Theming from the Ground Up

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InterMedia
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About Me

- Megan McDermott (aka “drupalchick”)
- Web designer/developer since 1997
- Working with Drupal since 2007 , full-time since May, 2011
- Portfolio: http://meganmcdermott.com
- Drupal.org: http://drupal.org/user/258172

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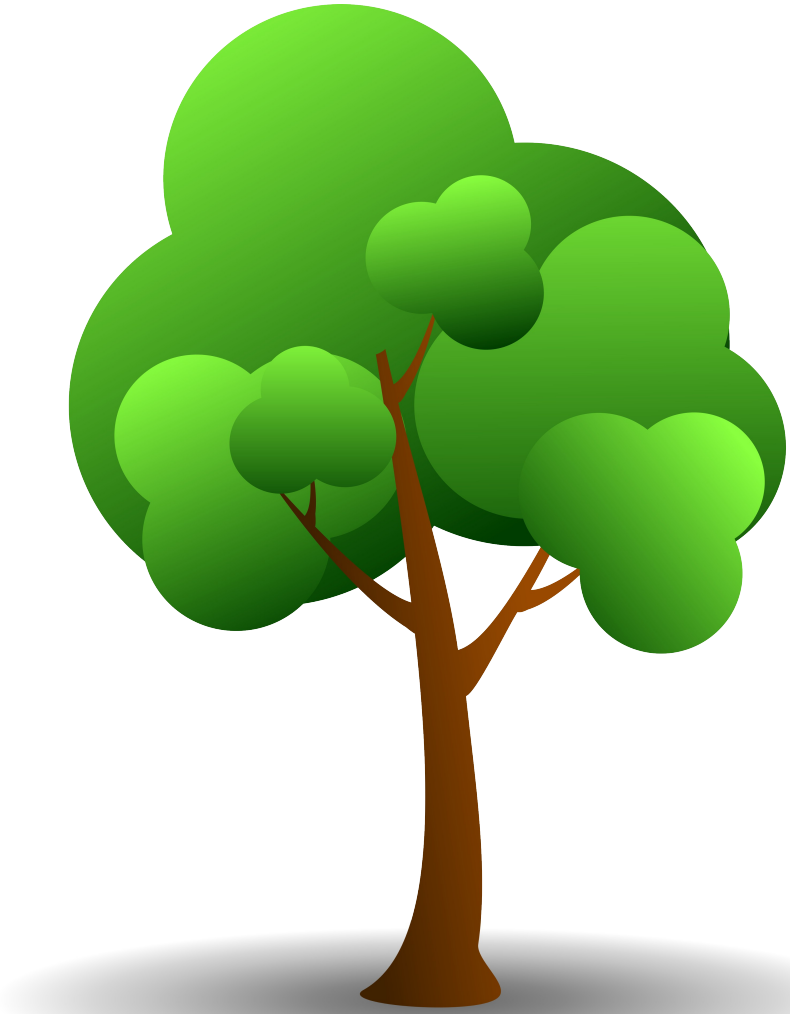
Theming from the Ground Up

- Building a theme from the bottom-up
- Often people get started by customizing exiting themes
  - These are complex



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What is a theme?

- Defines the structure (HTML) and appearance (CSS) of your Drupal site
- Similar to a template, but broader
- Encompasses anything the user sees on the page
- Facilitates:
  - Placement of content and user-interface bits
  - Design implementation (CSS)
  - Interactivity (JavaScript)

Types of Themes

Generic theme

Designed to be used for many sites, with many configurations (e.g. Bartik)

Custom theme

Designed for a specific site with a specific design (may or may not use a base theme)

Base theme

Generic theme designed to be used as a starting point for a custom theme (e.g. Zen)

