ADVANCED WEBFORMS

HTTP://BIT.LY/ADVANCED-WEBFORMS-APIS

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HELLO!

Hi, my name is Jacob Rockowitz.

- I am known as jrockowitz on the web.
- I am a Drupal developer and software architect.
- I built and maintain the Webform module for Drupal 8.

WELCOME

Welcome to the Drupal community.

- We are a diverse and inclusive community.
- You are part of this massive community.
- Everyone can contribute to the software and the community.

THERE ARE A
LOT OF RESOURCES
AVAILABLE FOR LEARNING
ABOUT THE BASICS OF
THE WEBFORM MODULE

ADVANCED
PRESENTATIONS
SHOULD TEACH YOU
A FEW NEW THINGS
& INSPIRE YOU
TO LEARN MORE

Building advanced webforms requires

leveraging hooks,
understanding plugins,
building render arrays,
& writing tests

WEBFORM
BASICS

THE WEBFORM
MODULE IS A
POWERFUL AND FLEXIBLE
OPEN SOURCE
FORM BUILDER &
SUBMISSION MANAGER
FOR DRUPAL 8

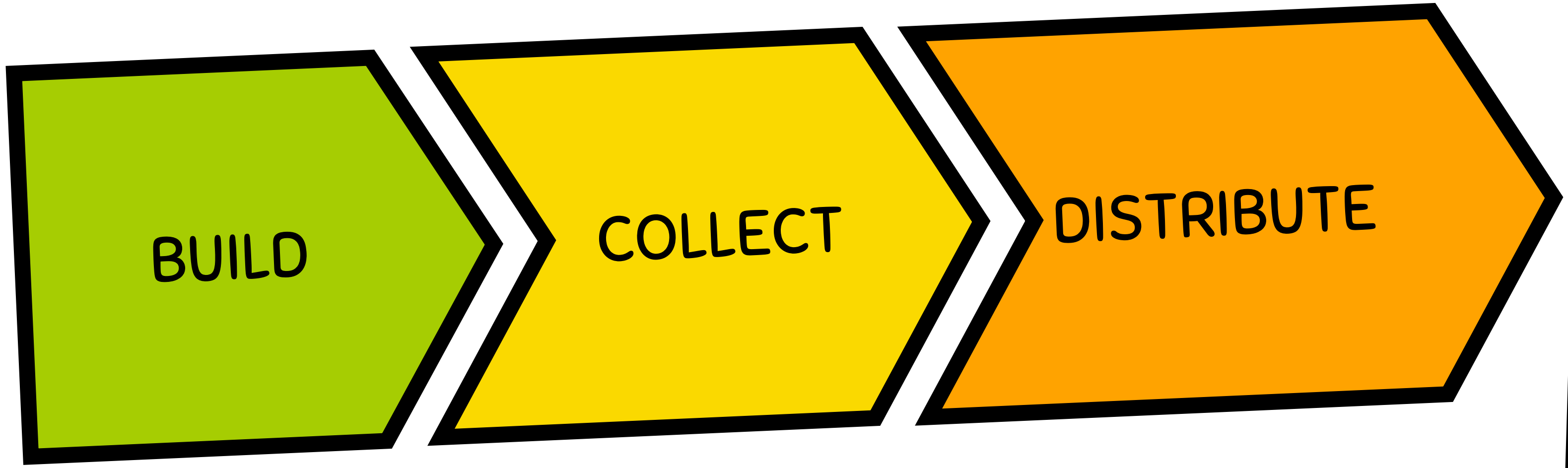
IT PROVIDES ALL THE FEATURES EXPECTED FROM AN ENTERPRISE PROPRIETARY FORM BUILDER...

...COMBINED WITH THE FLEXIBILITY AND OPENNESS OF DRUPAL

THE USE CASE...

- **BUILD** a form or copy a template
- **PUBLISH** the form as a page, node, or block
- **COLLECT** form submissions
- **SEND** confirmations and notifications
- **REVIEW** results online
- **DISTRIBUTE** results as CSV or remote post

ONCE AGAIN, THE USE CASE...



