

DRUPAL

ADVANCED CONTENT MANAGEMENT SYSTEM AND FRAMEWORK



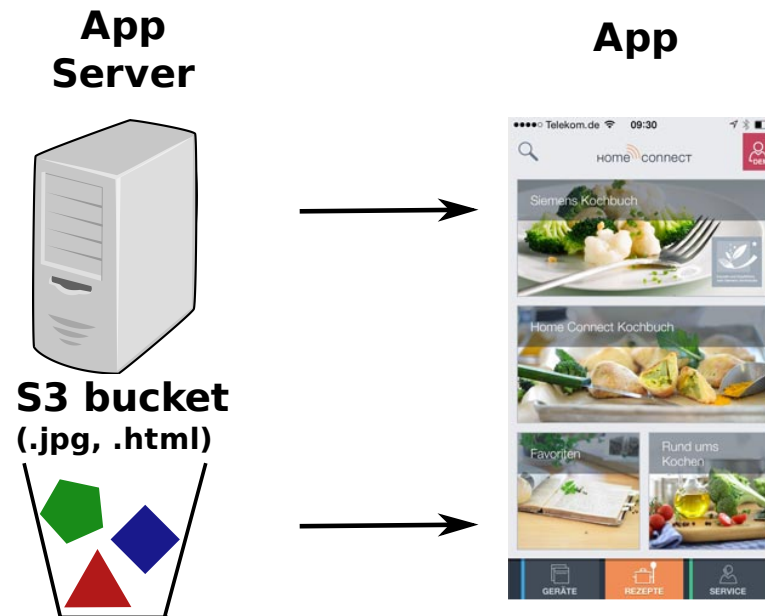
by [Gerd Friemel](#)

Techday, 13.05.2016

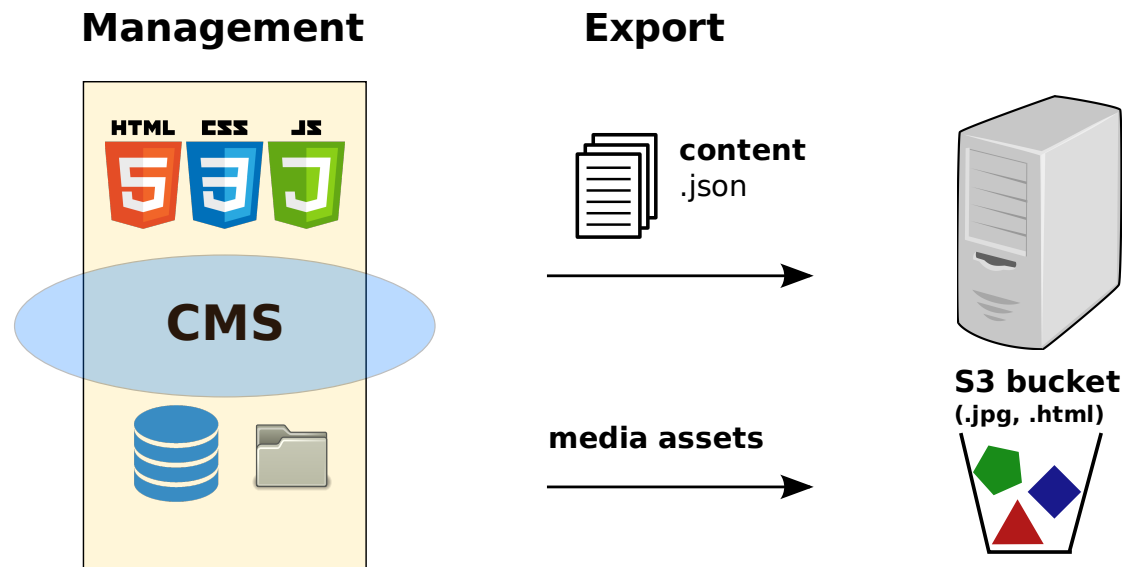


MOTIVATION: WHY DO WE NEED CONTENT MANAGEMENT ?

