

# Introduction to Javascript

Web Authoring and Design

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# Next Week

■ Revision Week

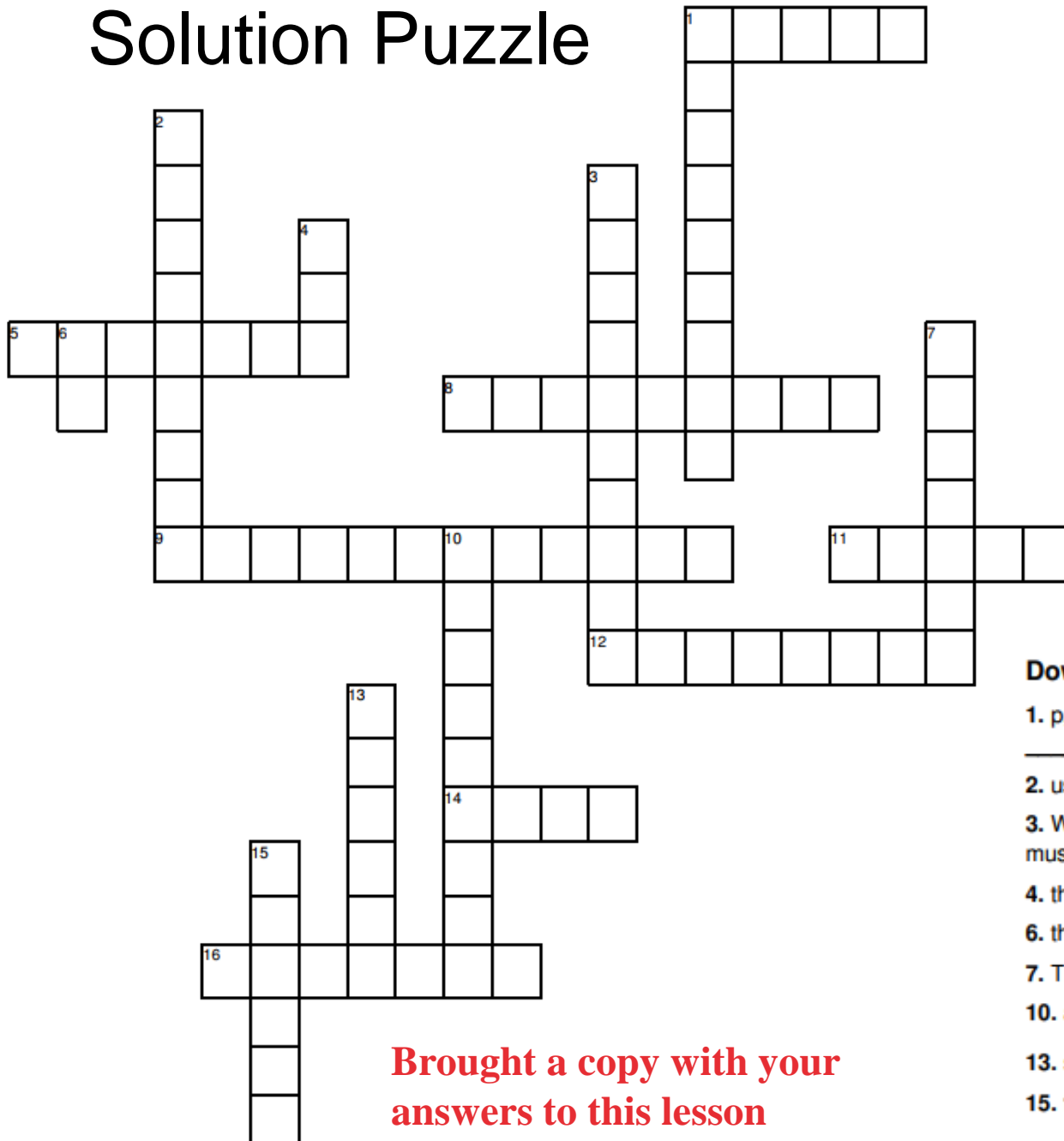
■ No Lectures

# Outline

- Review
- What is Javascript?
- Javascript Examples/Syntax
- Summary
- Review/Discussion