<demo>

Webform Basics

Overview:	/admin/structure/webform
Build:	…/webform/manage/contact
Source:	…/webform/manage/contact/source
Configure	…/webform/manage/contact/settings
Test:	/webform/contact/test
Results:	…/contact/results/submissions
Download:	…/contact/results/download
Submission:	…/contact/submission/1

ADDITIONAL RESOURCES

- Webform Articles
  http://dgo.to/2932764

- Webform Videos
  http://dgo.to/2834424

- Webform Features
  http://dgo.to/2837024

TESTING WEBFORMS

TESTS CONFIRM EXPECTATIONS

WEBFORM TESTS CONFIRM

- Rendering: Check an element's markup
- Processing: Check an input's default value
- Validation: Check required error messages
- Settings: Check labels and layout
- Access: Check user access controls

TESTING BEST PRACTICES

- Create a test module with exported webforms
- Write tests for every element and setting
- Establish repeatable testing patterns
- Organize tests into groups/subdirectories

- Having easy-to-repeat manual tests is okay
- Some tests are better than no tests

BY THE WAY, THE WEBFORM MODULE STILL USES DEPRECATED SIMPLETESTS...

...YOU SHOULD ONLY WRITE PHPUNIT TESTS

<demo>

Testing Webform

Overview: /admin/structure/webform
Settings: ../webform?search=confirmation
Elements: ../webform?search=email
Modules: /admin/modules (webform_test)

```
@see \Drupal\webform\Tests\Element\WebformElementEmailTest

// Check basic email multiple rendering.
$this->drupalGet('webform/test_element_email');
$this->assertRaw('<label for="edit-email-multiple-basic">Multiple email
  addresses (basic)</label>');
$this->assertRaw('<input type="text"
  id="edit-email-multiple-basic" name="email_multiple_basic" value=""
  size="60" class="form-text webform-email-multiple" />');
$this->assertRaw('Multiple email addresses may be separated by
  commas.');

// Check that second email address is not valid.
$edit = [
 'email_multiple_basic' => 'example@example.com, xxx',
];
$this->drupalPostForm('webform/test_element_email', $edit, t('Submit'));
$this->assertRaw('The email address <em class="placeholder">xxx</em> is
  not valid.');
```

```
@see \Drupal\webform\Tests\Settings\WebformSettingsConfirmationTest

// Check confirmation modal.
$webform = Webform::load('test_confirmation_modal');
$this->postSubmission($webform, ['test' => 'value']);
$this->assertRaw('This is a <b>custom</b> confirmation modal.');
$this->assertRaw('<div class="js-hide webform-confirmation-modal...>');

// Check custom confirmation page.
$webform = Webform::load('test_confirmation_page_custom');
$this->postSubmission($webform);
$this->assertRaw('<div style="border: 10px solid red; padding: 1em;"
  class="webform-confirmation">');

// Check confirmation URL.
$webform = Webform::load('test_confirmation_url_message');
$this->postSubmission($webform);
$this->assertRaw('This is a custom confirmation message.');
$this->assertUrl('<front>');
```

```
@see \Drupal\webform_ui\Tests\WebformUiElementTest

// Check access allowed (200) to textfield element.
$this->drupalGet('admin/structure/webform/manage/contact/element/add/tex
tfield');
$this->assertResponse(200);

// Check access denied (403) to password element,
// which is disabled by default.
$this->drupalGet('admin/structure/webform/manage/contact/element/add/pas
sword');
$this->assertResponse(403);
```

ADDITIONAL RESOURCES

- Testing | Drupal.org
  http://dgo.to/2819027
- An Overview of Testing in Drupal 8 | Lullabot
  https://www.lullabot.com/articles/an-overview-of-testing-in-drupal-8
- Automated Testing in Drupal 8 | Drupalize.me
  https://drupalize.me/series/automated-testing-drupal-8

