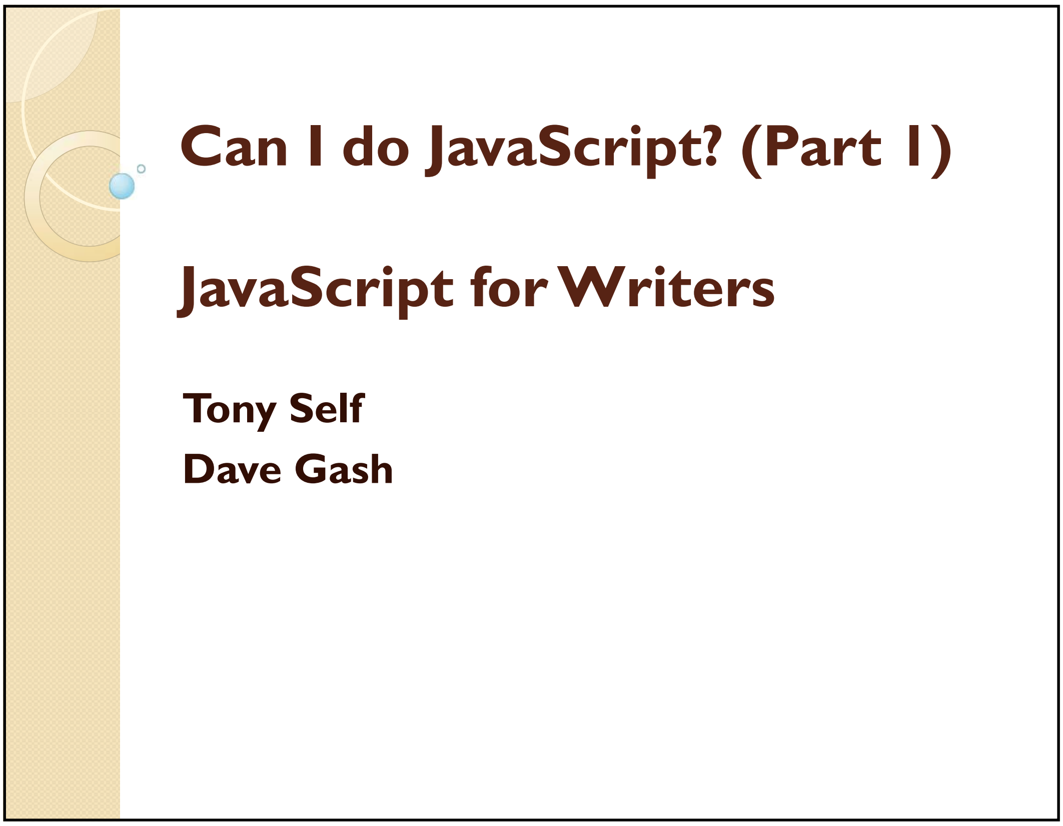
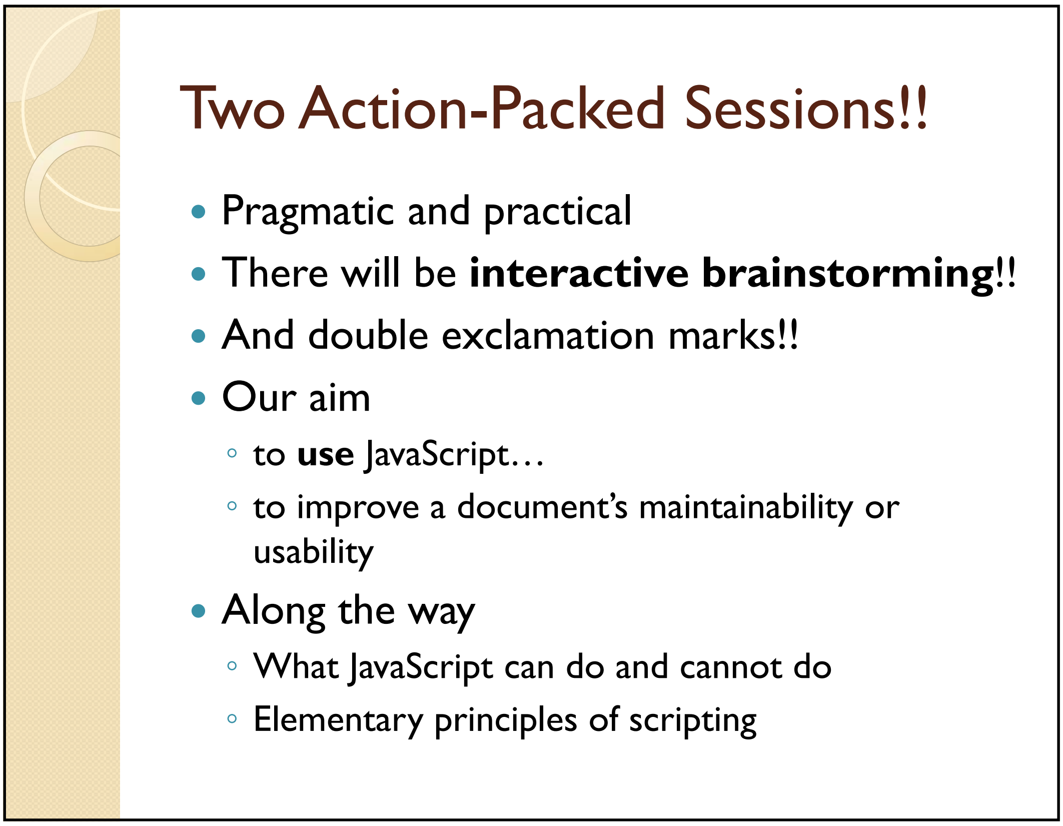


Can I do JavaScript? (Part 1)