Example: <http://www.schillmania.com/projects/snowstorm/>

# Solution Puzzle



**Brought a copy with your answers to this lesson**

## Across

1. CSS code is placed between the \_\_\_\_\_ tags
5. there are six different \_\_\_\_\_ tags
8. the name of the < p > tag
9. 'color' and 'background-color' are examples of \_\_\_\_\_
11. the name of the < br > tag
12. The largest/smallest heading tag is < h6 >.
14. for something to show on a webpage it must be between the \_\_\_\_\_ tags
16. uses the tag < ol > to make a list

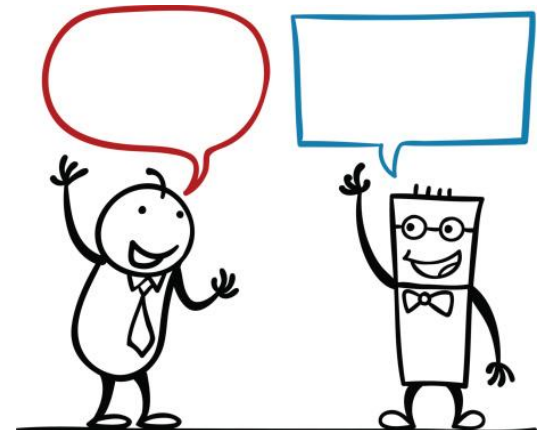
## Down

1. p, .p, and #p are examples of CSS element \_\_\_\_\_
2. uses the tag < ul > to make a list
3. When using the 'alt' attribute, the description you use must be in \_\_\_\_\_
4. the tag used to add pictures
6. the tag that makes words italicized
7. The largest/smallest heading tag is < h1 >.
10. a property that goes inside a tag to "customize" it
13. src is the \_\_\_\_\_ attribute for the < img >.
15. the tag that makes words bold

# Question

- What will the output be for the following HTML/CSS? (Why)

```
<!DOCTYPE html>
<html>
<title>Hello HTML/CSS</title>
<head>
<style>
<!--
    h4 { text-align:right; }
-->
</style>
</head>
<body>
<h4>Once, not twice, but once upon a time, ...</h4>
</body>
</html>
```



# Answer

## ■ Right aligned text

**Once, not twice, but once upon a time, ...**

Inside CSS Script, ...`<!-- -->`

(Ancient) browsers, which do not recognise `<style>` tags, will not show "weird" characters (CSS rules) because of the HTML comments.

# Question

- How do you comment in CSS Scripts?
  - ▷ e.g., Comment out lines?

# Answer

---

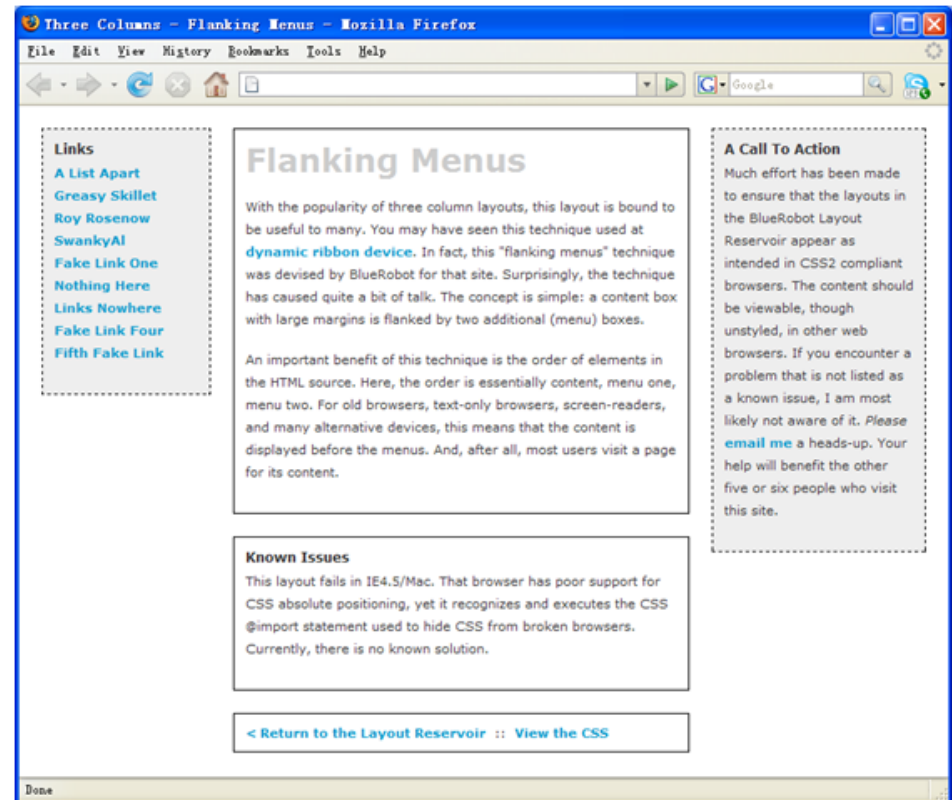
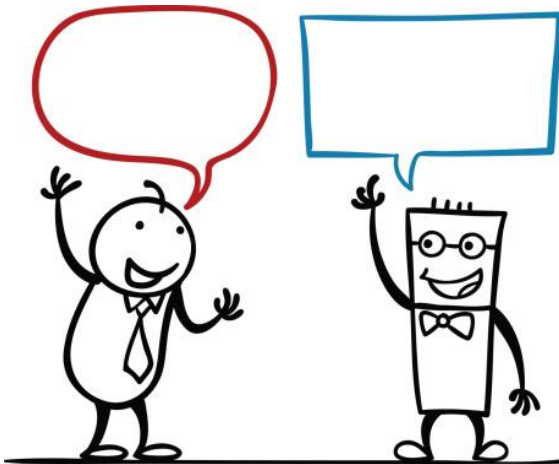
Once, not twice, but once upon a time, ...

```
<!DOCTYPE html>
<html>
<title>Hello HTML/CSS</title>
<head>
<style>
/*
    h4 { text-align:right; }
*/
</style>
</head>
<body>
<h4>Once, not twice, but once upon a time, ...</h4>
</body>
</html>
```