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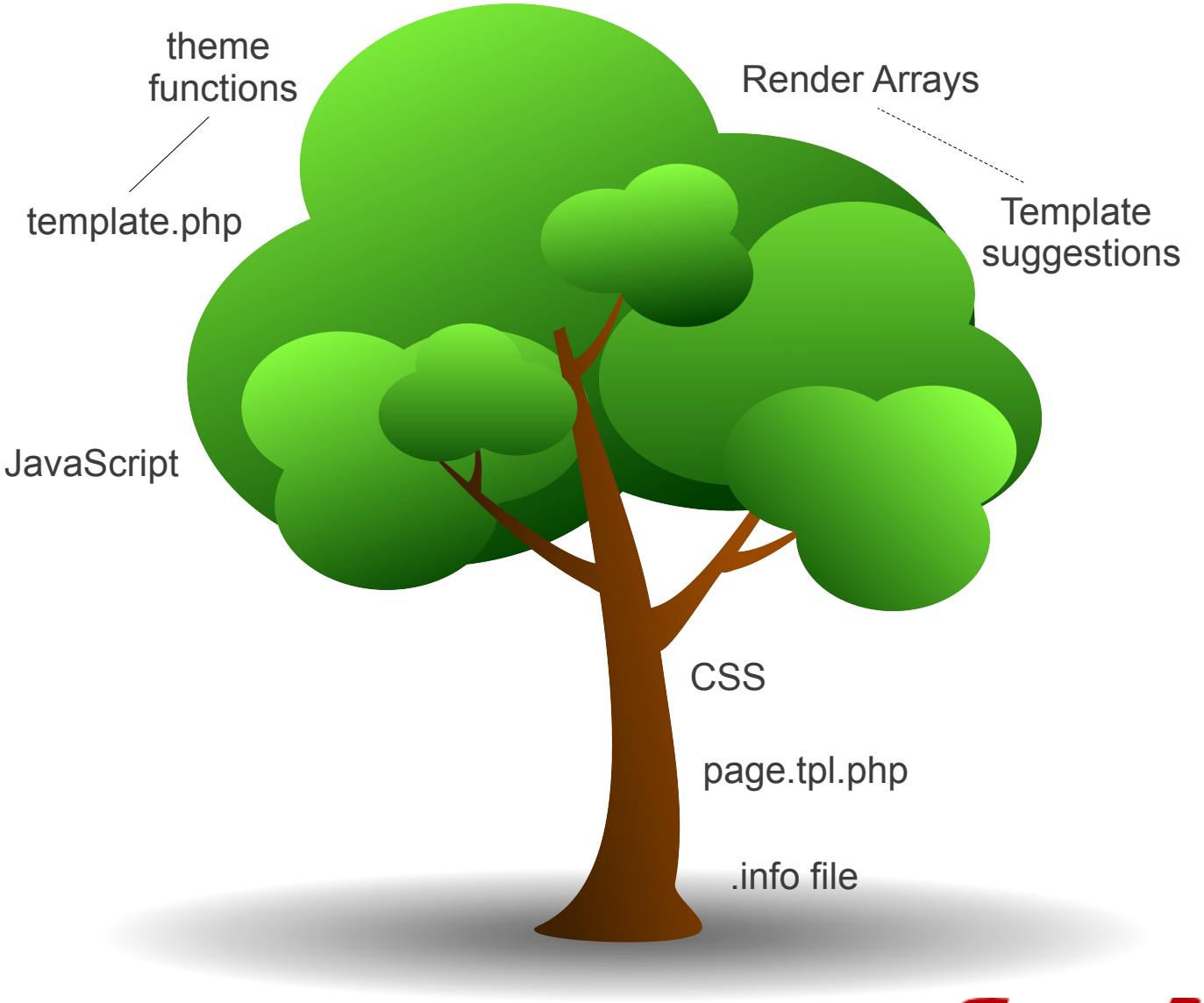
What's new in Drupal 7

- Separate html.tpl.php and page.tpl.php
- Content region required (content placed as a block)
- Render Arrays – ability to hide/show fields in a node template
  - Regions also output using render()
- hook_form_alter in theme layer
- Little things
  - Primary and Secondary links are now Main and Secondary menu
  - Sidebar left and Sidebar right ($left and $right) are now Sidebar first and Sidebar second

What's new in Drupal 7

- Little things (cont.)
  - Several variables removed (search, mission statement, footer message); search box is now a block
  - Clear-block class is now Clearfix
  - Title prefix and Title suffix variables
  - CSS files loaded by LINK and @import (gets around IE limit of 31 linked stylesheets)
- Complete list of changes:
  http://drupal.org/update/themes/6/7

