



Getting started with Drupal 9

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USA | Nicaragua | México | Germany

Upcoming Full-day Trainings



- July 13 – Getting started with Drupal 9
- July 21 – Drupal 8/9 content migrations
- July 23 – Upgrading to Drupal 8/9 using the Migrate API

<https://agoric.coop/training>

Outline



- Why Drupal?
- What is Drupal?
- Basic concepts
- Nodes
- Content types
- Fields
- Blocks
- Theme regions
- Views
- Layout builder
- Users and permissions
- Menus and taxonomy

Why Drupal?

[FORECASTS](#)[MAPS](#)[VIDEO](#)[PHOTOS](#)[NEWS](#)[LIVE TV](#)[HURRICANES](#)[Log In / Sign up](#)

The Weather Channel

79° Managua, ...

63° Santa Clar...



Managua, Nicaragua Weather

Observation as of 12:00 am CST



79°F

Feels Like 82°

Fair

Wind SE 5 mph

Humidity 83%

Dew Point 73°F

Pressure 29.80 in ↓

Visibility 6.2 mi

UV Index 0 out of 10

| DAY | COND | TEMP | DESCRIPTION | PRECIP | WIND |
|---------|------|------|------------------------|--------|-----------|
| TODAY | | 90° | PM Thunderstorms | 50% | ESE 9 mph |
| TONIGHT | | 75° | Thunderstorms Early | 60% | SE 5 mph |
| SUN | | 91° | Isolated Thunderstorms | 30% | ESE 7 mph |



GRAMMY.ORG THE RECORDING ACADEMY GRAMMY FOUNDATION MUSICARES THE LATIN RECORDING ACADEMY GRAMMY MUSEUM GRAMMY PRO

GRAMMY.COM

Winners News Blogs Photos Videos GRAMMY Live Social Radio Press Sponsors Store Search

ALL ABOARD

The inaugural GRAMMY cruise has docked, but here is a list of nine upcoming music cruises
Photo Gallery: GRAMMY Festival At Sea

Countdown to GRAMMY Sunday

GUCCI
COUNTDOWN TO FEBRUARY 6, 2018
85 21 2 52
DAY HOUR MIN SEC
THE 57TH ANNUAL GRAMMY AWARDS

Made with GRAMMIUM™. Click here

PHOTOS

A collage of photos from the GRAMMY Festival At Sea. The main image is a large cruise ship, the Norwegian Pearl, sailing on the ocean. Below it are several smaller circular and rectangular photos of musicians performing on stage. One photo shows a woman with long black hair playing an electric guitar. Another shows a man with a microphone. A third shows a woman with bright pink hair. There are also photos of a band performing on stage and a close-up of a musician playing a guitar.

NUESTRA TIENDA ONLINE



NARANJAS



MANDARINAS



CAJAS MIXTAS



MIEL



MERMELADA



LIMONES



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Some features of these websites



What is Drupal?

Drupal as a CMS



Drupal is a content management system. It allows multiple people to participate in the creation of content. Also, it is possible to establish publication workflows, content revisioning, and granular access control over each piece of information.

Drupal as a Framework



Drupal is a development framework. Through custom code it is possible to extend Drupal beyond its pre-built functionality. For example, to create an ecommerce website or the backend of an application.

Drupal as a Community



- 200+ countries
- 150+ languages
- 30,000+ code contributors
- 97,000+ active users

Basic Concepts

Core

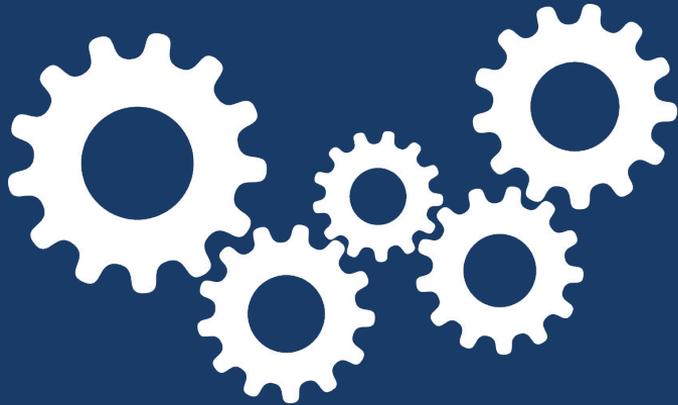


- The minimum required software to start a drupal project.
- It contains **modules** and **themes**.
- Serves as a framework to build on top of.



Modules

Add functionality



Themes

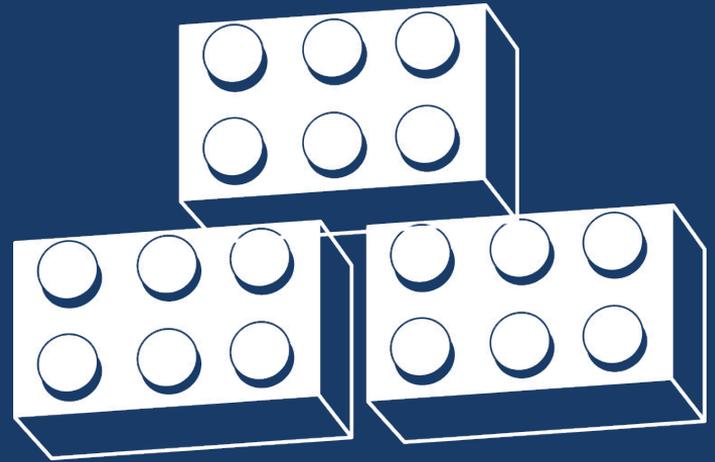
Control appearance



Contrib Repository



Community contributed **modules, themes, and distributions**. These extend Drupal beyond its pre-built functionality.