# Activity

- Write down on a piece of paper the CSS to display the following website design:  
(5 Minutes)



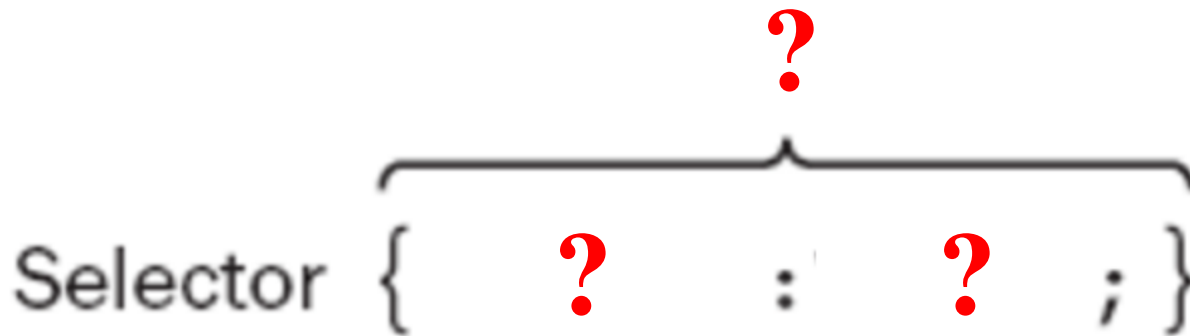
# Answer

## Three Columns Flanking Menu

```
.content {
    position:relative;
    width:auto;
    min-width:120px;
    margin:0px 210px 20px 170px;
    border:1px solid black;
    padding:10px;
    z-index:3; /* This allows the content to
overlap the right menu in narrow windows in
good browsers. */
}
#navAlpha {
    position:absolute;
    width:128px;
    top:20px;
    left:20px;
    border:1px dashed black;
    background-color:#eee;
    padding:10px;
    z-index:2;
}
#navBeta {
    position:absolute;
    width:168px;
    top:20px;
    right:20px;
    border:1px dashed black;
    background-color:#eee;
    padding:10px;
    z-index:1;
}
```

# Question

- What are the terms in CSS for the selector syntax:



# Answer

## Selector Syntax

Selector  $\overbrace{\{ \text{Property} : \text{Value} ; \}}^{\text{Declaration}}$

# Question

- What would the following HTML/CSS output?

```
<!DOCTYPE html>
<html>
<head>
</head>
<body style="font-size:120%;
           text-transform:uppercase;
           text-align:center;
           font-weight:normal;">
  <p>Once upon a time, ..</p>
  There was a cat called ..
</body>
</html>
```

# Answer

ONCE UPON A TIME, ..