Tree of theming



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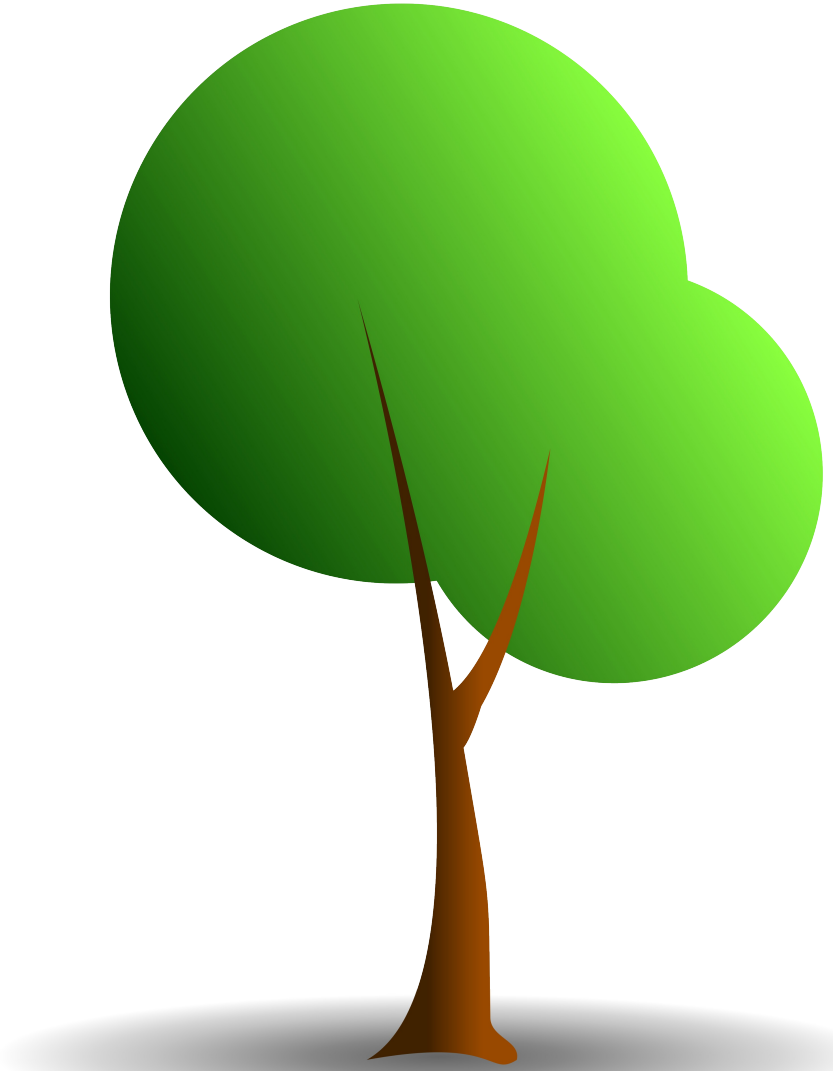
Process

1. Create folder structure
2. Create Info file
3. Create page.tpl.php
    i. Template variables
    ii. Regions
4. Add CSS
5. Advanced:
    i. Template overrides
    ii. Render Arrays
    iii. Custom theme functions
    iv. JavaScript