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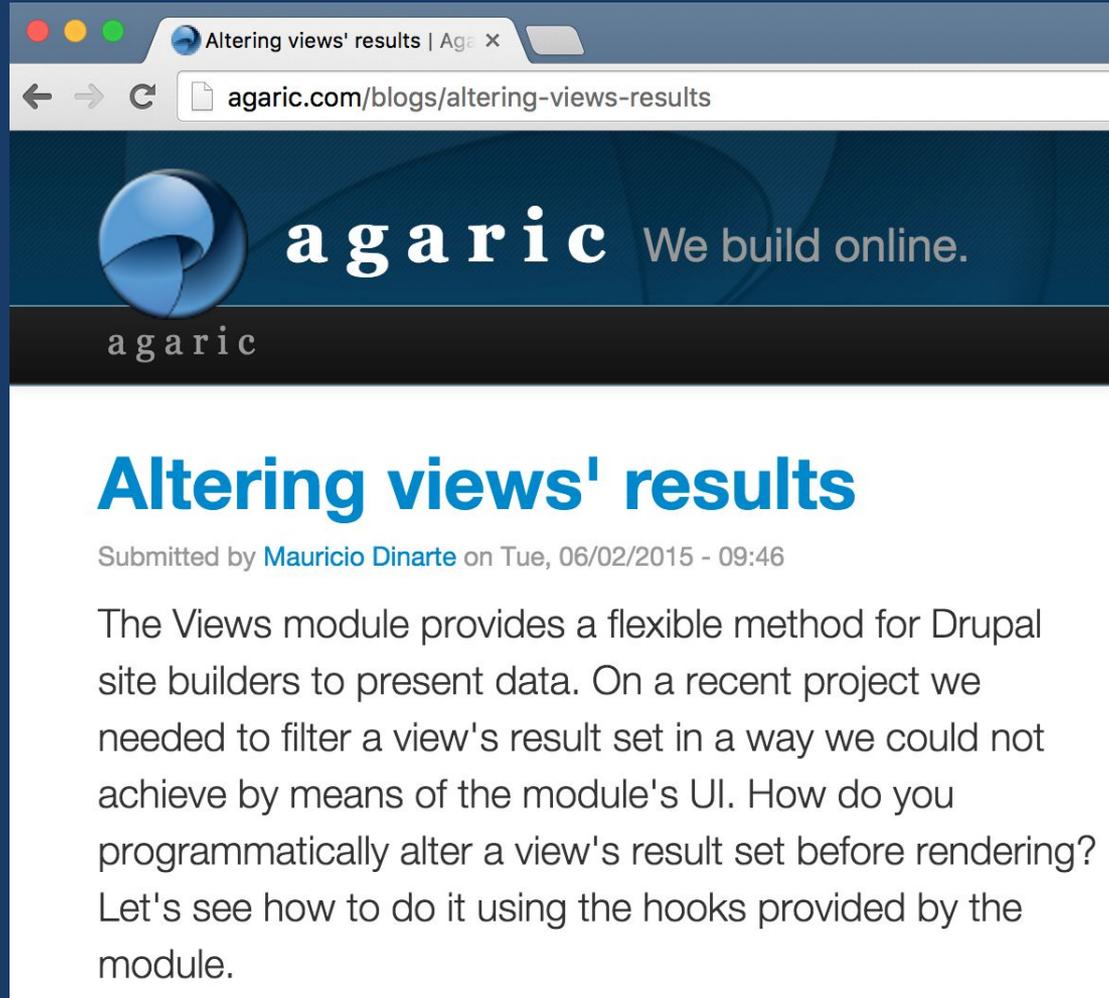
Content

What is a Node?



A piece of information that can tell a story by itself. It serves as a container of information used to describe something.





Altering views' results | Age x

← → ↻ agaric.com/blogs/altering-views-results



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Altering views' results

Submitted by [Mauricio Dinarte](#) on Tue, 06/02/2015 - 09:46

The Views module provides a flexible method for Drupal site builders to present data. On a recent project we needed to filter a view's result set in a way we could not achieve by means of the module's UI. How do you programmatically alter a view's result set before rendering? Let's see how to do it using the hooks provided by the module.



CAN I HAVE



MORE WHEELS, PLZ?

memegenerator.net



Content Types

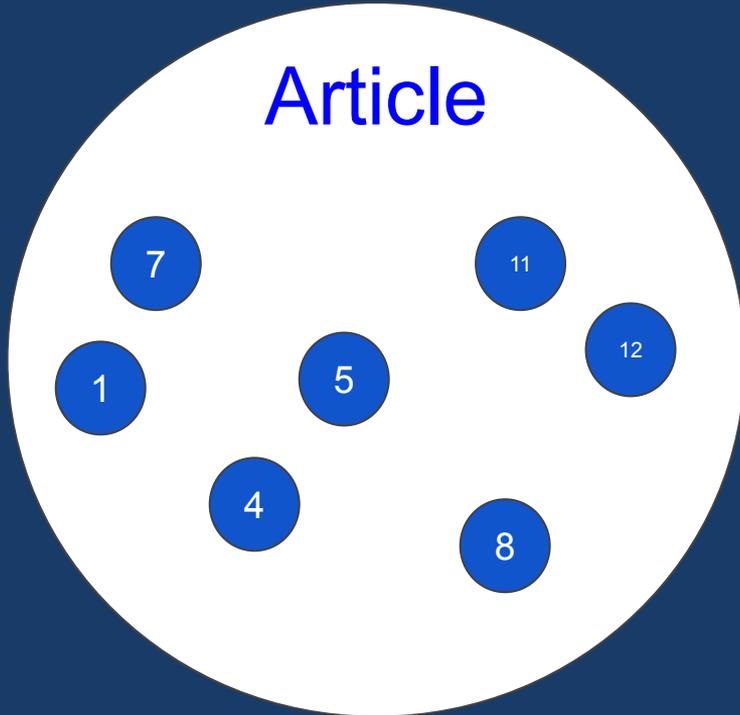


Abstraction that allows you to group nodes which share similar characteristics or describe the same idea. They serve as a template to collect information. Once collected, they ease the management of that information.