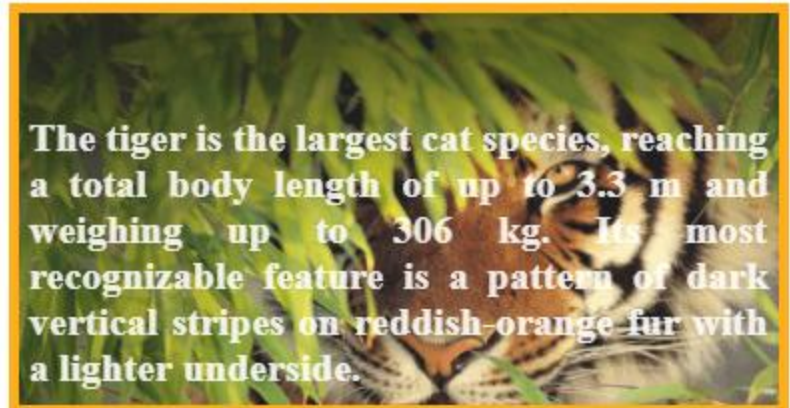
THERE WAS A CAT CALLED ..

# Question

- Write the HTML/CSS to create an image hover text overlay



mouse over the image...



# Answer

```
<!DOCTYPE html>
<html >
<head>
<style type="text/css">
  .txtOverlay{
    width:390px;
    height:206px;
    opacity:0.9;
    font-size:20px;
    font-weight:700;
    text-align:justify;
    border:5px solid #FFA500;
    padding:5px;
    background: url(img/tiger-img.png) no-repeat;
  }
  .theText{
    opacity:0;
  }
  .txtOverlay:hover .theText
  {
    opacity:0.9;
    color:#FFFFFF;
    font-size:20px;
    font-weight:700;
  }
</style>
</head>
```

```
<body>
<div class="txtOverlay">
  <div class="theText">
    <br><br>
    The tiger is the largest cat species,
    reaching a total body length of up to
    3.3 m and weighing up to 306 kg. Its
    most recognizable feature is a pattern
    of dark vertical stripes on reddish-orange
    fur with a lighter underside.<br><br>
  </div>
</div>
</body>
</html>
```



# Review

■ Javascript between the tags

■ < script >

■ ...

■ < /script >

# Review

## ■ Simple Javascript Example

```
<!DOCTYPE html>
<html>
  <head>
    <script>
      alert("Javascript run at HEAD section");
    </script>
  </head>
  <body>
  </body>
</html>
```

# Question

- What would the following HTML/JS output?

```
<!DOCTYPE html>
<html>
  <head>
    <script>
      ALERT("Hello");
    </script>
  </head>
  <body>
  </body>
</html>
```

# Answer

- ❑ Nothing
- ❑ Javascript is case-sensitive

```
<!DOCTYPE html>  
<html>  
  <head>  
    <script>  
      alert("Hello");  
    </script>  
  </head>  
  <body>  
  </body>  
</html>
```

```
<!DOCTYPE html>  
<html>  
  <head>  
    <script>  
      ALERT("Hello");  
    </script>  
  </head>  
  <body>  
  </body>  
</html>
```

# Question

■ What would the following HTML/JS do?

```
<!DOCTYPE html>
<html>
<body bgcolor="white">
  <p>First Javascript Program</p>
  <script type="text/javascript">
    alert("Click OK to change the background color.");
    document.bgColor = "00FF00";
  </script>
</body>
</html>
```