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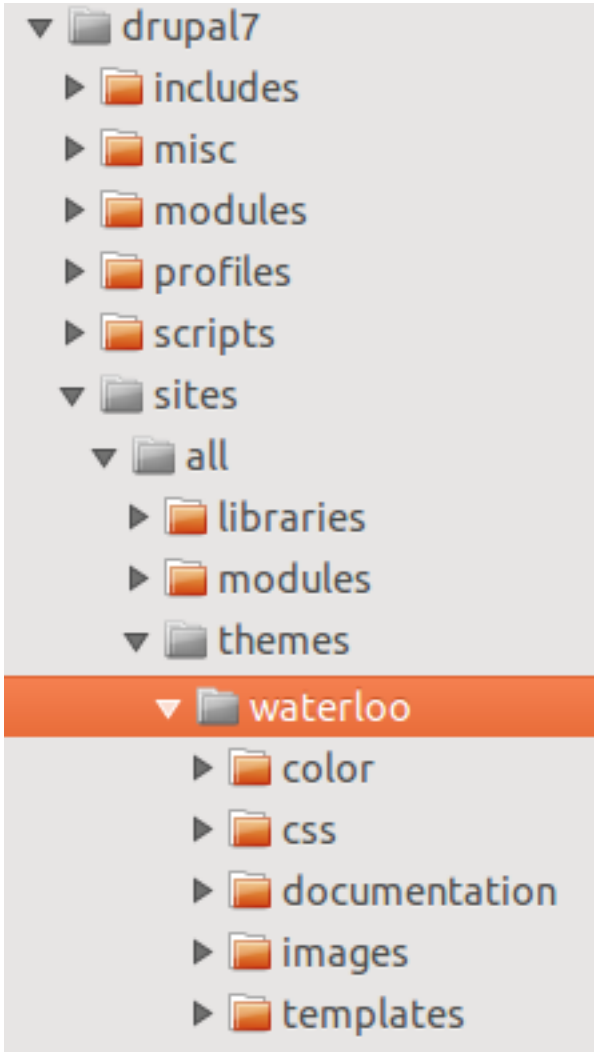
Folder Structure

- Theme goes in a folder in sites/all/themes or sites/(yoursite)/theme
- Useful to create separate folders for CSS, images, scripts, templates



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The info file

- Tells Drupal basic information about your theme:
  - Name + Description (shows up in Appearance area)
  - Drupal version
  - Template language
  - **Regions**
  - CSS Files
  - Scripts
  - Features

Sample .info file

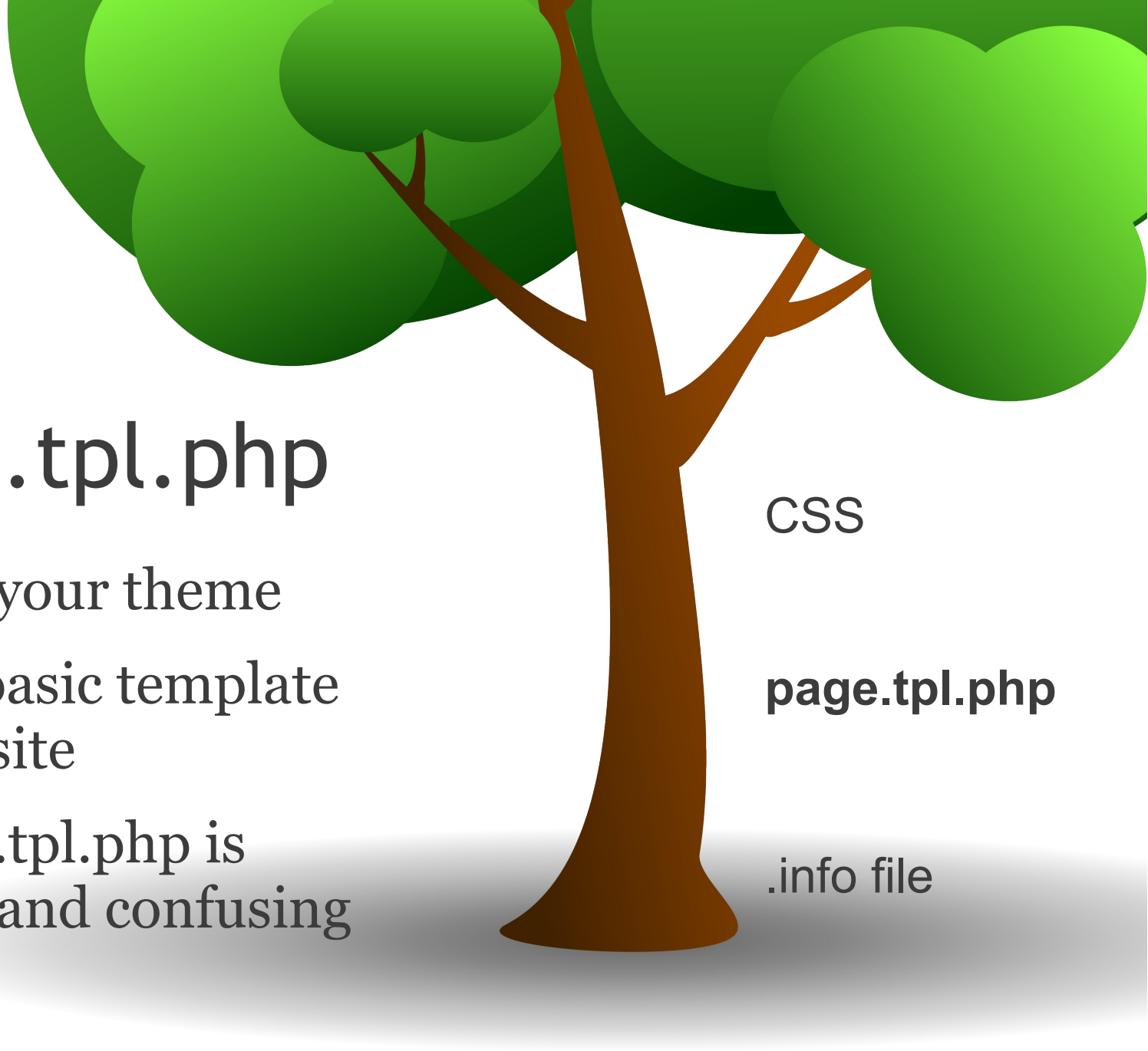
```
name = Waterloo
description = A responsive, colourable theme with many possible uses
core = 7.x
engine = phptemplate

regions[header] = Header
regions[featured] = Featured
regions[content] = Content
regions[sidebar_first] = Sidebar
regions[upper_footer] = Upper footer
regions[lower_footer] = Lower footer

stylesheets[all][] = css/base.css
stylesheets[all][] = css/layout.css
stylesheets[all][] = css/style.css
stylesheets[all][] = css/forums.css
stylesheets[all][] = css/drupal.css
stylesheets[all][] = css/colours.css
stylesheets[screen and (max-width: 600px)][] = css/layout-smallscreen.css
stylesheets[print][] = css/print.css

scripts[] = waterloo.js
```

