

How to Change Everything And Hack Nothing

Hack: A change to Drupal's code

Patch: A documented change to Drupal's code

Contribution: A sustainable change to Drupal's code

Configuration Changes:

Blocks

Theme Settings

CCK “Display Fields” Settings

Site Information

Views UI

NO conphpiguration please!

Finding the Source:

Firebug

Theme Developer Module (in Devel)

Find in project * recommended

– you must use a good text editor / IDE to do this

Changing Text:

t() function: Translatable Text

locale.module (core)

string_overrides.module * recommended

settings.php overrides

THEME LAYER

Subtheme Creation:

Choose a Starter theme

In sites/all/themes create a new directory

<http://drupal.org/node/441088>

zenophile.module (creates Zen subtheme)

THEME LAYER

Add Block Regions and CSS files:
the .info file

```
regions[top_left] = Top Left
```

```
stylesheets[all][] = header.css
```

```
stylesheets[all][] = css/footer.css
```

CSS Overrides:

Use Firebug

Drupal CSS Cascade: Core, Contributed Modules,
Theme, Subtheme

Specificity: <http://www.w3.org/TR/CSS2/cascade.html>
6.4.3

Learn CSS: <http://www.w3schools.com/css/>
Master CSS: <http://www.cssmastery.com/>

THEME LAYER

Template Overrides: AKA tpl.php's

1. Copy a template (from a module or base theme) into your theme folder
2. Modify it
3. Clear your theme registry

Gotcha: If you add e.g. node-blog.tpl.php without having a node.tpl.php...

THEME LAYER

Change Template Variables: Preprocess functions

In your template.php, use `THEMENAME_preprocess_FUNCTION(&$vars)`

```
function mytheme_preprocess_page(&$vars) {  
  $vars['credit'] = t('This site powned by JodyH.');}  
  
/**  
 * Change a variable used by user-picture.tpl.php  
 */  
function mytheme_preprocess_user_picture(&$vars) {  
  $vars['picture'] = mytheme_some_other_logic();  
}
```

Keep logic out of the tpl.php files!

THEME LAYER

Override Theme Functions:

Copy a theme function into your template.php

Rename it to your theme name: e.g. theme_breadcrumb
=> awesome_breadcrumb

Modify it and add comments explaining what you did

Clear the theme registry

THEME LAYER

Add jQuery:

Beautytips

Vertical Tabs

Thickbox

Add your own with `drupal_add_js`

MODULE LAYER

Customization Modules:

Add one to sites/all/modules or
sites/all/modules/custom with just .info and .module
files

form alterations

menu link alterations

custom blocks

CCK formatters

MODULE LAYER

Use Devel Module:

```
dpm($anything);
```

```
ddebug_backtrace();
```

```
devel/php
```

MODULE LAYER

CCK Formatters: the cleanest way to customize node output

hook_field_formatter_info

```
/**
 * Implementation of CCK's hook_field_formatter_info().
 */
function mymodule_field_formatter_info() {
  return array(
    'product_sample' => array(
      'label' => t('My custom formatter'),
      'field types' => array('nodereference'),
      'multiple values' => CONTENT_HANDLE_CORE,
    ),
  );
}
```

MODULE LAYER

```
/**
 * Implementation of hook_theme().
 */
function mymodule_theme() {
  return array(
    'mymodule_formatter_product_sample' => array(
      'arguments' => array('element' => NULL),
    ),
  );
}

/**
 * Theme the product_sample custom CCK formatter.
 */
function theme_mymodule_formatter_product_sample($element) {
  $output = "";
  if (!empty($element['#item']['nid']) && is_numeric($element['#item']['nid']) && ($title =
  _nodereference_titles($element['#item']['nid']))) {
    $output = check_plain($title) . l('read full post', 'node/'. $element['#item']['nid']);
  }
  return $output;
}
```

MODULE LAYER

hook_form_alter

Drupal is a series of forms

```
/**  
 * Implementation of hook_form_alter().  
 */  
function mymodule_form_uc_cart_view_form_alter(&$form, $form_state) {  
  // Alter the cart view form.  
  // Loop through the item rows and limit the Qty. maxlength to 3.  
  foreach ($form['items'] as $key => $value) {  
    if (isset($form['items'][$key]['qty']['#size'])) {  
      $form['items'][$key]['qty']['#size'] = 4;  
      $form['items'][$key]['qty']['#maxlength'] = 3;  
    }  
  }  
}
```

Or

```
function mymodule_form_alter(&$form, $form_state, $form_id) {  
  If ($form_id == 'uc_cart_view_form') {
```

MODULE LAYER

hook_menu_alter

Drupal is a series of pages

```
/**
 * Implementation of hook_menu_alter().
 */
function mymodule_menu_alter(&$callbacks) {
  // remove uc_file tab
  $callbacks['user/%user/files']['access callback'] = FALSE;
  // Change user 'view' tab to 'My Stuff'
  $callbacks['user/%user/view']['title'] = 'My Stuff';
  // Change the callback for the admin page.
  $callbacks['admin']['page callback'] = mymodule_admin_page();
}
```

MODULE LAYER

Custom Blocks

```
function mymodule_block($op = 'list', $delta = 0, $edit = array()) {  
  switch ($op) {  
    case 'list':  
      return array(  
        'key_terms' => array(  
          'info' => 'Key Terms'),  
      );  
      break;  
    case 'view':  
      switch ($delta) {  
        case 'key_terms':  
          $block['content'] = mymodule_key_terms();  
          $block['subject'] = t('Key Terms');  
          break;  
        }  
      }  
      return $block;  
    }  
}
```

CONFIG LAYER

Rebuild pages with Views

Front page (/node)

Taxonomy pages

Admin pages

views_build_operations

User account tabs

Patching

```
cv diff -uRp > my-change.patch
```

Maintain and organize your patches

Ex: patches/imagecache-512345.patch

When to Just Say No:

If a customization cannot be done without patching

If the resulting patch would not be of interest to the community

If the burden of maintaining the patch would outweigh the benefit of the change

If the client is unaware of the expense of the particular change

What not to do:

Get rid of something on the page by using `css display: none;`

Download your code without CVS

Keep track of your hacks by adding a comment with your name on it

Use Garland as your base theme

Submit a patch, wait a few days, and get annoyed it's not committed