# Answer

- Popup, select OK, background changes to green

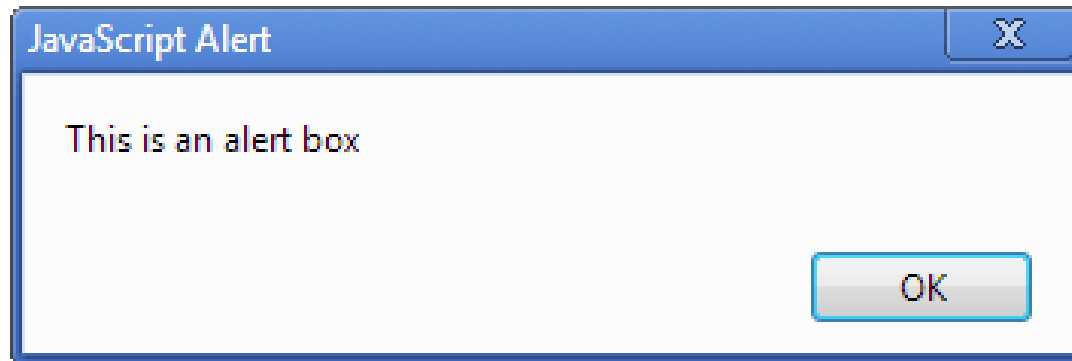
# Popup boxes

- JavaScript introduced three dialog boxes that work well enough for alerting, confirming and prompting for values

```
alert()  
confirm()  
prompt()
```

# Alert Boxes

- These dialog boxes are helpful to raise and alert, or to get confirmation on any type of input from the user

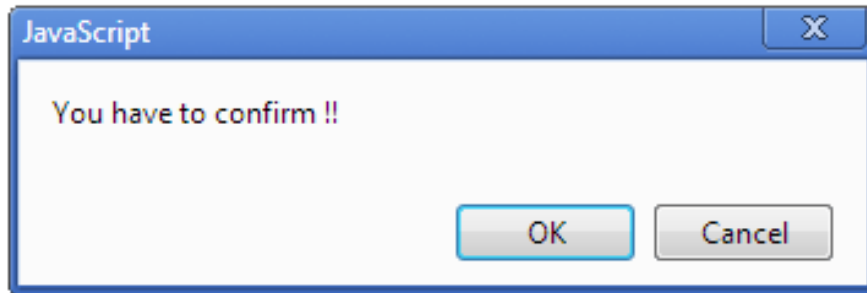


```
alert('Your message here');
```



# Button Triggers

Click Here to show alert box



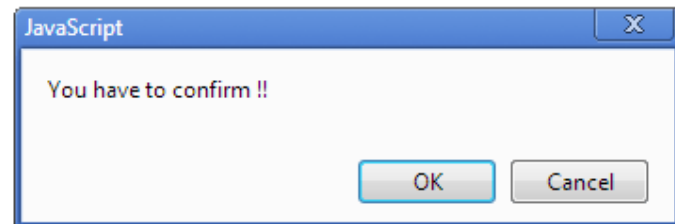
```
<!DOCTYPE html>
<html>
<body>
  <input type="button"
        value="Click Here to show alert box"
        onclick="alert('This is an Alert Box');" />
</body>
</html>
```

# Confirm Dialog

```
<!DOCTYPE html>
<html>
<body bgcolor="white">
  <p>First Javascript Program</p>
  <script type="text/javascript">
    alert("Click OK to change the background color !!!");
    document.bgColor = "red";
  </script>
</body>
</html>
```

```
<html>
<head>
<script type="text/javascript">
  function confirmMesage ()
  {
    var conVal = confirm("You have to confirm !!");
    if (conVal == true)
    {
      val = "Confirmed !!";
    }
    else
    {
      val = "Cancelled !!";
    }
    alert(val);
  }
</script>
</head>
<body>
  <form>
    <input type="button"
      onclick="confirmMesage () "
      value="Click here to confirm" />
  </form>
</body>
</html>
```

Click here to confirm



# Question

- How do you declare a function in Javascript? Write down an example HTML/JS program

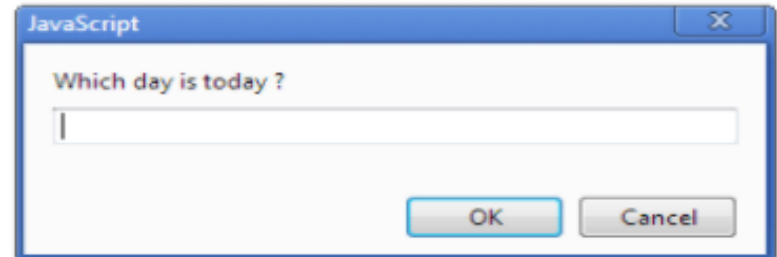
# Answer

```
<html>
<head>
<script type="text/javascript">
function promptUser() {
    var iDay = prompt("Which day is today ?", "");
    if (iDay != null)
    {
        alert("Today is " + iDay);
    }
    else
    {
        alert("You should enter a Day !!");
    }
}
</script>
</head>
<body>
<form>
<input type="button"
        onclick="promptUser()"
        value="Click here to enter a day !" />
</form>
</body>
</html>
```