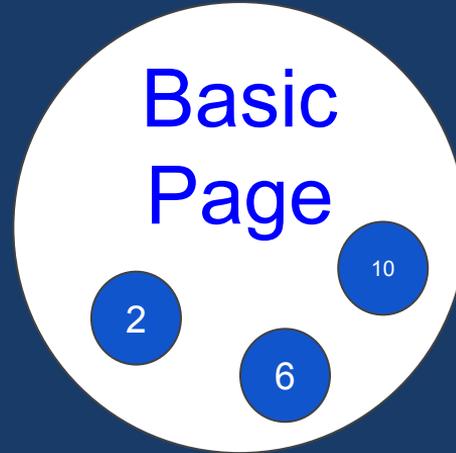
Every Node is of One Specific Content Type



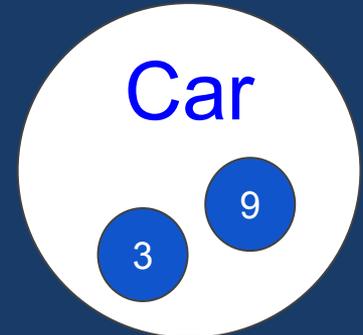
Article



Basic Page



Car





Fields



They are **awesome!**



Status Photo / Video Life Event

What's on your mind?

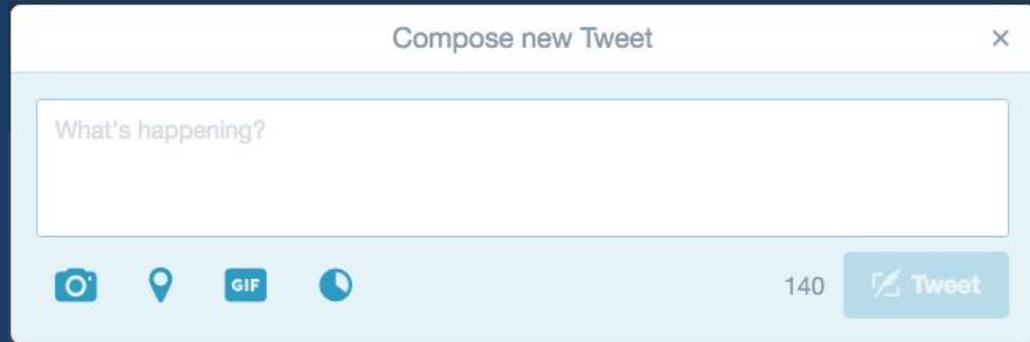
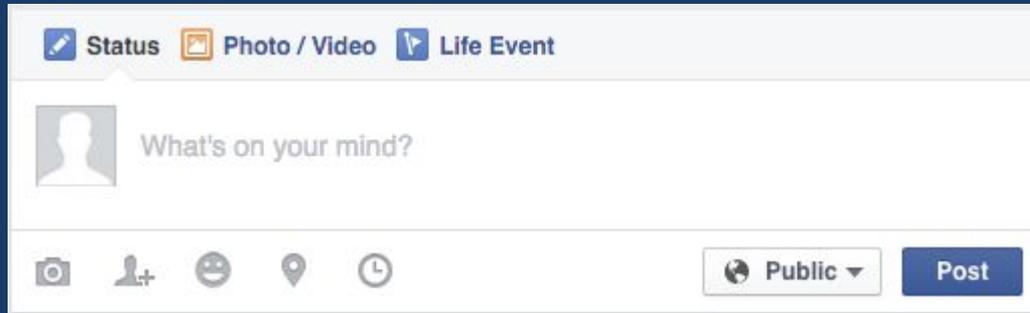
Public

Compose new Tweet ×

What's happening?

140

Free Text Is Not Easily Searchable



Inconsistent Data Is Not Easily Searchable



November 19, 2015

Nov. 19, 2015

11/19/2015

11/19/15

11-19-15

Invalid Data Makes Drupal Cry



Age: -10 years old

Birthdate: February 31, 2000

Price: \$ 1.5 euros

Email: notareal.email

Phone: Hi, I am beautiful! :)

I want to cry



Free text

Inconsistent data

Invalid data



Drupal Can Enforce Validation Criteria



Required field

▼ DEFAULT VALUE

Price

Minimum

Maximum

Prefix

Suffix

Required field

▶ DEFAULT IMAGE

Allowed file extensions *

File directory

Maximum image resolution

 × pixels

Minimum image resolution

 × pixels

Maximum upload size

 Enable *A/t* field
 A/t field required
 Enable *Title* field

Drupal Can Enforce Validation Criteria



Required field

▼ DEFAULT VALUE

Price

Minimum

Maximum

Prefix

Suffix

Required field

▶ DEFAULT IMAGE

Allowed file extensions *

File directory

Maximum image resolution

 × pixels

Minimum image resolution

 × pixels

Maximum upload size

 Enable *A/t* field
 A/t field required
 Enable *Title* field

Happiness



Recipe to Make Drupal Happy



- 1) One field per piece of data to store.
- 2) Select the right type of field. Example: integer, decimal, image, phone, email, url, etc.