JavaScript for Writers

Tony Self
Dave Gash

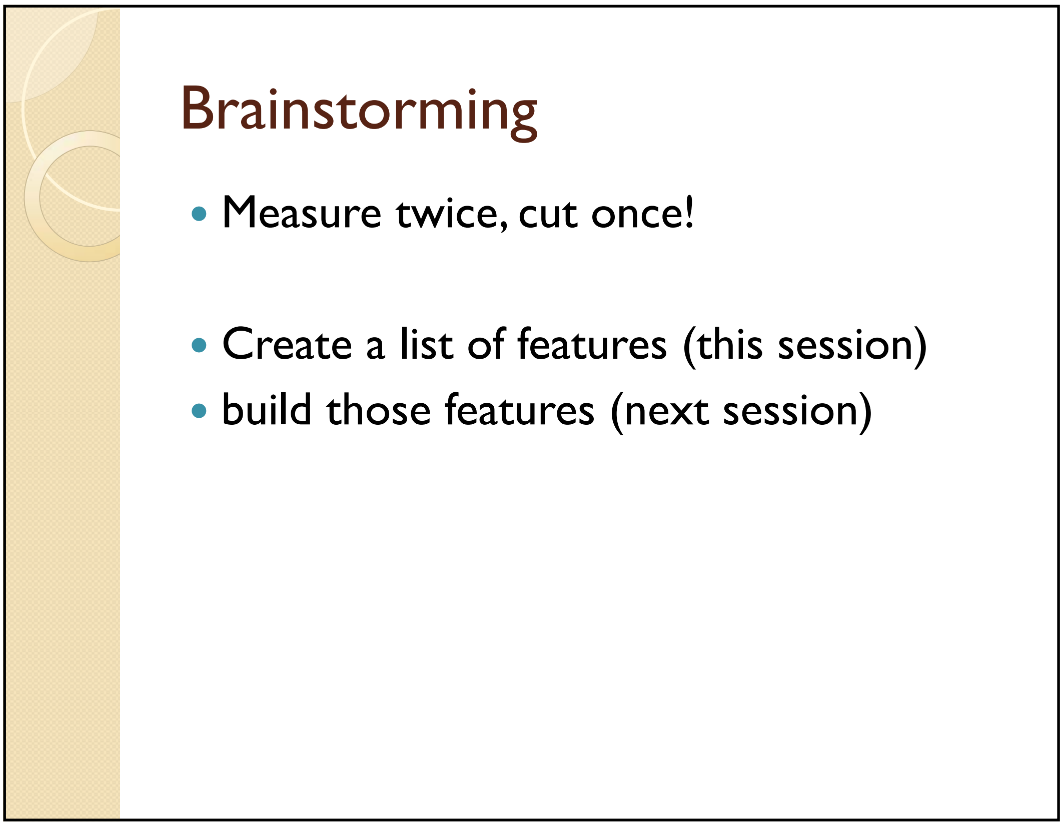
1



Two Action-Packed Sessions!!

- Pragmatic and practical
- There will be **interactive brainstorming**!!
- And double exclamation marks!!
- Our aim
  - to **use** JavaScript…
  - to improve a document's maintainability or usability
- Along the way
  - What JavaScript can do and cannot do
  - Elementary principles of scripting

2

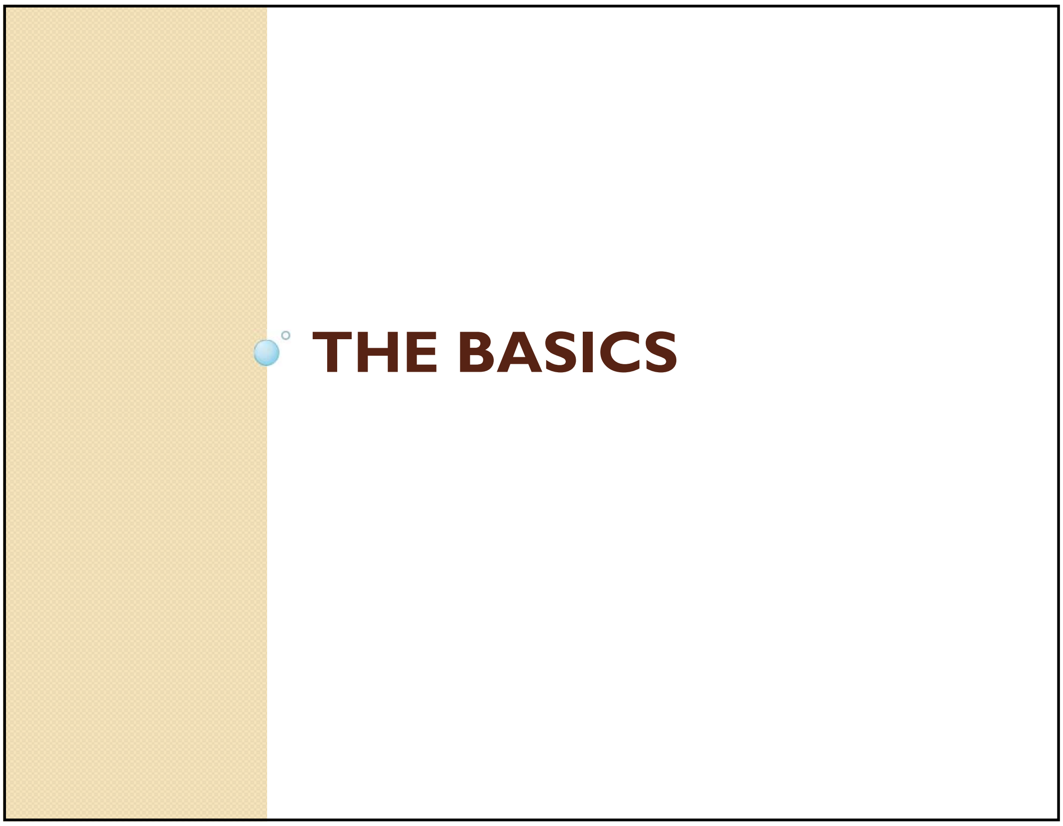


Brainstorming

- Measure twice, cut once!

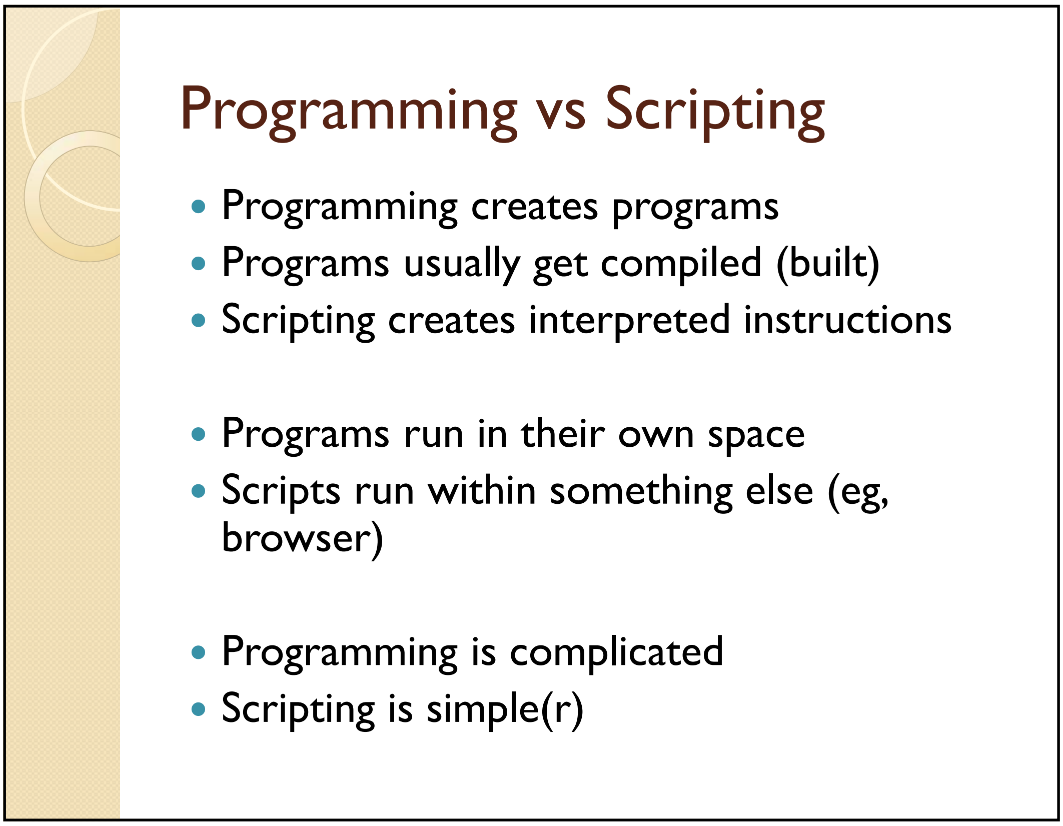
- Create a list of features (this session)
- build those features (next session)