- app for controlling home appliances requires texts, media assets
- meta data: country specific, brand specific, device specific



- renders content in the predefined json format (Meta Data + language specific)
- exports media assets (pictures, video links) html to S3 bucket
- connection with other services within the company



WHAT FUNCTIONALITY MUST BE PROVIDED BY CMS

- GUI: forms creation/editing and display of content
- theme customization
- Menu hierarchy, routing and organization of the content
- Categorization, tagging of content (Taxonomies)
- Internationalization/Localization
- User Management: Roles & Permission
- Moderation of content
- content revisioning
- API, customization (business logic)
- and more ...

APPROACHES OF DEVELOPMENT

- everything from scratch
- use packages, modules, libraries
- use a Web-Application Framework (Symfony, Django)
- CMS:
 - most of the features out-of-the Box
 - saves redundant re-implementation of the same features

WHAT IS ON THE MARKET?



- Drupal, 4,9 %
- Wordpress, 60%
- Joomla 6,1%
- Typo3, Magento, Blogger, [↗](#)

WORDPRESS AND DRUPAL

DRUPAL 

WORDPRESS 

Technology	AMP stack: Apache, MySQL, PHP (support other DB)	
Initial release	May 2000	May 2003
Customization	Modules	Plugins
Scope	Content management framework	Usability, static webpages, extendable via plugins
Philosophy	"... what sets it apart is its flexibility; modularity is one of its core principles. ... build the versatile, structured content that dynamic web experiences need..." ↗	"Advanced blogging tool and it provides a rich set of features."

DRUPAL IN DEPTH

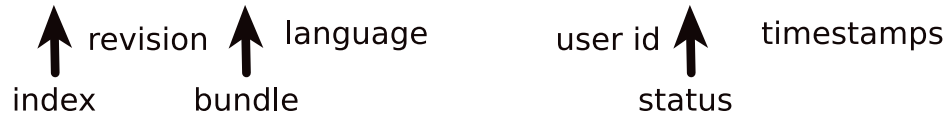
node	is a	entity type	↔	base class
article	is a	bundle (content type)	↔	extended class (of node)
'Hello World' (node id = 1)	instance of	article		
field	↔	member or property		

- node based organization of data
- fully configurable in the Admin backend

A LOOK INTO THE DATA BASE

table 'node'

nid	vid	type	language	title	uid	status	created	changed	comment	promote	sticky	tnid	translate	uuid
2721	211841	tip_fe...	zh-hans	冷食速烹	8	0	1425015449	1462203658	0	1	0	12859	0	b58c733b-5904-453e-95fe-8ae153...
2722	210736	tip_fe...	zh-hans	蒸汽烹制	8	1	1425015563	1461922003	0	1	0	12861	0	74f0e04d-7ce3-4475-b58b-4b502a...
2723	211842	tip_fe...	zh-hans	照明系统	8	0	1425015651	1462203658	0	1	0	12863	0	d79f77bd-1aff-430b-9725-ef618bf6...
2724	211843	tip_fe...	zh-hans	菜谱助手	8	0	1425015756	1462203658	0	1	0	12865	0	eb4fbde0-e91f-413d-8c76-9e34360...
2725	209508	tip_fe...	zh-hans	蒸汽辅助	8	1	1425015852	1461077239	0	1	0	12867	0	4b09bcc4-85f3-43fd-8642-0f33c8c...
2732	2732	page	en	Content	1	1	1423041650	1462978705	0	0	0	0	0	7374df39-7d18-40ca-8ec5-ef6a74c...
7658	7658	oa_key	und	Service.Careline.E...	90	1	1432395186	1454081210	0	0	0	0	0	0988e00f-6d6b-4a75-984c-3c86e4...
7659	7659	oa_key	und	Service.Careline.P...	90	1	1432395186	1454081210	0	0	0	0	0	705f3538-e059-45b3-9127-2c15e9...



all other information is joined from the field tables

VIEWS: DRUPAL'S KILLER FEATURE

part of the core in Drupal 8

CUSTOMIZING DRUPAL: MODULES

- functional plugins
- interact with the drupal core
- Hooks: modules can interact with information flow
- kind of eventlistener

```
hook_menu()
```