Creating the .info file

- Text file with .info extension
- Items defined in name/value pairs
- Features – options available in the Apperance/Settings admin area
  - Toggle logo, site name, etc.; upload logo or shortcut icon
  - Not to be confused with *Features* (the module)
  - Only features listed in your .info file will appear in the admin interface (leave it out to include all features)
  - Only listed features will provide variables to page.tpl.php
- Documentation page: http://drupal.org/node/171205

The page.tpl.php

- The heart of your theme
- Defines the basic template used for the site
- Default page.tpl.php is complicated and confusing



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Building a page.tpl.php

- Much like coding a regular HTML template
- Process:

1. Create empty page.tpl.php file
2. Define basic HTML structure (div wrapper, header, footer, content area, etc.)
3. Add variables for basic page elements
4. Add regions

Page.tpl.php variables

- Listed in the default page.tpl.php or at http://api.drupal.org/api/drupal/modules!system!page.tpl.php/7
- Add common elements to your page:
  - **Site identity** (name, logo, slogan, url to front page)
  - **Navigation** (main menu, secondary menu)
  - **Page content** (title, messages, tabs, etc.)
  - **Utility variables** (base path, is_front, logged_in, etc.)

Building a page.tpl.php

- Add variables in PHP
- Some variables can be printed as-is:

```
<?php print $site_name ?>
```

- Variables that are arrays (see documentation page), need to be wrapped in the render() function:

```
<?php print render($tabs); ?>
```

- Variables that may not be present should be wrapped in conditionals:

```
<?php if ($tabs): ?>
    <?php print render($tabs); ?>
<?php endif; ?>
```

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Building a page.tpl.php

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Defining Regions

- This is where Drupal can put stuff using the blocks interface
- Examine design to determine where you need to be able to add content through the user interface
- Defined in .info file

```
regions[header] = Header
```

- Output in page.tpl.php

```
<?php print render($page['header']); ?>
```

- If region may or may not contain content, wrap with a conditional:

```
<?php if ($page['header']): ?>
    <?php print render($page['header']); ?>
<?php endif; ?>
```