3



THE BASICS

4



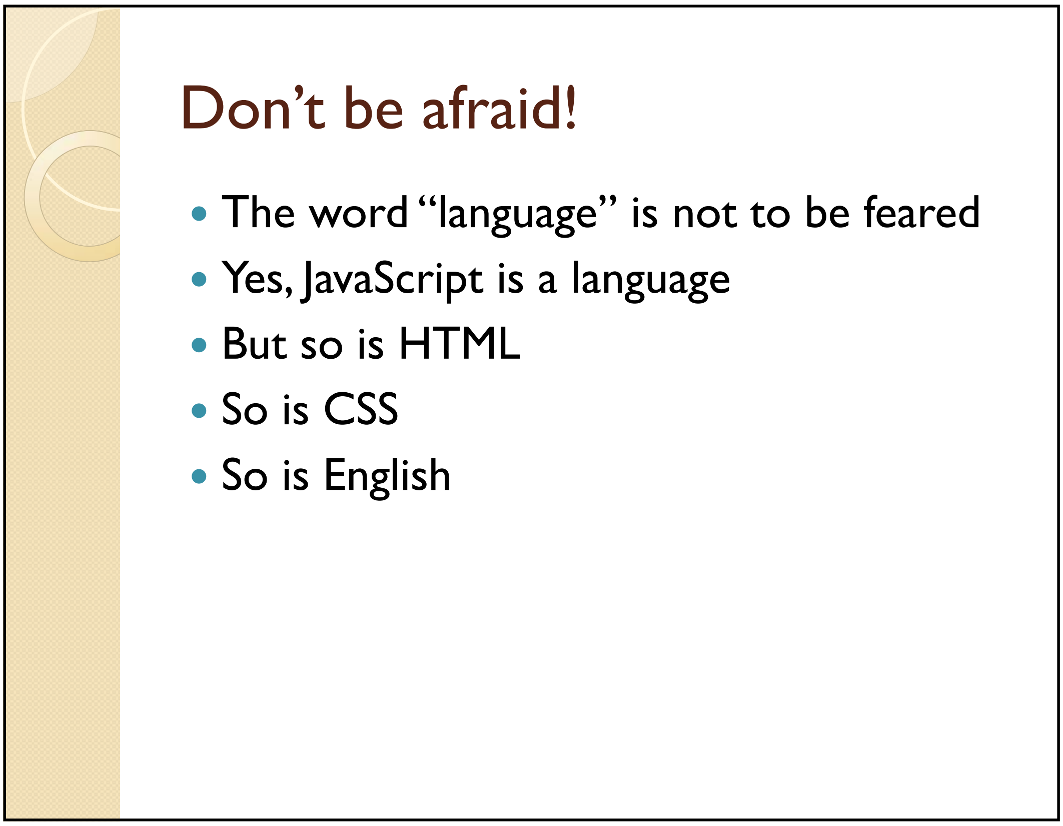
Programming vs Scripting

- Programming creates programs
- Programs usually get compiled (built)
- Scripting creates interpreted instructions

- Programs run in their own space
- Scripts run within something else (eg, browser)

- Programming is complicated
- Scripting is simple(r)

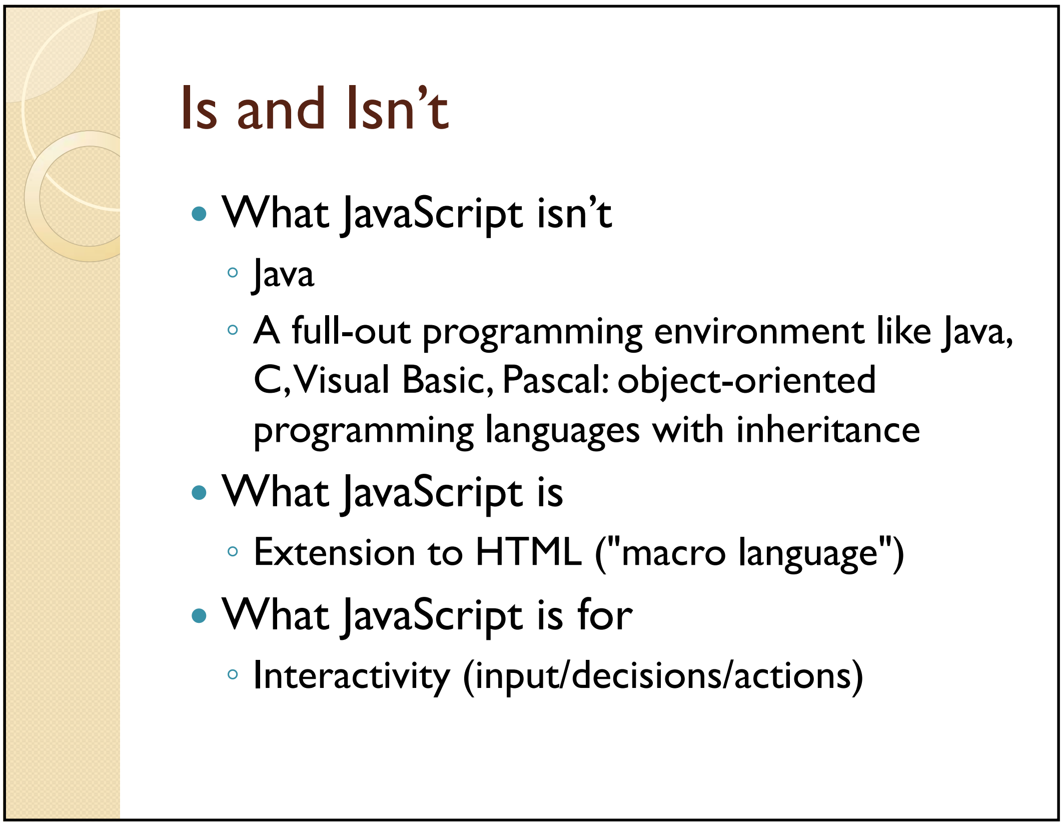
5



Don’t be afraid!