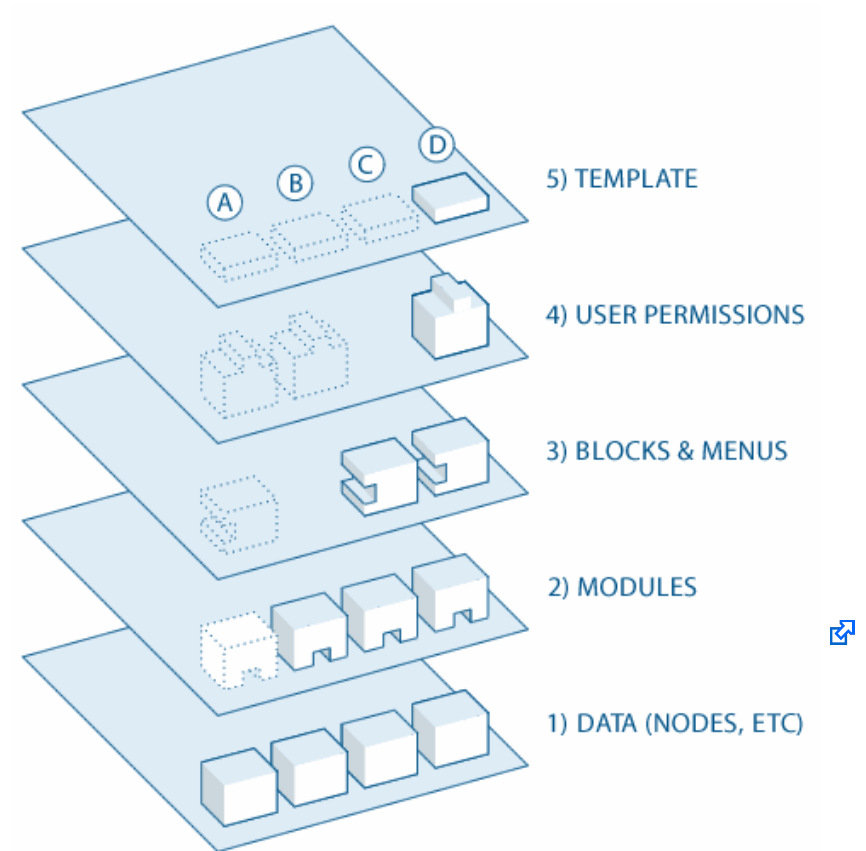
defines routes + callback

```
hook_node_insert($node)
```

called when a node is created

```
hook_node_delete($node)
```

called when a node is deleted



1. create route:

```
/**
 * Implements hook_menu()
 */
function formexample_menu() {
  $items['formexample'] =
    array(
      'title' => 'Simple Name Form',
      'page callback' => 'drupal_get_form',
      'page arguments' => array('formexample_nameform'),
      'access callback' => TRUE,
      'type' => MENU_NORMAL_ITEM
    );
  return $items;
}
```

2. callback function: drupal_get_form() renders the form expects form array

```
/**
 * Define a form.
 */
function formexample_nameform() {

  $form['name'] = array(
    '#title' => t('Your Name'),
    '#type' => 'fieldset',
    '#description' => t('What people call you.')
  );
  $form['name']['user_name'] = array(
    '#title' => t('Your Name'),
    '#type' => 'textfield',
    '#description' => t('Please enter your name.')
  );
}
```

3. validation hook

```
/**
 * implements FORM_ID_validate
 * Validate the form.
 */
function formexample_nameform_validate($form, &$form_state) {
  if ($form_state['values']['user_name'] == 'Bill Gates') {
    // We notify the form API that this field has failed validation.
    form_set_error('user_name',
      t('Are U kidding me?'));
  }
}
```

4. submission hook

```
/**
 * implements FORM_ID_submit
 * Handle post-validation form submission.
 */
function formexample_nameform_submit($form, &$form_state) {
  $name = $form_state['values']['user_name'];
  drupal_set_message(t('Thanks for filling out the form, %name',
    array('%name' => $name)));
}
```

DRUPAL 8



Based on Symfony web framework
Twig template library

**Drupal
Release Party**



**Node.js
Release Party**