I ❤️ you!

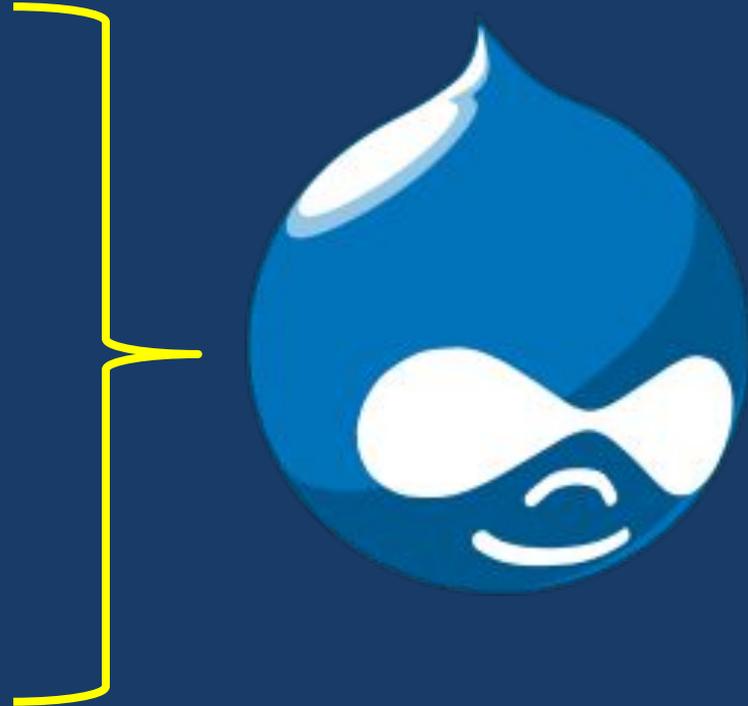
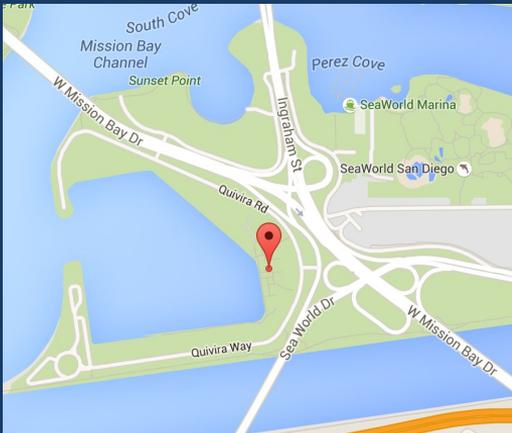


Collecting Data

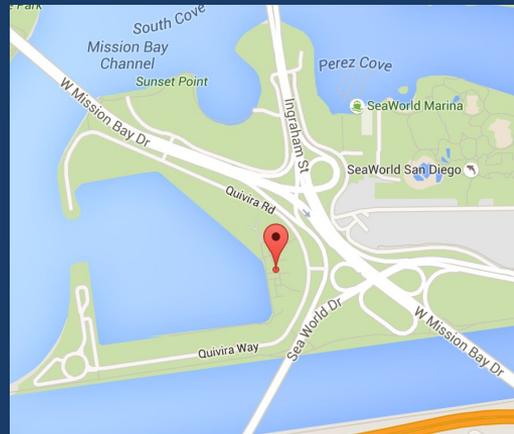
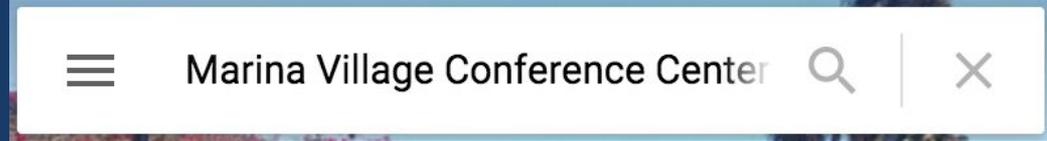
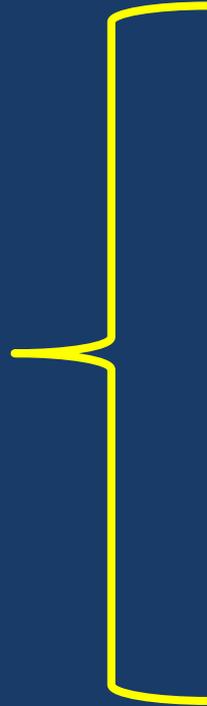


☰ Marina Village Conference Center 🔍 | ✕

☰ 32°45'42.0"N 117°14'02.1"W 🔍 | ✕



Presenting Data



Aggregating Data



Powered by Leaflet — Map data © OpenStreetMap contributors (Terms) served by Mapbox (Terms)

Find Drupal events with ease!