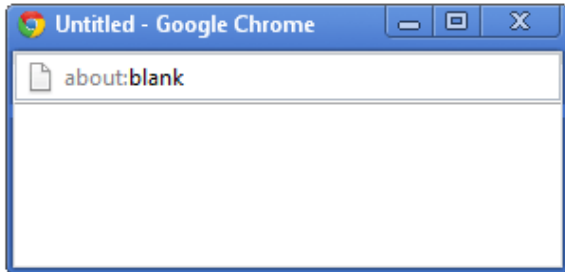
# Prompt Box

```
<html>
<head>
<script type="text/javascript">
function promptUser() {
    var iDay = prompt("Which day is today ?", "");
    if (iDay != null)
    {
        alert("Today is " + iDay);
    }
    else
    {
        alert("You should enter a Day !!");
    }
}
</script>
</head>
<body>
<form>
<input type="button"
        onclick="promptUser()"
        value="Click here to enter a day !!" />
</form>
</body>
</html>
```

Click here to enter a day !!



# Javascript Popup Window



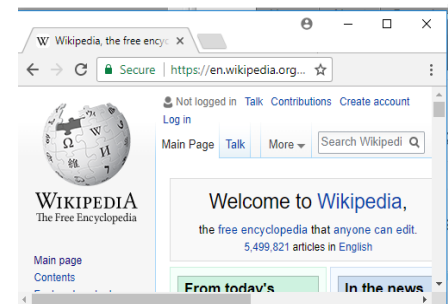
Syntax:

```
window.open(url, windowName, "attributes");
```

```
<html>
<head>
<script type="text/javascript">
    function popWindow() {
        var newWindow = window.open("", "", "width=300, height=200");
    }
</script>
</head>
<body>
    <button onclick="popWindow()">Open New Window</button>
</body>
</html>
```

# Parameters New Window

```
<html>
<head>
<script type="text/javascript">
    function popWindow() {
        var newWindow = window.open("http://www.msn.com",
                                     "_blank",
                                     "top=100, left=100, width=800, height=500,
                                     menubar=yes,toolbar=yes, scrollbars=yes, resizable=yes");
    }
</script>
</head>
<body>
    <button onclick="popWindow()">Open New Window</button>
</body>
</html>
```



# Question

- Write a Javascript function which when called will open a new window



# Answer

```
<html>
<head>
<script type="text/javascript">
    function popWindow() {
        var newWindow = window.open("http://www.msn.com",
            "_blank",
            "top=100, left=100, width=800, height=500,
            menubar=yes,toolbar=yes, scrollbars=yes, resizable=yes");
    }
</script>
</head>
<body>
    <button onclick="popWindow()">Open New Window</button>
</body>
</html>
```

# Question

- How do you declare a variable in Javascript?

# Answer

■ 'var' keyword

e.g., `var value = 0;`

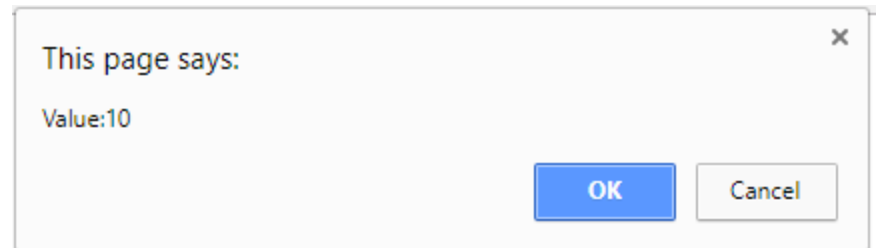
# Question

- Write a small HTML/JS example, which as:
  1. Function
  2. For loop
  3. Confirm dialog
  4. Triggered from the HTML  
(e.g., when you click 'go')

# Answer

```
<!DOCTYPE html>
<html>
  <head>
    <script>
      function test()
      {
        var value = 0;
        for (var i=0; i<10; ++i)
        {
          value++;
        }
        confirm("Value:" + value);
      }
    </script>
  </head>
  <body>
    <button onclick="test()">Go</button>
  </body>
</html>
```

