

Architecture of Drupal 6.0

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Who am I ?

B-tech (CS) from VIT, Vellore graduated in may 2008. My drupal experience has been with 2 social networks careseek.com and ilovebolly.com (will be launching soon) architected and implemented with drupal. Before that I used to maintain server of LUG @ VIT using drupal.

Power of Drupal

- ❑ The user System
- ❑ The node System – (The “C” of CMS)
- ❑ Appearance Separated from Data/Logic
- ❑ Access Control
- ❑ File Management (uploads/downloads)
- ❑ Friendly with external Data Services (XMLRPC et al)
- ❑ Efficient/Optimized and most Imp Flexible and easy to extend.

Anatomy of Drupal Installation

- Drupal = Drupal Core + Contrib Modules + Contrib themes + Installation profiles
- What's packaged in drupal core ?
- Few mins on core modules.

Modules

Modules is drupal's way of implementing a new functionality and plugging it into existing drupal system.

Modules can :

- ☐ Access DB, Create tables, delete them, insert, update etc.
- ☐ enforce Access Control and plug into existing ACL's
- ☐ Define how things should look to your users.
- ☐ Interact with other modules.

So what does Module Contain?

- ❑ Lot of PHP yes !!
- ❑ Modules interact with drupal using hooks
- ❑ Hooks are triggers that fire when something they are listening on occurs.
- ❑ Modules also contain helping functions which are usually used internally.
- ❑ And some modules expose their functionality to other modules.

Module Anatomy

- .Info file → Helps drupal core to find info about module
- .module file → contain all the hooks and other fn's related to functionality of module
- .install file → contains schema api hooks to create, update tables necessary for module functioning
- .inc files → included in modules usually separated for functionality separation

Example of hooks and how modules use them

hook_nodeapi → mymodule_nodeapi

hook_user → mymodule_user

hook_menu → mymodule_menu

hook_perm → mymodule_perm

And so on ..

Drupal presents the opportunity to all modules to modify content, user, menu's, enforce perm etc by means of these hooks.

The Database

- ❑ Data persistence is done in DB
- ❑ Drupal supports multiple databases via Database Abstraction API
- ❑ Not `mysql_query` but `db_query`
- ❑ Drupal can talk to multiple database instances using `db_active`
- ❑ Drupal prevents you from sql injection and other malicious database infections.

The User Interface

- Modules control the logic interact with DB and prepare the output !! How does drupal show it ?
- Theme Engine → Phptemplate
- Module resident theme functions.
- Intercept and Override
- Templating done via tpl files usually called template files.

Theme anatomy

- .Info files
- Template files → .tpl.php
- Template.php → Override here
- Media files – Images, css, javascript et al

Drupal 6.0 Theming Peculiarities

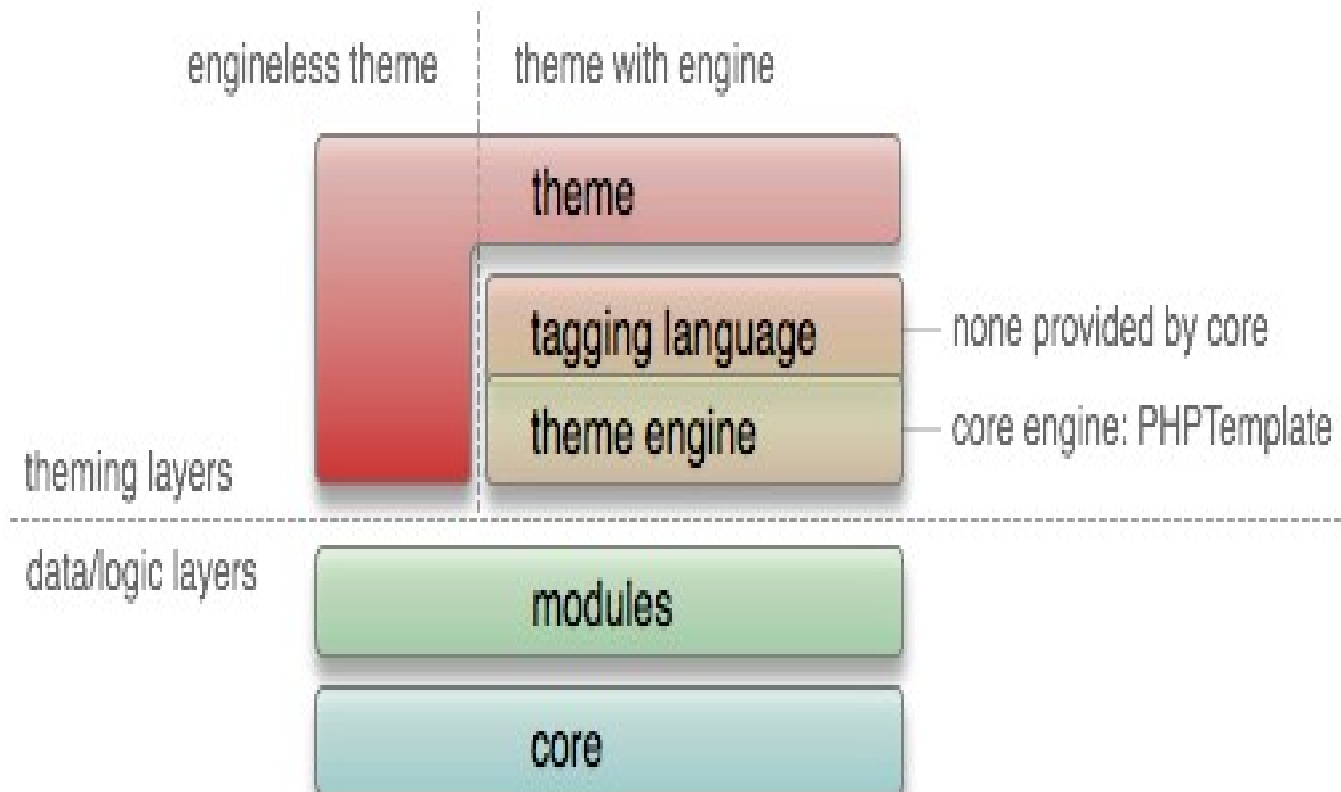
- Theme registry using `hook_theme`
- Every theme function can now have template file associated with it.
- Imagine the flexibility, Great move towards MVC

Magic of Phptemplate engine

- ❑ Picks up data from drupal core and prepare it for visual manipulation by theme (read \$vars accessed in template files)
- ❑ node-1.tpl.php, user-1.tpl.php all done here !!
- ❑ You would have used phptemplate_callback defined in the engine to associate a template file with a theme fn or on a condition.
- ❑ Acts a bridge between drupal core and the theme (which determines how your pages look)

The Bigger Picture

A Picture speaks more than a thousand words !!



Get Started !!

- ❑ Drupal Dojo → <http://drupaldojo.com>
- ❑ Drupal Dojo The group → <http://groups.drupal.org/drupal-dojo>
- ❑ Drupal Handbooks (Specially D6 theming guide)
- ❑ IRC → lots of help there #drupal-support for support questions and #drupal for contributions of any sort
- ❑ Drupal Forum : Get help and also help in drupal forums <http://drupal.org/forums>
- ❑ Play Drupal : <http://playdrupal.com> A lazy attempt by me and satish to write on drupal. Join Us !! Write on your drupal experience contact me.
- ❑ Track drupal on twitter, Sometimes you get really great links

Thank You !!

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