- The word “language” is not to be feared
- Yes, JavaScript is a language
- But so is HTML
- So is CSS
- So is English

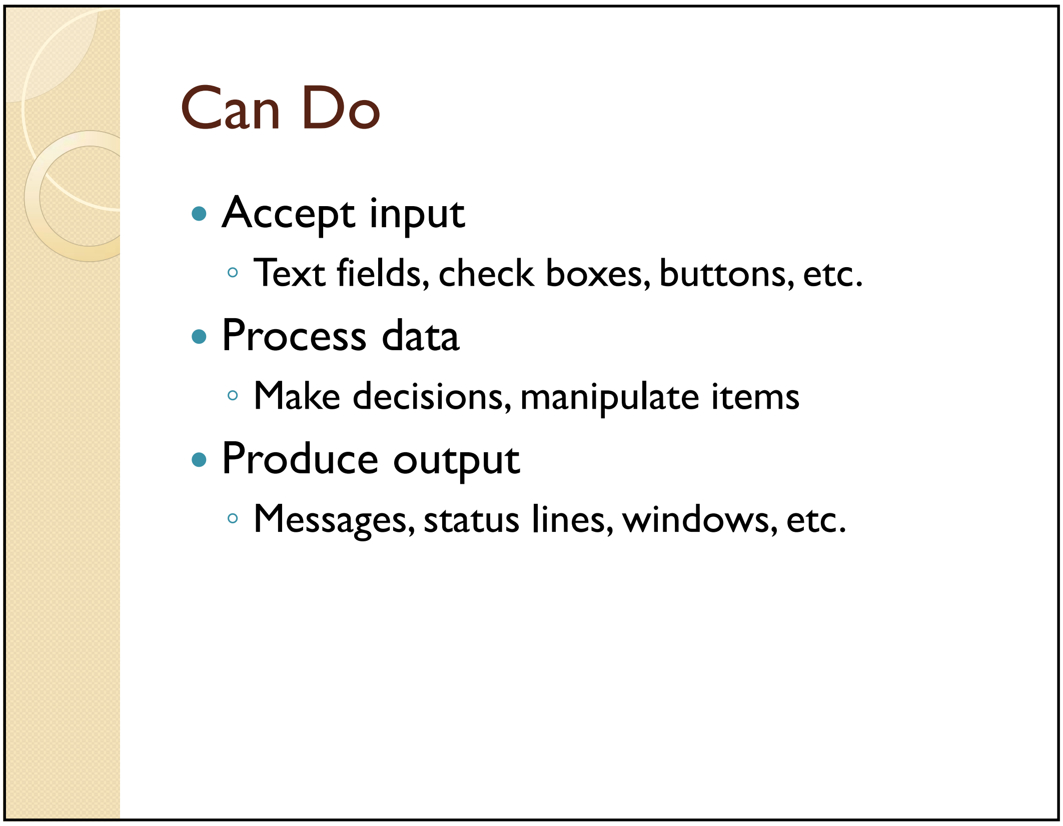
6



Is and Isn’t

- What JavaScript isn’t
  - Java
  - A full-out programming environment like Java, C, Visual Basic, Pascal: object-oriented programming languages with inheritance
- What JavaScript is
  - Extension to HTML ("macro language")
- What JavaScript is for
  - Interactivity (input/decisions/actions)

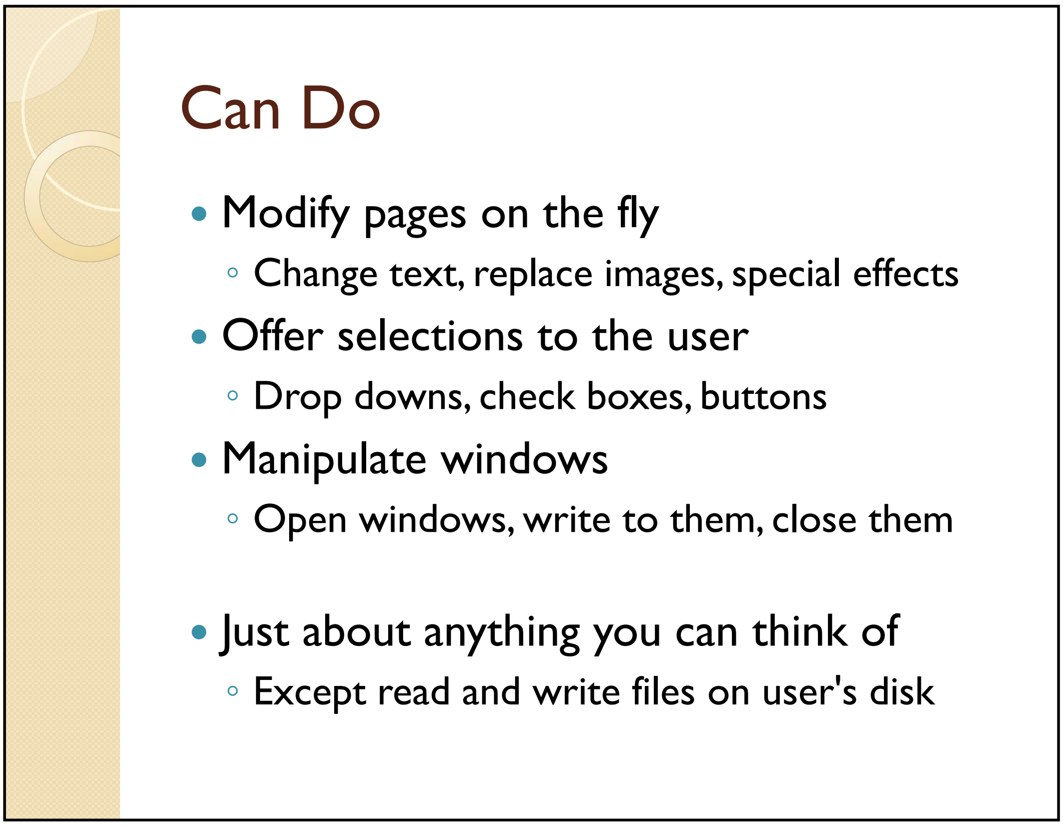
7



Can Do

- Accept input
  - Text fields, check boxes, buttons, etc.
- Process data
  - Make decisions, manipulate items
- Produce output
  - Messages, status lines, windows, etc.