All Continents ▾ All Countries ▾

- Feb 25** SANDcamp 2016
United States, San Diego, CA
25-27. February 2016
- Feb 25** Fresno Drupal Meetup
United States, Fresno, CA
25. February 2016 08:25
- Feb 25** Free Training! Ready, Set, Drupal 8
United States, Waltham, MA
25-26. February 2016
- Feb 25** Drupal NYC Meetup
United States, New York, NY
25. February 2016 10:20
- Feb 25** San Gabriel Valley Meetup
United States, Monrovia, CA
25. February 2016 18:00
- Feb 25** Drupal Meetup: Introduction to
Drupal 8 Module Development
Canada, Vancouver, BC
25. February 2016 18:30-20:00
- Feb 25** Drupal Cafe Lviv
Ukraine, Lviv, 46
25. February 2016 19:00
- Feb 25** Sessió d'introducció a Symfony per
Marc Morera i Drupal&Beers el 25 de
febrer
Spain, Barcelona

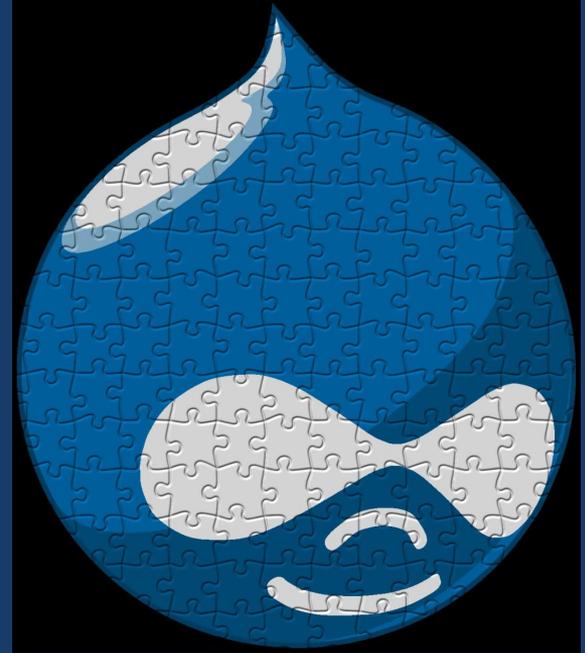
drupical *Beta*

Drupalcon **Drupalcamp or Summit** **User group meeting** **Sprint** **Training** **Related event**

[about](#) • [tw](#) • [fb](#) [todo](#) • [changelog](#) 92 drupal events

Can Be Shown or Hidden Individually

Fields allow you to cherry-pick what information to show and what information to hide.



Example of Field Types



Agaric



Established in: 2006

Tue, 07/07/2020 - 07:00

Agaric makes websites that matter.

We provide development services,
training, and consulting to help
define and meet your needs.

ask@agaric.com

+1 508 283 3557

Industries

NGO, Education, Government

Fields



They are used to **structure** the information that is being stored. They save **discrete** data which can be used for **displaying**, **filtering**, and **sorting** information. It is possible to enter and display a field's data in various ways.



Logo

Telephone
Mail

Slider header image

Banner #1

Banner #2

Site
Navigation

Updates and
Upcoming Events

News Section

Contact
Information

Blog

Social
Media Links

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Block

What is a Block?



A container of extra information to display along the main content of your website. They are placed in a **theme region**.

Theme Region



Blocks Can Display Static or Dynamic Content



Static content

- Display the same data (almost) all the time. E.g.: copyright text or the banner of a sponsor.

Dynamic content

- Change its content regularly. E.g.: latest blog posts or newest products in the store.

Blocks Can Enforce Visibility Rules



Show or hide the block depending on certain conditions.

| | |
|--|---|
| Language Not restricted | Content types <input type="checkbox"/> Article <input type="checkbox"/> Basic page |
| Content types Not restricted | |
| Pages Not restricted | |
| Roles Not restricted | |

Blocks Can Be Aware of the Environment



Use data from the environment in which the block is displayed to **change the information to be presented.**

Examples:

- More posts from the same author.
- More vehicles on sale in the same city.

Blocks Can Have Fields



Similarly to content types, it is possible to define block types and add fields to them.

Example:

- A “special offer” block type with fields for title, description, image, and expiration date.

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Views

What is a View?



A view is a **listing of information**. It can be a list of nodes, users, comments, taxonomy terms, files, etc.

Views scans your website using any criteria you specify and presents the results in the format of your choice. For example, a HTML table, a RSS feed, a PDF document, a CSV document, an interactive map, an image slideshow, or a JSON representation to be used as a REST endpoint.



Random car

M000505 - 2008 Toyota Yaris



[Read more](#)

Search

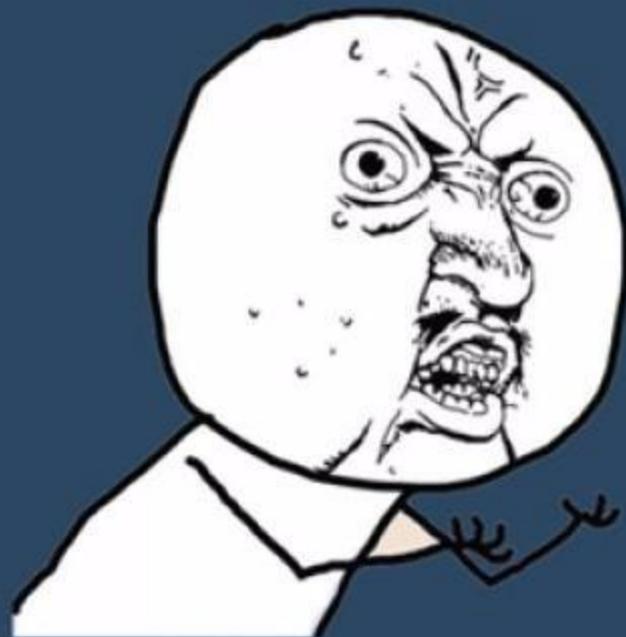
Cars

Year: - Any - | Make: - Any - | Model: - Any - | Sort by: Year | Order: Desc

Apply

| ID | Image | Color | Transmission | Fuel |
|---|-------|--------|--------------|----------|
| M000123 - 2014 Toyota Corolla | | White | Automatic | Gasoline |
| M909522 - 2013 Tesla Model S | | Red | Automatic | Electric |
| M3075681 - 2013 Mercedes S500 | | Black | Manual | Gasoline |
| M1463982 - 2011 BMW 535i | | Black | Automatic | Gasoline |
| M000505 - 2008 Toyota Yaris | | Silver | Manual | Gasoline |

WHY SO MUCH



THEORY?