- Standard region names: header, footer, content, sidebar_first, sidebar_second

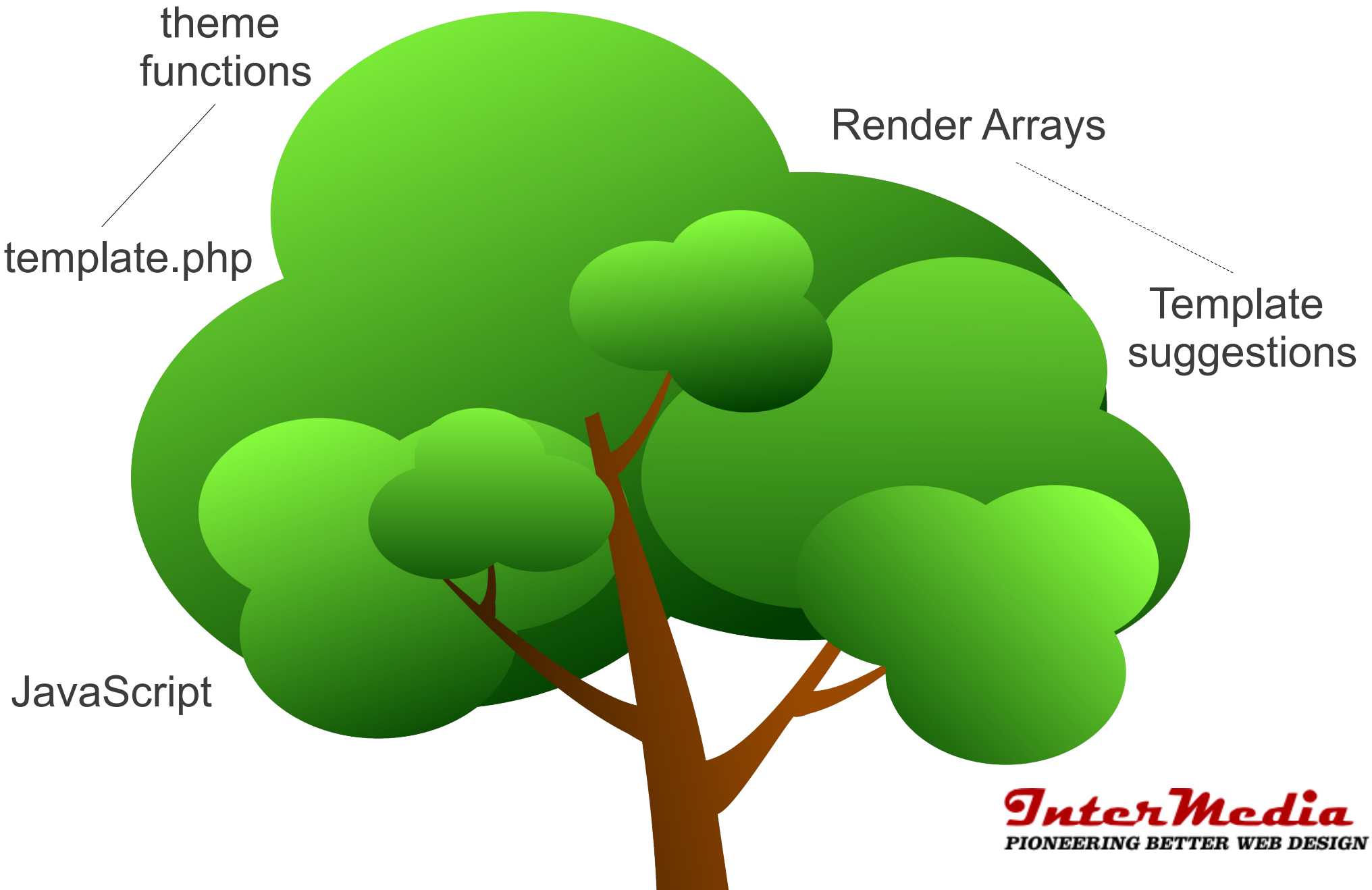
Add CSS

- Add links to CSS files in the .info file
- Can be placed in a separate folder
- Can use media queries

```
stylesheets[print][] = css/print.css
stylesheets[screen and (max-width: 600px)][]
   = css/layout-smallscreen.css
```