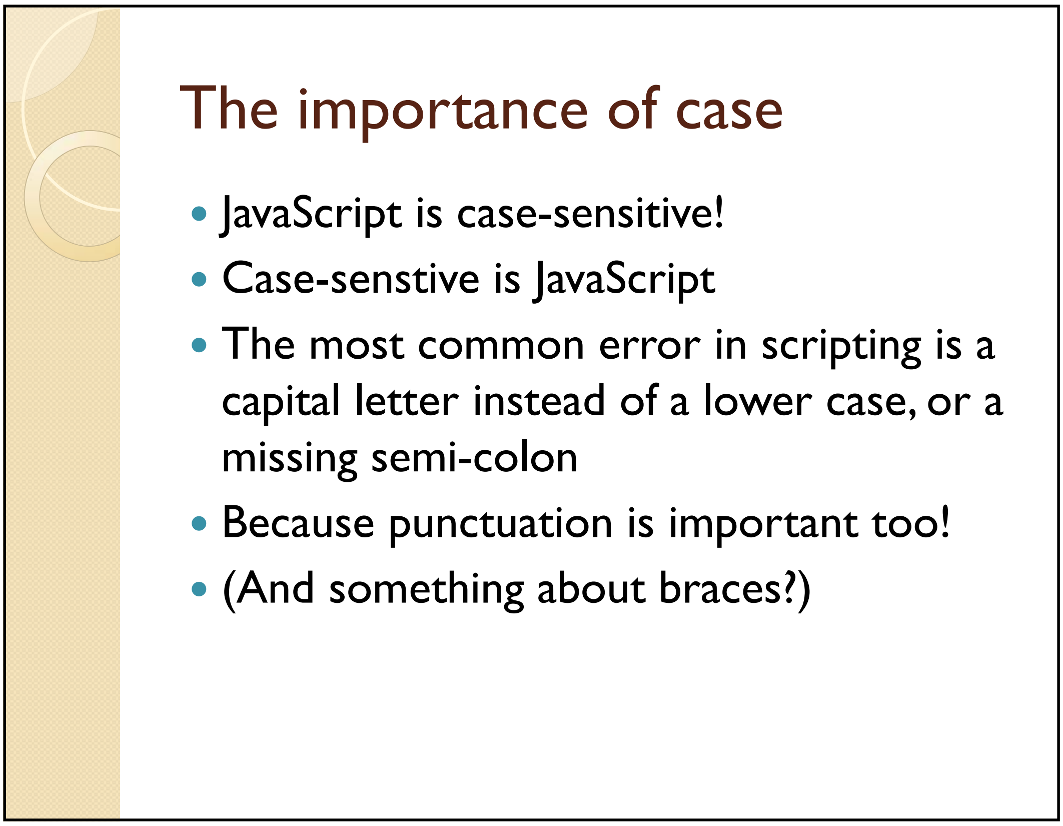
8



Can Do

- Modify pages on the fly
  - Change text, replace images, special effects
- Offer selections to the user
  - Drop downs, check boxes, buttons
- Manipulate windows
  - Open windows, write to them, close them
- Just about anything you can think of
  - Except read and write files on user's disk

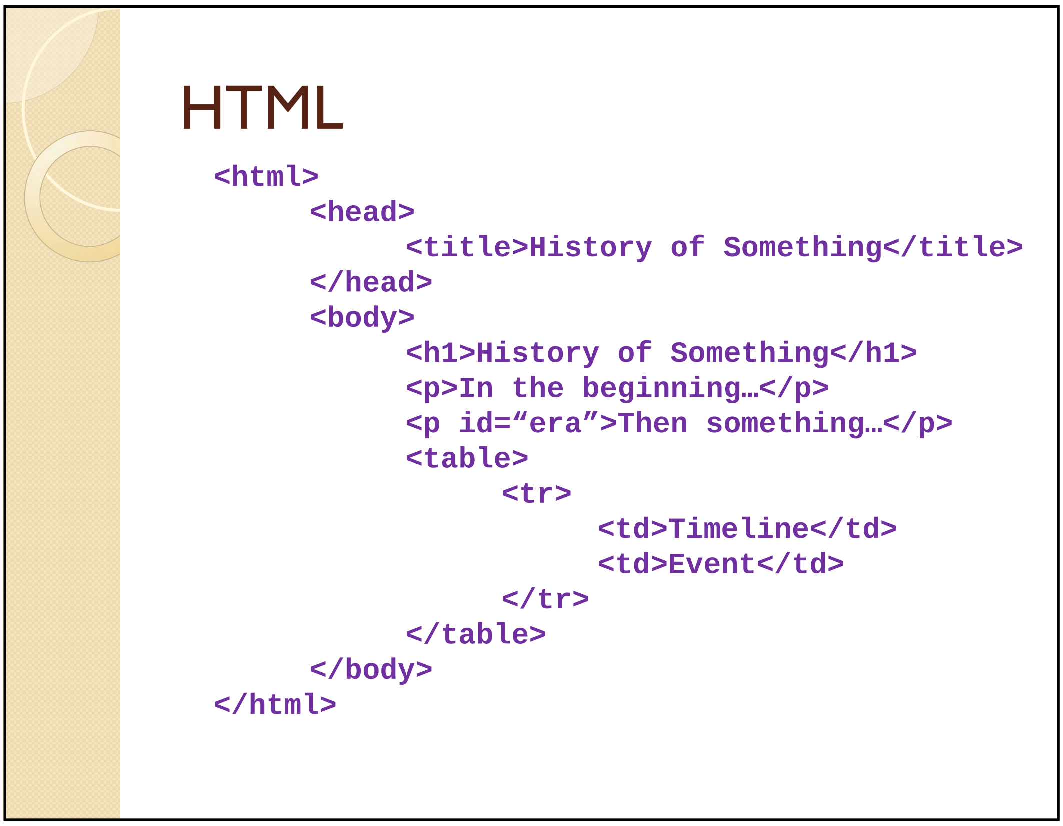
9



The importance of case

- JavaScript is case-sensitive!
- Case-senstive is JavaScript
- The most common error in scripting is a capital letter instead of a lower case, or a missing semi-colon
- Because punctuation is important too!
- (And something about braces?)