Drupal Loves Nests



Concepts





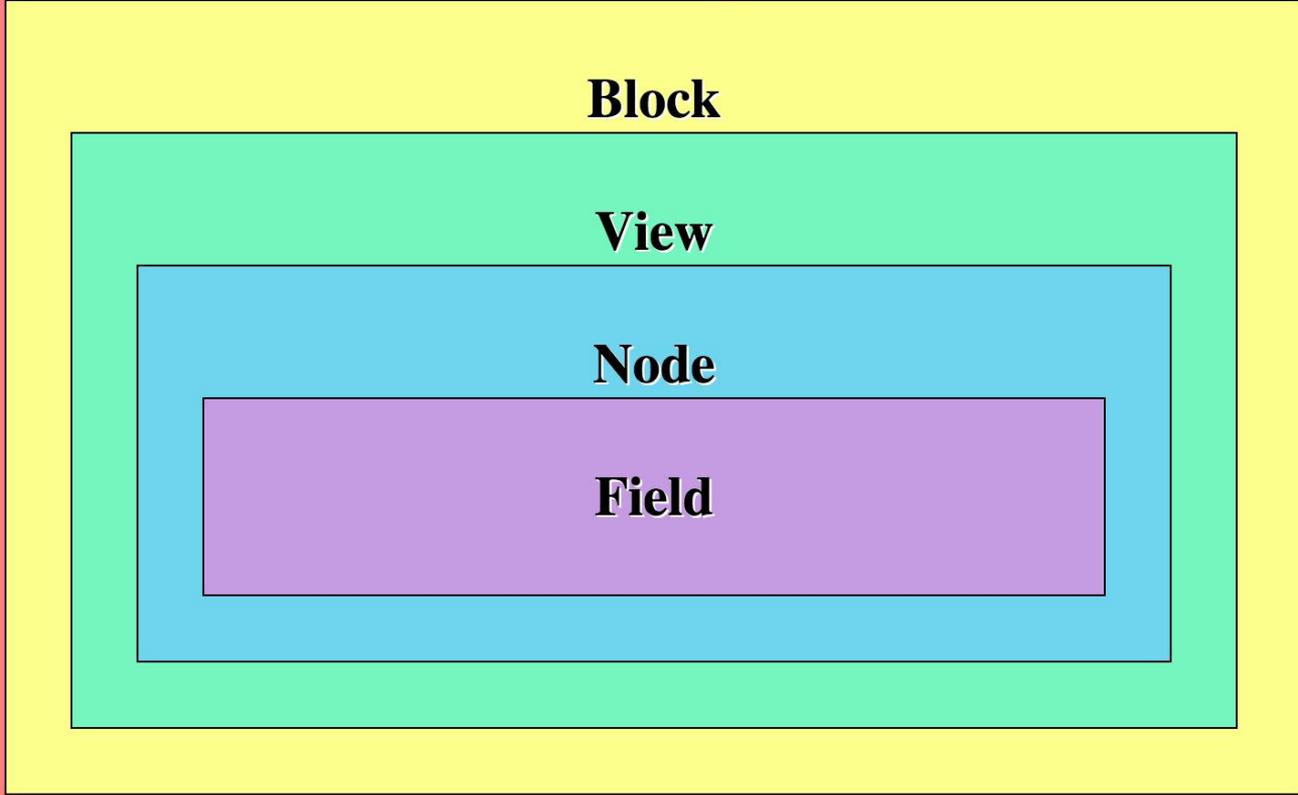
Theme region

Block

View

Node

Field





Logo

Telephone
Mail

Slider header image

Banner #1

Banner #2

Site
Navigation

Updates and
Upcoming Events

News Section

Contact
Information

Blog

Social
Media Links



Home > Administration

Structure

> **Block layout**

Configure what block content appears in your site's sidebars and other regions.

> **Comment types**

Manage form and displays settings of comments.

> **Contact forms**

Create and manage contact forms.

> **Content types**

Create and manage fields, forms, and display settings for your content.

> **Display modes**

Configure what displays are available for your content and forms.

> **Menus**

Manage menus and menu links.

> **Taxonomy**

Manage tagging, categorization, and classification of your content.

> **Views**

Manage customized lists of content.

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Layout Builder



✕ [Configure Section 1](#)

"Image" field

+ [Add block](#)

+ [Add section](#)

✕ [Configure Section 2](#)

"Established in" field

"Email" field

"Industries" field

"Telephone number" field

+ [Add block](#)

+ [Add block](#)

+ [Add section](#)

✕ [Configure Section 3](#)

"Description" field

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User

What is a User?



A visitor to the website. Depending on who is visiting the website it is possible to change the information they see.

Drupal can handle multiple users which makes account credential sharing among multiple people unnecessary. This is useful to keep track of changes to the website.

A Role...



Is a collection of **permissions**. They are used to assign privileges to a group of users. For example: a C-level executive, a sales representative, etc.

Drupal ships with three default roles, but more can be added:

- Anonymous user
- Authenticated user
- Administrator.

