {
19      border:4px solid;
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22      padding-left:5px;
23      padding-right: 5px;
24      position: relative;
25      float:right;
```

〈〉 JS   ⚙ ▾

```
 1  (function() {
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 7          question: "What is 3*6?",
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```

Learning...   ... Quiz

Question 1:

What is 2*5?

● 2
● 5
● 10
● 15
● 20

Next

6. Predict which language will control the scoring, shown below.

Answer: As you can see, it is in JavaScript!

HTML

```html
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10             <div id='title'>
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    Quiz</h1>
12             </div>
13             <br/>
```

CSS

```css
1    body {
2        font-family: Open Sans;
3    }
4
5    h1 {
6        text-align: center;
7    }
8
```

JS

```javascript
151
152     // Computes score and returns a paragraph
    element to be displayed
153     function displayScore() {
154         var score = $('<p>',{id: 'question'});
155
156         var numCorrect = 0;
157         for (var i = 0; i < selections.length; i++) {
158             if (selections[i] ===
    questions[i].correctAnswer) {
159                 numCorrect++;
160             }
161         }
162
163         score.append('You got ' + numCorrect + '
    questions out of ' +
164             questions.length + ' right!!!');
165         return score;
166     }
167 })();
```

Learning Js Properly: Project #1 - Dynamic Quiz

You got 4 questions out of 5 right!!!

Start Over

This is just a starting point! Here are the next steps...

- Explore open source code sets from places like **codepen.io**

- Look at the various tags and commands in this lesson, as well as other examples. We will look at other code sets and see how they can be altered to customize your screens!

Now Try Out What You've Learned..and Take it Further!

Go to https://tinyurl.com/2p88c3pk to display this sample screen:

CSS Flip cards
rashonmitchell313@gmail.com + Follow

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HTML ⚙ ⌄

```
1  <!-- horizontal -->
2
3  <h4>Horizontal Flip</h4>
4  <div class="flip">
5      <div class="front" style="background-image:
   url(https://images.pexels.com/photos/540518/pexels-
   photo-540518.jpeg?
   w=1260&h=750&dpr=2&auto=compress&cs=tinysrgb)">
6          <h1 class="text-shadow">MOUNTAIN</hi>
7      </div>
8      <div class="back">
```

CSS (SCSS) ⚙ ⌄

```
1  @import url('https://fonts.googleapis.com/css?
   family=Heebo');
2
3  * {
4      box-sizing: border-box;
5      font-weight: normal;
6  }
7
8  body {
9      color: #555;
10     background: #222;
```
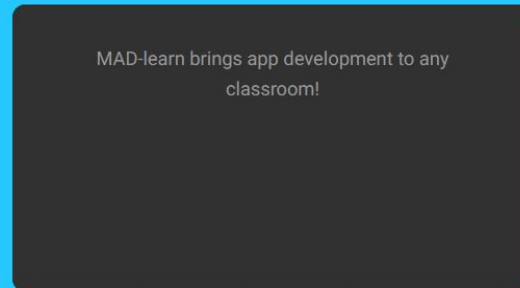
JS ⚙ ⌄

```
1
```

Horizontal Flip

MOUNTAIN

LAKE

OCEAN
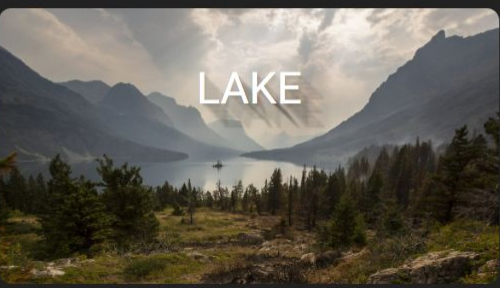
Explore the HTML code sets and try the following "hacks" for the First Card:

- **Change the title of the card's front side to MAD-learn.**
- **Delete the heading on the first card's back side and add: MAD-learn brings app development to any classroom!**
- **Replace the image on the front side of the card with one you find online.**
- **Here's an example:**

Explore the CSS code sets and try the following "hacks" for the First Card:

- Change the background color of the card's back to (**#005ECE**) "dark blue".
- Change the opacity on the back of the card so that a faded image from the front side shows under the text (about 80%).
- Change the text color of the card's back to "white" (#FFFFFF).
- Take away the reflective shadowing of the letters on the front side of the card.
- Here's an example:

Further Exploration:

Explore a bit further and make at least one more change OR make similar changes to at least one more card!

MAD-learn

MAD-learn brings app development to any classroom!