10



HTML

```
<html>
     <head>
          <title>History of Something</title>
     </head>
     <body>
          <h1>History of Something</h1>
          <p>In the beginning…</p>
          <p id="era">Then something…</p>
          <table>
               <tr>
                    <td>Timeline</td>
                    <td>Event</td>
               </tr>
          </table>
     </body>
</html>
```

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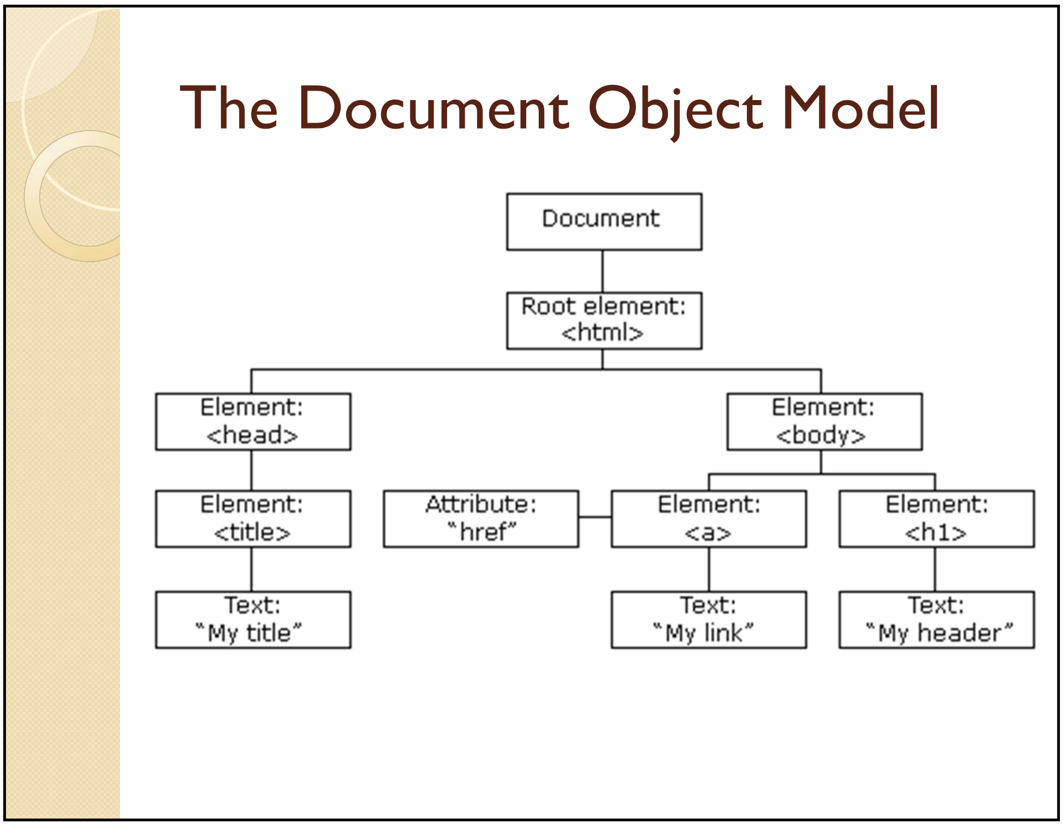

The Document Object Model

Document

Root element: <html>

Element: <head>

Element: <body>

Element: <title>

Attribute: "href"

Element: <a>

Element: <h1>

Text: "My title"

Text: "My link"

Text: "My header"

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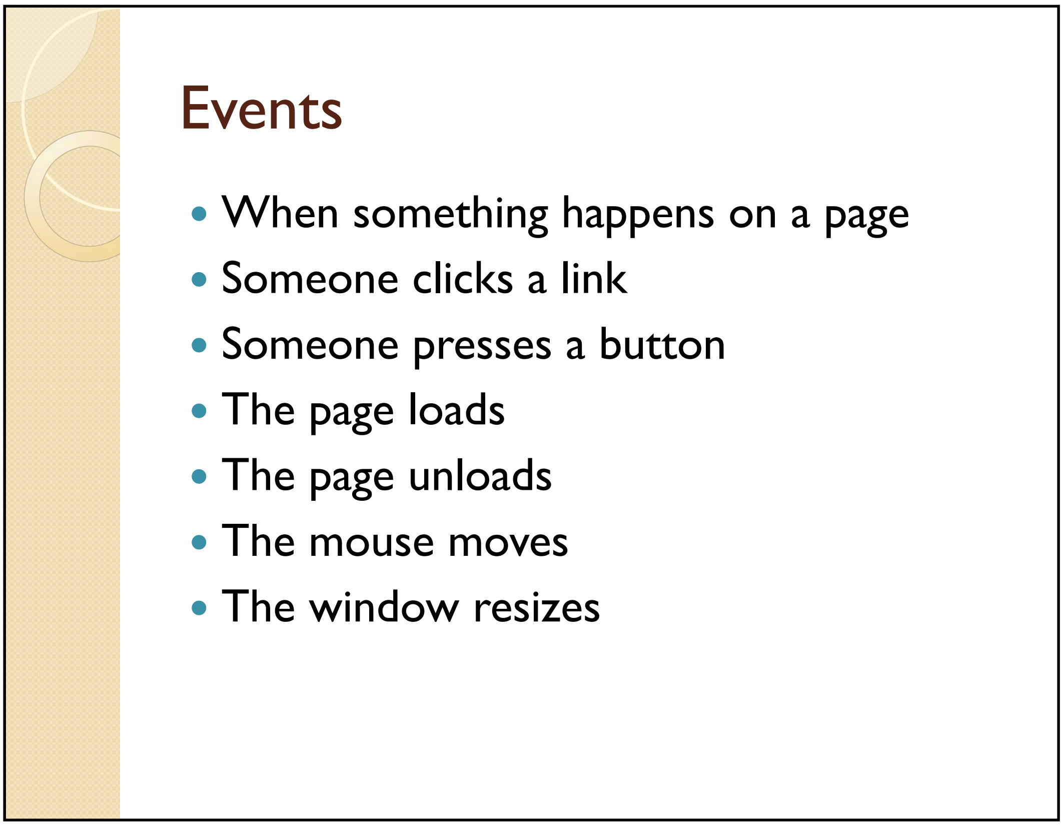

Events

- When something happens on a page
- Someone clicks a link
- Someone presses a button
- The page loads
- The page unloads
- The mouse moves
- The window resizes