A Permission...



Checks if a user can perform a specific action. For example:

- Create content of type Article.
- Revert revisions for the content type Article.
- Post comments.
- Use the site-wide contact form.

Drupal's Permission System



Note that users can have **multiple** roles!
Every permission in each role is granted.

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Menu

What is a Menu?



Menus are a **collection of links** used to navigate the website. Drupal ships with default menus like the “Main Navigation” and others can be added by as needed.

Menus can be **hierarchical**. That is, a menu can be various level deep where a menu link can have other menu links under it.



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[About Us](#)

[Content Types](#)

[Mega menu demo](#)

[Drupal themes](#)

[Contact Us](#)

[Login](#)

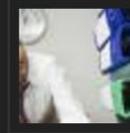
DEMO CONTENT

Full Width

Main - Right

Superfish menu

SF NavBar



What our products' benefits

12/28/2012 - 15:53



Easy to customize

11/30/2011 - 14:57

Taxonomy

What is Taxonomy?



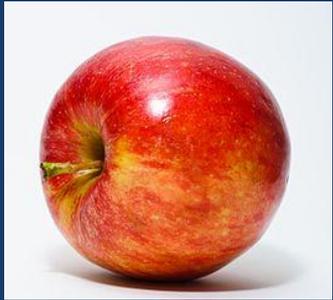
It is a system used for **categorization** which allows you to **connect**, **relate**, and **classify** your website's content.

In Drupal, taxonomy **vocabularies** are containers for a set of taxonomy **terms**. Vocabularies can be **hierarchical**. That is, a vocabulary can be various level deep where a term can have other terms under it.

Vocabulary: Fruits



Apple



Strawberry



Orange

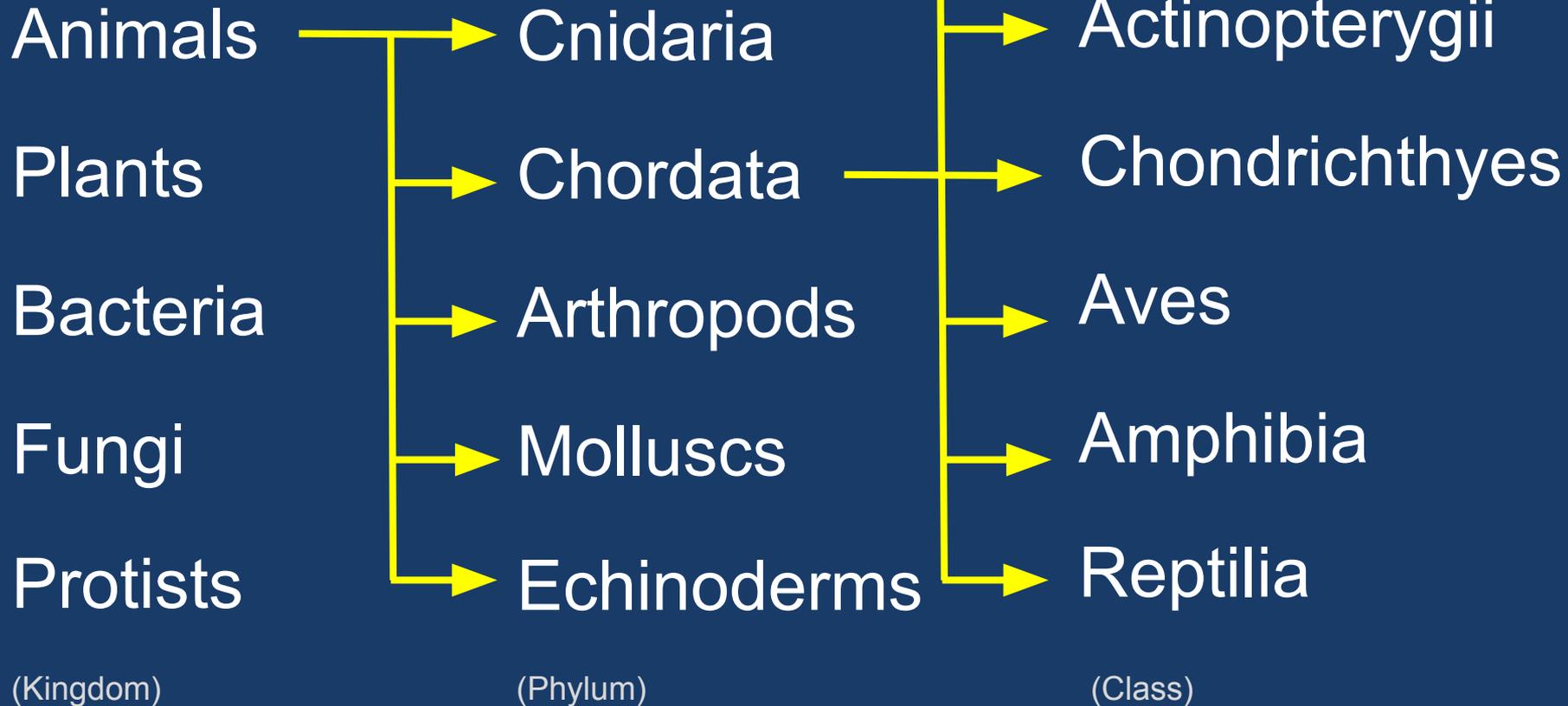


Grapes



Note that taxonomy terms can have **fields!**
In this example, an image field.