- IE Conditional Stylesheets: two options:
  - Theme preprocess function
  - Conditional Stylesheets module (add in .info file)
- Just like coding regular CSS
  - use developer tools to find Drupal's class and id names

Advanced theming: In the treetops



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Overriding Drupal's HTML

- Where did that code come from?
  - Template files or theme functions (provided by core or contrib modules)
- How do you know?
  - **Guess**
    - Big stuff has a template file (e.g. node, block, comment, view)
    - Small, repetitive stuff uses theme functions (e.g. menu, links)
  - Views tells you (Advanced > theme information)
  - Devel Themer

Template files

- Template files are HTML + PHP code with .tpl.php extension
- Drupal will always fall back to the default template if you don't specify one in your theme
- Works like CSS: levels of specificity
  - Drupal will use the most specific template
- **Copy** template to your theme folder; keep the same file name
- List of templates provided by Drupal core: http://drupal.org/node/190815

Template suggestions

- Can override core templates for specific cases, e.g.:
  - **Node** template for a node type or a specific nid
  - **Block** template for a region or a specific block
  - **Field** template for a content type or a specific field
  - **Taxonomy/term** template for a vocabulary or a specific term
  - **Comment** template for a node type
  - Many more!

Template suggestions

- General pattern: core-template—case.tpl.php
  - e.g. node—page.tpl.php, comment—blog.tpl.php, field--field_thumbnail_image.tpl.php
  - Note the *two dashes*
- Documentation: http://drupal.org/node/1089656
- Devel themer also provides a list of possible template files
- Remember:
  - Clear the cache after adding a new template suggestion
  - Drupal will use the most specific template

Render Arrays

- Rearrange fields and other content parts (e.g. links, comments) within the template
- Everything in a node is in the $content array, including body, other fields, comments, links
- By default, will display according to the order set in node type's Manage Display settings
- Can hide items in the array to be displayed elsewhere
- Why? Fuller control over HTML structure; can change the order or add structural mark-up around groups of fields

Render Arrays

- Hide a something when the $content variable is *rendered*

```
hide($content['comments']);
```

- *Render* it where you want it to appear

```
<?php print render($content['comments']); ?>
```

- Regions and some template variables are also output using render()
- Documentation: http://drupal.org/node/930760
(from Developer's guide)

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Customizing theme functions

- Go in template.php file
- Find relevant function on api.drupal.org
- Copy function to template.php
- Rename with your theme name
- Customize
- Lots of snippets available on drupal.org and elsewhere

JavaScript

- Add in the same way you add CSS in the .info file:
- jQuery is included with Drupal core
- Wrap with closure + Behavours:

```
// Using the closure to map jQuery to $.
(function ($) {
   // Store our function as a property of Drupal.behaviors.
   Drupal.behaviors.yourBehaviours = {
      attach: function (context, settings) {

         (your JavaScript here)

      }
   };
}(jQuery));
```

- Documentation: http://drupal.org/node/171213

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Sample JavaScript

```
(function ($) {
  Drupal.behaviors.waterlooBehaviours = {
    attach: function (context, settings) {

      $("#block-search-form .form-text").attr("value", "Search");

      $('#block-search-form .form-text').focus(function() {
         if($(this).attr("value") == "Search") {
          $(this).attr("value", "");
         }
      });

      $('#block-search-form .form-text').blur(function() {
        if($(this).attr("value") == "") {
          $(this).attr("value", "Search");
        }
      });
    }
  }
})(jQuery);;
```

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Creating Subthemes

- Best option for customizing existing themes
- Can be chained
- Define the parent theme in the .info file:

```
base theme = themeName
```

- Inherits everything *except* region definitions
- Like a regular theme, only you are building on an existing theme rather than Drupal's default output
- Documentation: http://drupal.org/node/225125

Finishing touches

- Screenshot
  - Shows up in the Appearance admin area
  - Screenshot with file name screenshot.png
  - Standard dimensions 294 x 219
- Favicon
  - A feature in the .info file
  - Place in theme directory, called favicon.ico

