



Programming

- Why is programming fun?
 - Finally, there is the delight of working in such a tractable medium. The programmer, like the poet, works only slightly re-moved from pure thought-stuff. He builds his castles in the air, from air, creating by exertion of the imagination. Few media of creation are so flexible, so easy to polish and rework, so readily capable of realizing grand conceptual structures.

Source: Frederick P. Brooks, Jr. *The Mythical Man-Month Essays on Software Engineering*.



Announcements

- Grades are published in Catalyst Gradebook





Announcements

- Quick Click quizzes resume Monday!
- Bring your clickers on Monday!



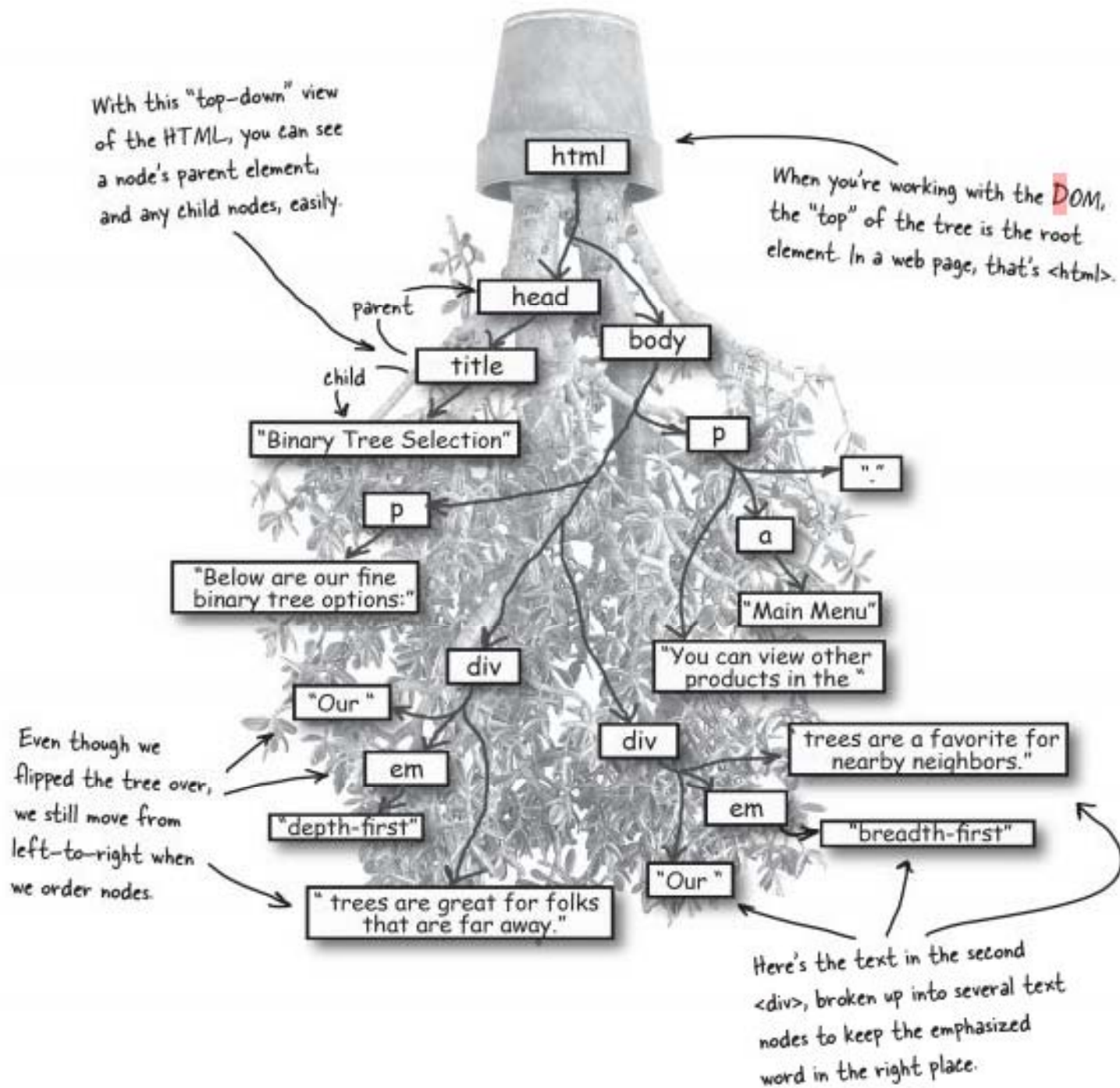
dom, dom, d-dom,
dom-dom dom-dom
d-ah-m, d-ah-ah-m
dom-a, dom-a, dom-a,
d-ah-ah-m,
The beat goes o-o-n
dom-a, dom-a, dom-a,
d-ah-ah-ah-m....

Are you catching
the new tune
and this new
way of looking at
Web pages?