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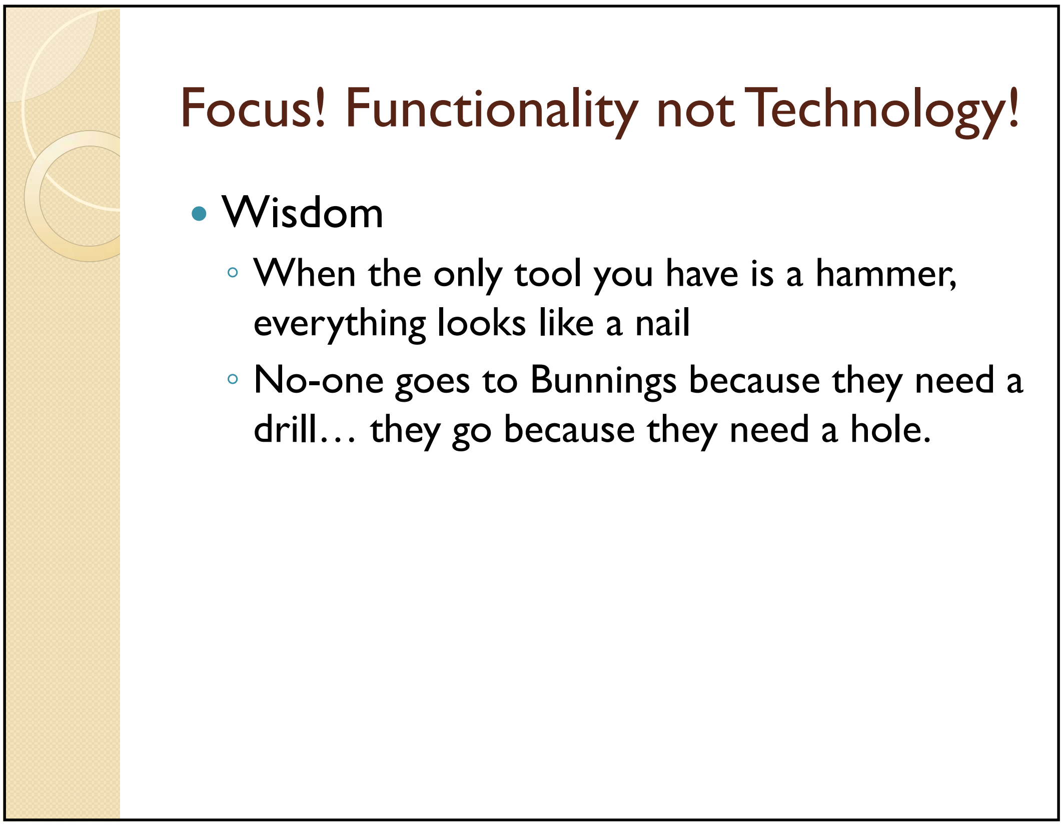

Focus! Functionality not Technology!

- Wisdom
  - When the only tool you have is a hammer, everything looks like a nail
  - No-one goes to Bunnings because they need a drill… they go because they need a hole.

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ASSEMBLING A LIST OF FEATURES

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Implementing JavaScript

```
<script language="javascript">

script code goes here!

</script>
```

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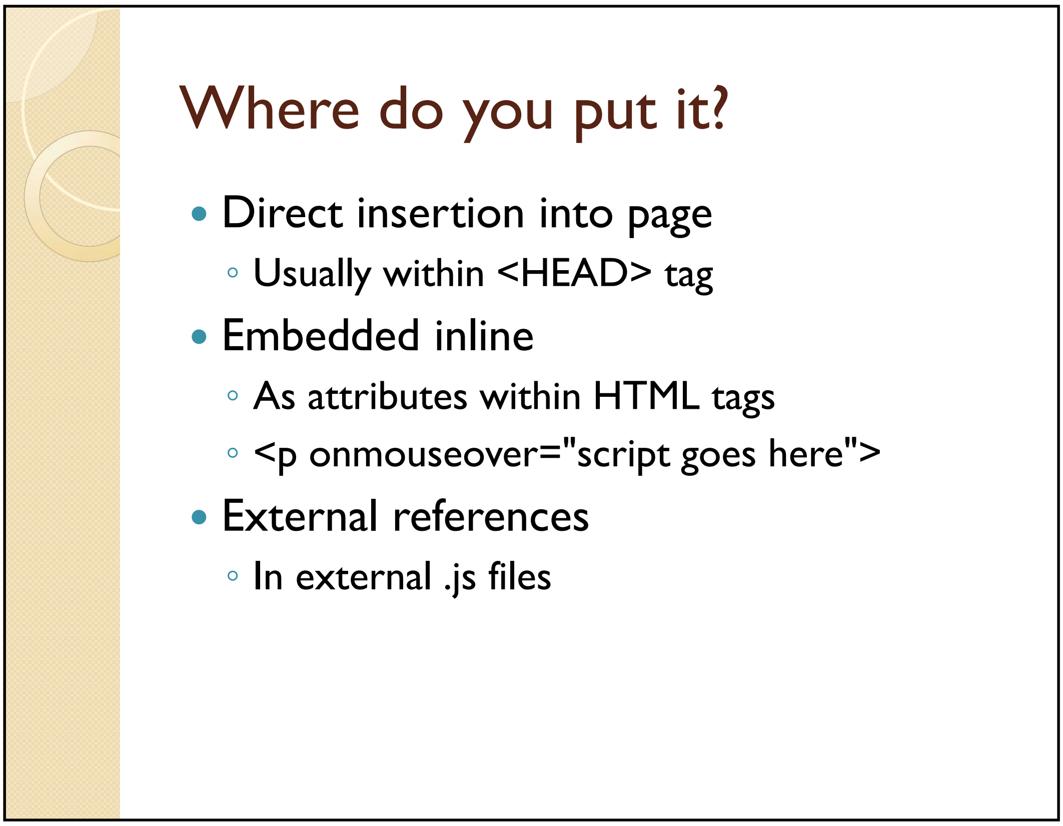

Where do you put it?

- Direct insertion into page
  - Usually within <HEAD> tag
- Embedded inline
  - As attributes within HTML tags
  - <p onmouseover="script goes here">
- External references
  - In external .js files

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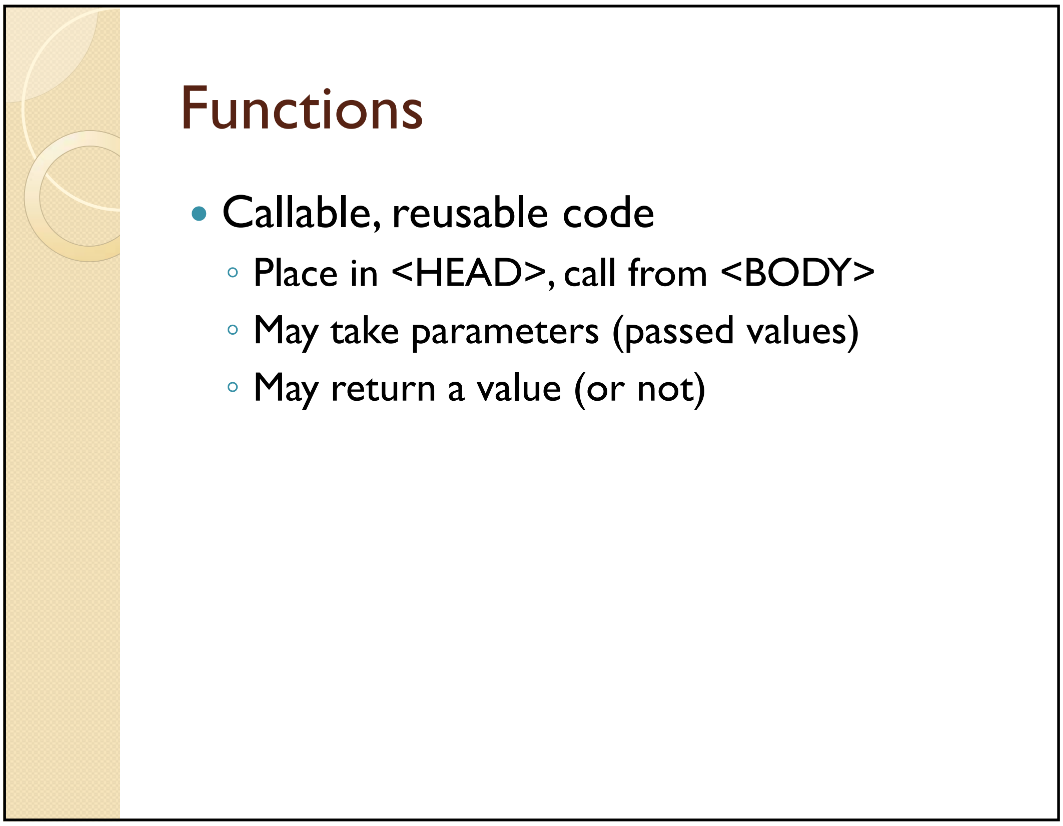