Go



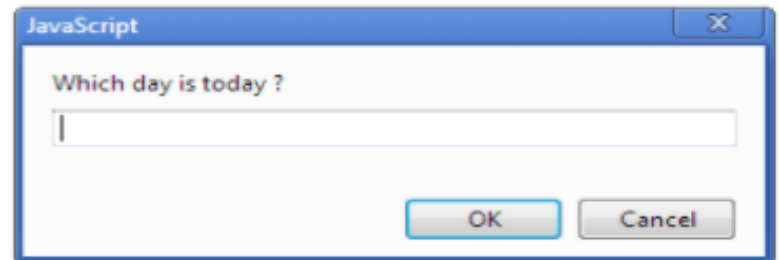
# Question

- Write a small HTML/JS script that shows a popup dialog asking you to enter a string

# Answer

```
<html>
<head>
<script type="text/javascript">
function promptUser() {
    var iDay = prompt("Which day is today ?", "");
    if (iDay != null)
    {
        alert("Today is " + iDay);
    }
    else
    {
        alert("You should enter a Day !!");
    }
}
</script>
</head>
<body>
<form>
<input type="button"
        onclick="promptUser()"
        value="Click here to enter a day !" />
</form>
</body>
</html>
```

Click here to enter a day !!



# Summary

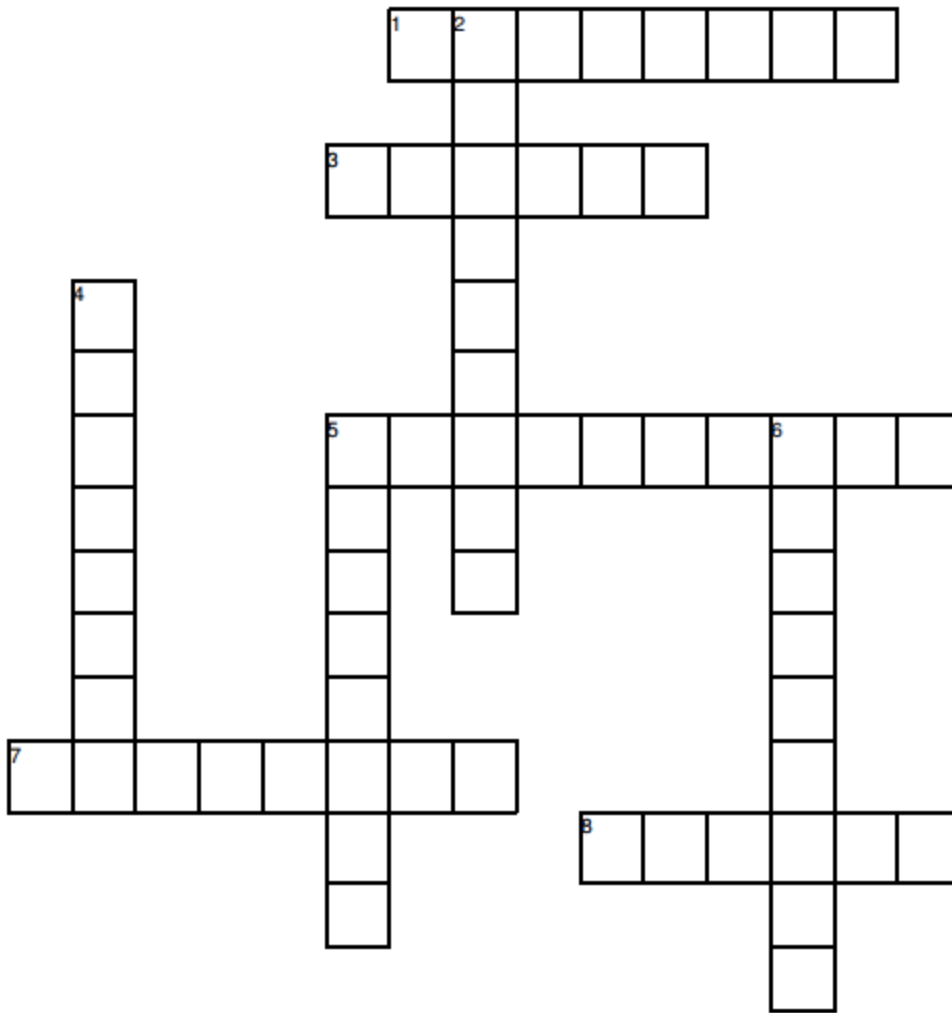
- Overview of Javascript
- Basic Formatting
  - ▷ Script, Functions, ...
- Altering webpage operation (through Javascript)
- Hands-On/Practical