Voc.: Living Organisms



Real Life Example: Pets Cat-egorization



Kingdom Animalia
Subkingdom Bilateria
Infrakingdom Deuterostomia
Phylum Chordata
Subphylum Vertebrata
Infraphylum Gnathostomata
Superclass Tetrapoda
Class Mammalia
Subclass Theria
Infraclass Eutheria
Order Carnivora
Suborder Feliformia
Family Felidae
Subfamily Felinae
Genus *Felis*
Species *Felis catus*

Other Example Uses



- List every piece of content tagged with a specific term.
- Show additional content with the same tags. Similar By Terms module.
- Create editorial access controls based on hierarchies. Workbench Access module.
- Associate geographic location to terms to be rendered on a map. Location Taxonomize module in Drupal 7. Attach address field in Drupal 8/9.



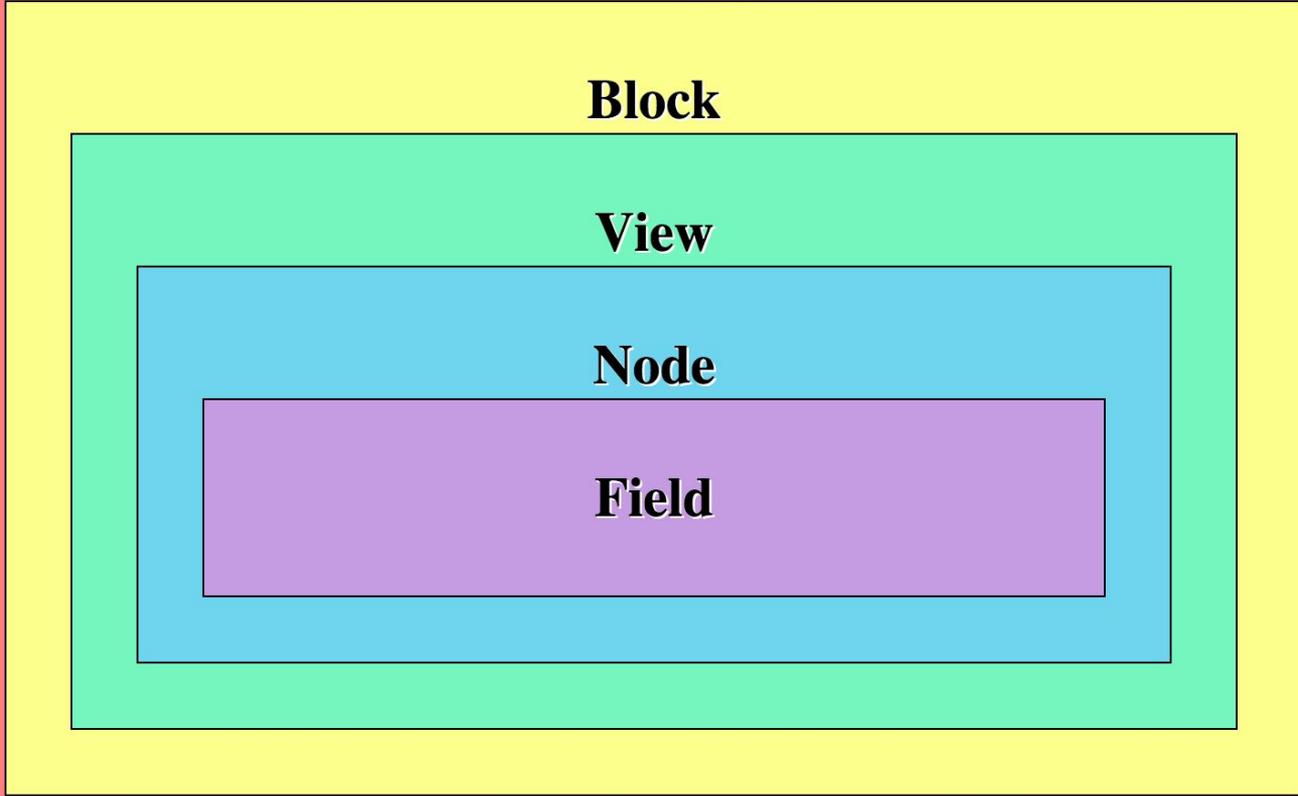
Theme region

Block

View

Node

Field



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FAQ

Is it a Good Idea to Change the Downloaded Code for a Quick Fix?



NO!

When performing updates, the new code can override your changes. Also, you might alter the framework's functionality and prevent other code from working. Instead, use the framework API to alter its behaviour as needed.

Modify Drupal without Hacking



Check out Joe Shindelar's session "Altering, Extending, and Enhancing Drupal 8" at

www.youtube.com/watch?v=tMM-I70ksQA

To Learn the Basics of Drupal's Markup



Check out Mauricio Dinarte's session "Twig recipes: Making Drupal 8 render the markup you want"

www.youtube.com/watch?v=bqfxaFLQ8D4



Get Involved with the Community!

- Create a user account

<https://www.drupal.org/user/register>

- Be part of the conversation

<https://www.drupal.org/ircchat> - #drupal @ freenode.net

<https://www.drupal.org/slack> - #general @ drupal.slack.com

<https://www.drupal.org/drupalchat> - #drupal @ drupalchat.me

- Get involved with your local community

<https://groups.drupal.org>

<https://www.drupal.org/events>



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- July 23 – Upgrading to Drupal 8/9 using the Migrate API

<https://agoric.coop/training>

Thank You!



Let's continue the conversation on twitter

#UnderstandingDrupal



Please Provide Feedback



<https://agoric.coop/r/getting-started-drupal-feedback>

@dinarcon | #UnderstandingDrupal | mauricio@agoric.com