DOCUMENT OBJECT MODEL

With this "top-down" view of the HTML, you can see a node's parent element, and any child nodes, easily.

When you're working with the **DOM**, the "top" of the tree is the root element. In a web page, that's `<html>`.





The DOM Tree

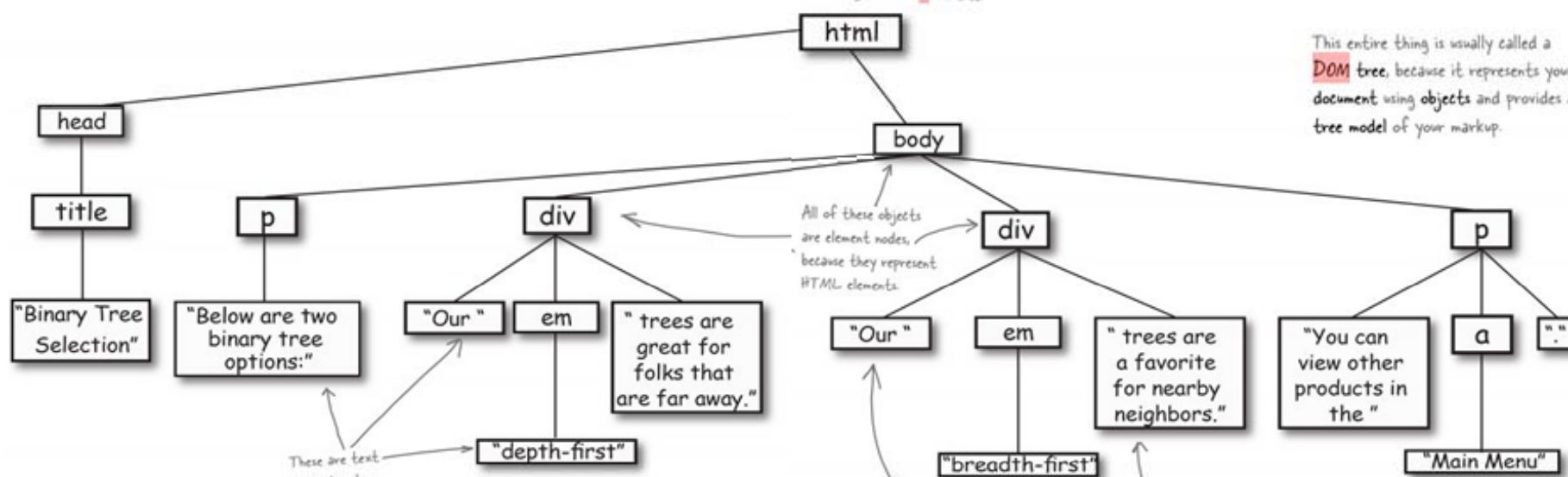
A new type of tree: the **DOM** tree

Once the browser has your markup with the `<html>` element at the top, it creates a new object for each node in the tree. The result is a bunch of objects, all "connected" together, like you see here:

This entire thing is usually called a **DOM** tree, because it represents your document using objects and provides a tree model of your markup.

We've ditched the tree image... we figure
you can't see it anyway.

`<html>` is the root
element of the
DOM tree.



These are text
node objects.

All of these objects
are element nodes,
because they represent
HTML elements.

Order is still preserved, as
elements and text appear in
exactly the same order as
they do in the HTML markup.



DOM Exercise 3

- DOM Exercise 3
 - *With a neighbor, discuss what happens when the line of code in red runs, or executes:*





DOM Exercise 3

```
<form>
<label for="animal">
  Enter an animal:</label>
  <input type="text" id="animal" name="animal" />
</form>
<script type="text/javascript">
  //other code here
  animal=document.getElementById("animal").value;
  //other code here
</script>
```



DOM Exercise 3

- What is **document**?
 - `<body>`
- What does **getElementById** do?
 - Looks for an HTML element
- What does **"animal"** do?
 - Specifies the name of the id to find
- Use "animal" or 'animal'?
 - Use either one; they're the same in JS.



DOM Exercise 3

- What does **.value** mean?
 - Grabs the value entered by the user in the animals text box
- Explain **animals =** and what it does.
 - Assignment statement
 - Assigns the results of everything on the righthand side to animals.



Announcement

- Shreyas has previous Quick Writes
 - Pick them up if you haven't already



Common problem; easy fix

PROBLEMS WITH PROJECT 2B



A stop-it dead story killer....

HTML

- Handles white space

```
var story = "";  
story = '<p>Once upon a time, there lived a wizened old wizard who lived in  
the heart of an oak tree.</p>  
<p>He lived for vast eons in the tree, dreaming until one day....'
```

JavaScript

- Fumbles it

```
var story = "";  
story = '<p>Once upon a time, there lived a wizened old wizard who lived in  
the heart of an oak tree.</p><p>He lived for vast eons in the tree, dreaming  
until one day....'
```



Other problems