# This Week

- \*No Lecture Next Week
  - *Revision Week*
- Review Slides
- Read Associated Chapters
- Weekly Tasks
  - ▷ Update GitHub Account/Webpage
  - ▷ Crossword
- **Online Quizzes**

# Crossword Puzzle Solve for Next Lesson



## Across

1. class selectors can be used xxxxxxxx times within a document
3. ID selectors must be xxxxxx within a document
5. selectors are used to select elements that are nested within another element
7. sign used to represent the universal selector
8. elements allow selection of the first letter of a paragraph

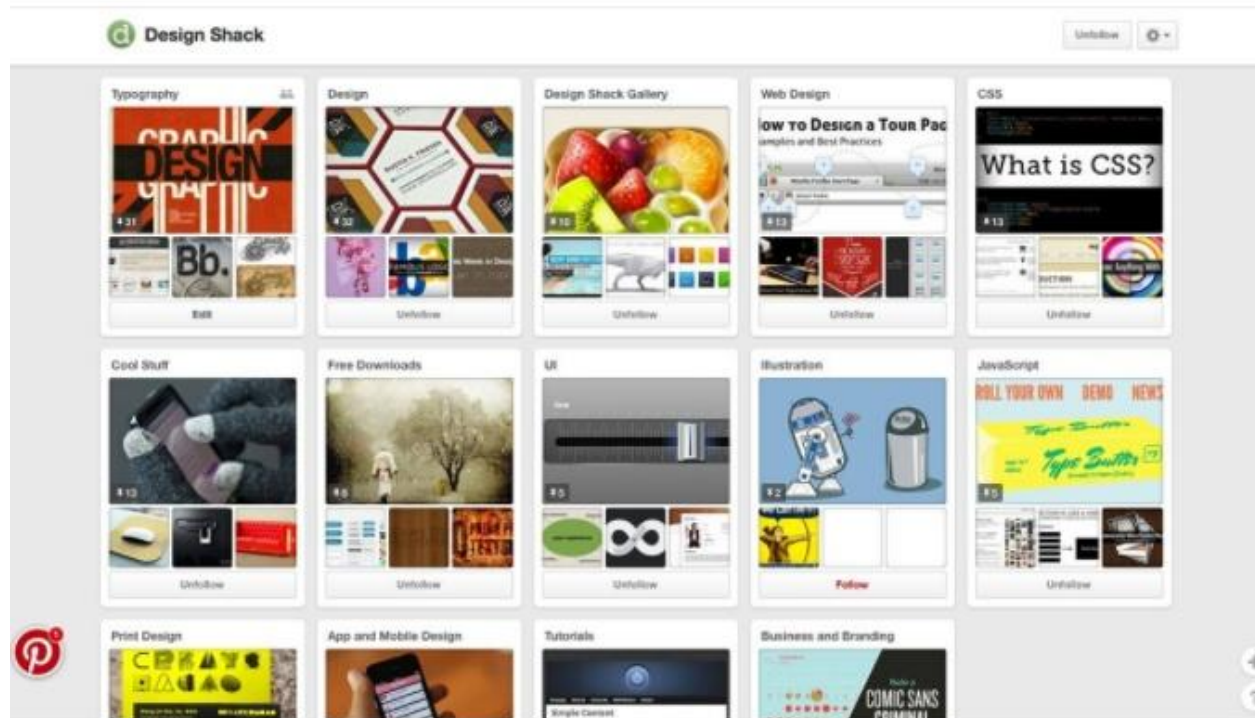
## Down

2. used to select any element
4. selectors are used to select any HTML immediately following an element
5. used to contain logical divisions of the content of an HTML file
6. selectors allow selection based on some characteristic of the element, such as color

Print out the crossword with your solutions  
and bring along to the next Lesson

# Questions/Discussion

# Challenge



- Implement a Pinterest type website that uses cards for everything, including navigation, to help users move through the site. It's one of the most effective outlines employing card-style design out there. Users of all ages seem to figure it out with ease.

# Modern Web Development