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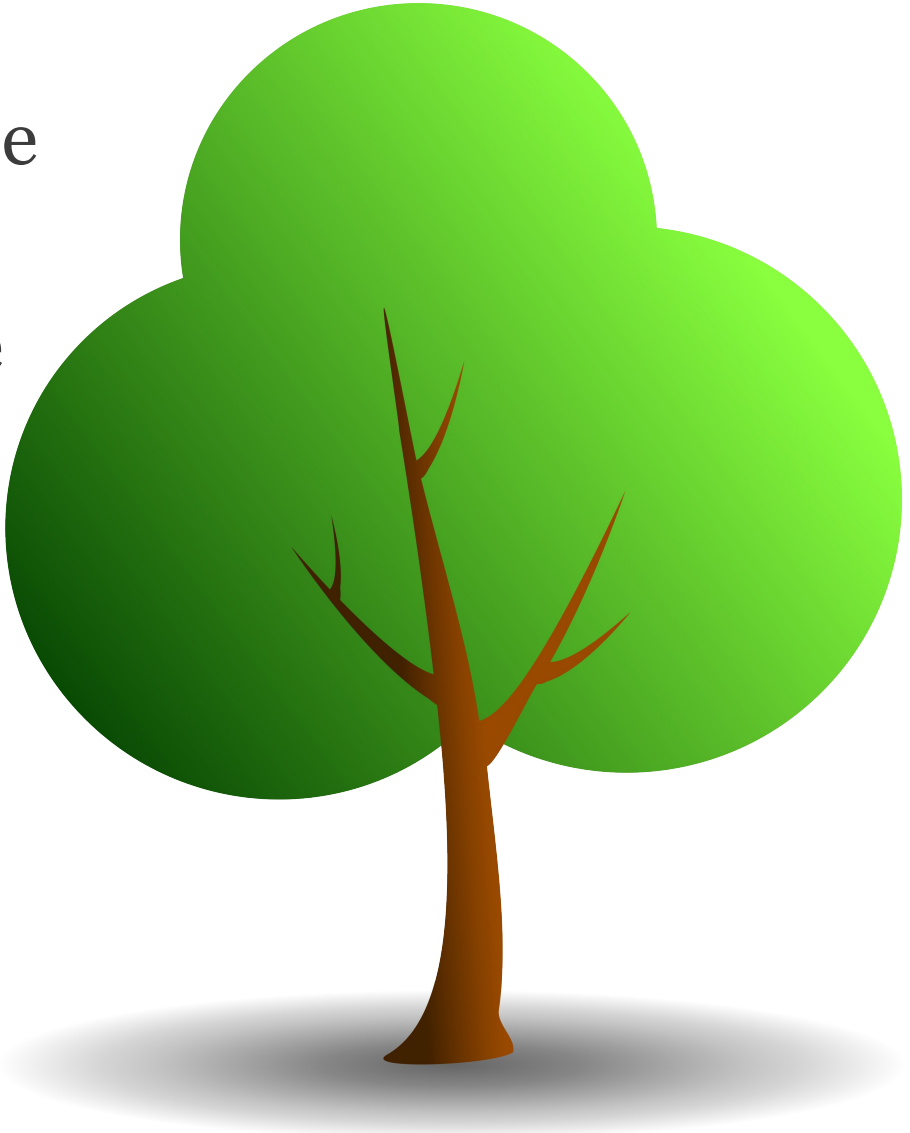
Theming Tips

- Customize as little as possible
- Provide documentation (in comments and/or a separate file)
- Drupal's CSS coding standards: http://drupal.org/node/302199
- (Try to) keep it simple!



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Looking ahead to Drupal 8

- Relevant Initiatives:
  - HTML 5
    http://drupal.org/community-initiatives/drupal-core/html5
  - Blocks & Layouts everywhere
    http://groups.drupal.org/scotch
- Separating module and theme CSS
- A new theme system?
  - Recognition that this isn't very user-friendly
  - Relevant Drupal.org issues:
    - http://drupal.org/node/1499460
    - http://drupal.org/node/1382350

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References

- How to create a simple Drupal 7 theme from scratch
  http://www.apaddedcell.com/how-create-drupal-7-theme-scratch
- Drupal.org theming guide
  http://drupal.org/documentation/theme
-

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