Functions

- Callable, reusable code
  - Place in <HEAD>, call from <BODY>
  - May take parameters (passed values)
  - May return a value (or not)

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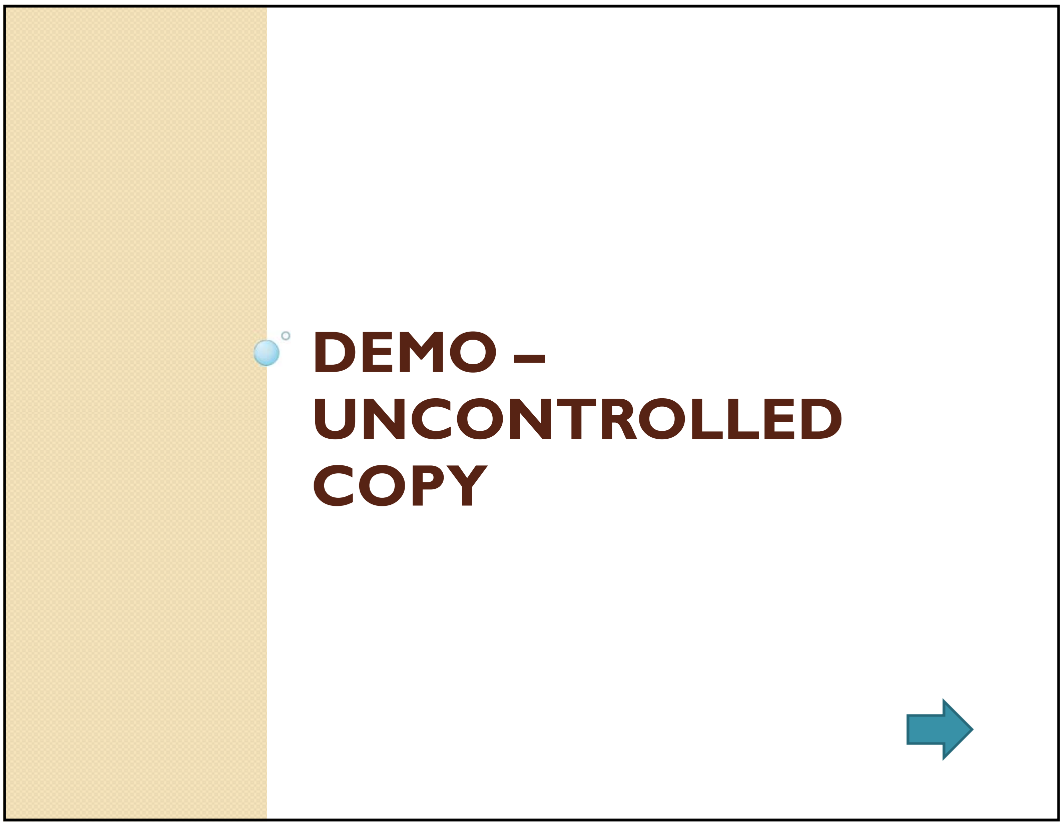

DEMO – UNCONTROLLED COPY

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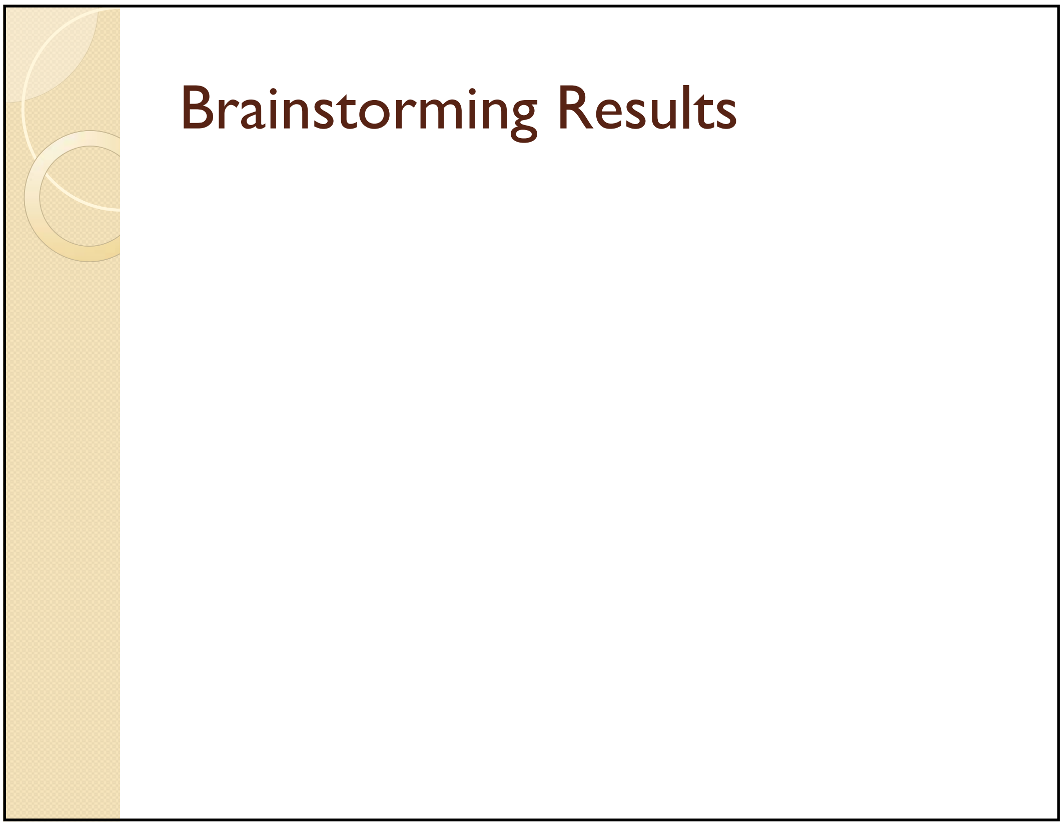

Brainstorming Results

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