WEBFORM ENTITIES

Everything in Drupal 8 is

an entity

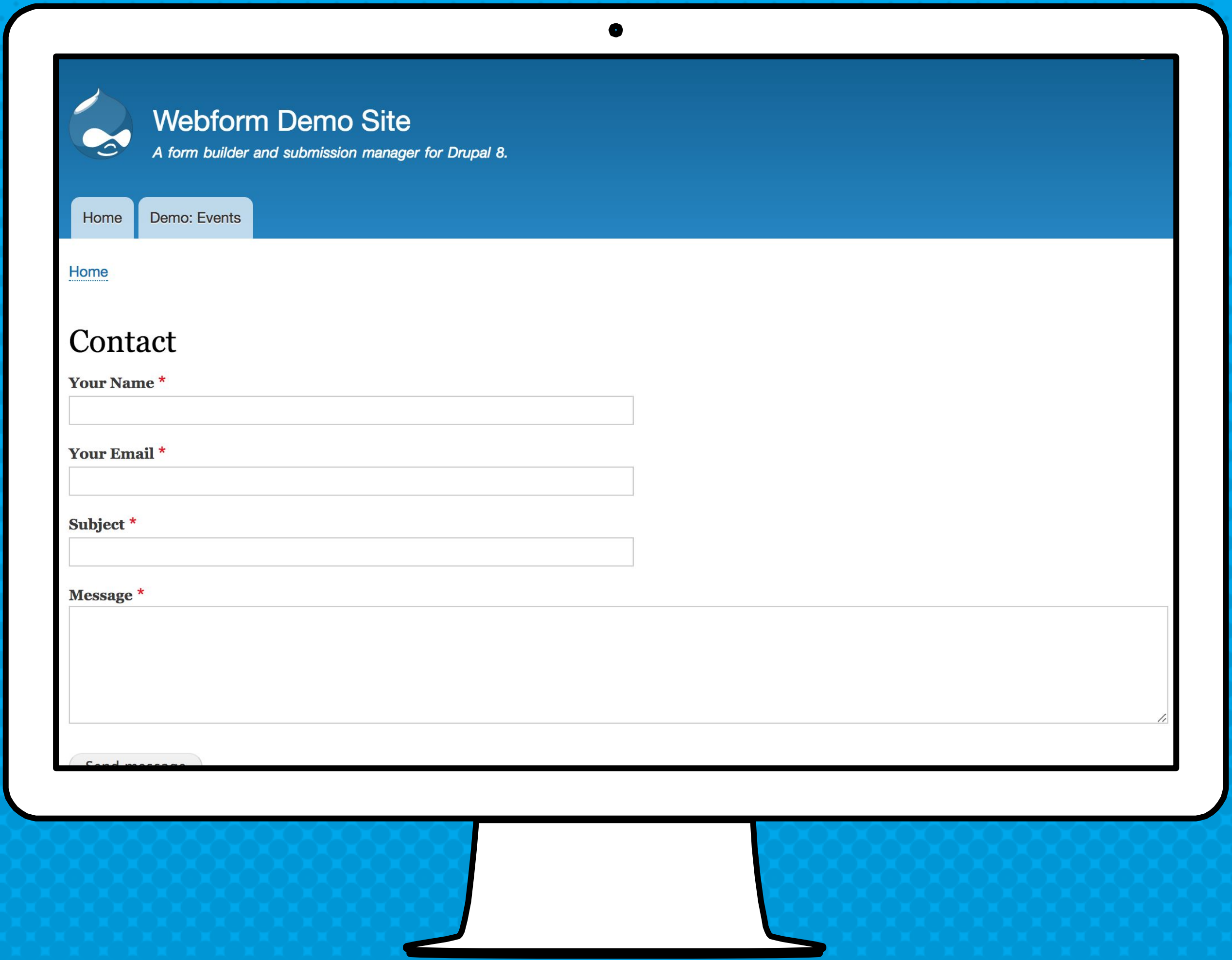
(or a plugin)

WHAT IS AN ENTITY?

Any defined chunk of data in Drupal. This includes things like nodes, users, taxonomy terms, files, etc. Contributed modules can define custom entities. Each entity type can have multiple bundles.

-- https://dgo.to/937

THIS IS A *WEBFORM ENTITY*



Webform Demo Site

A form builder and submission manager for Drupal 8.

Contact

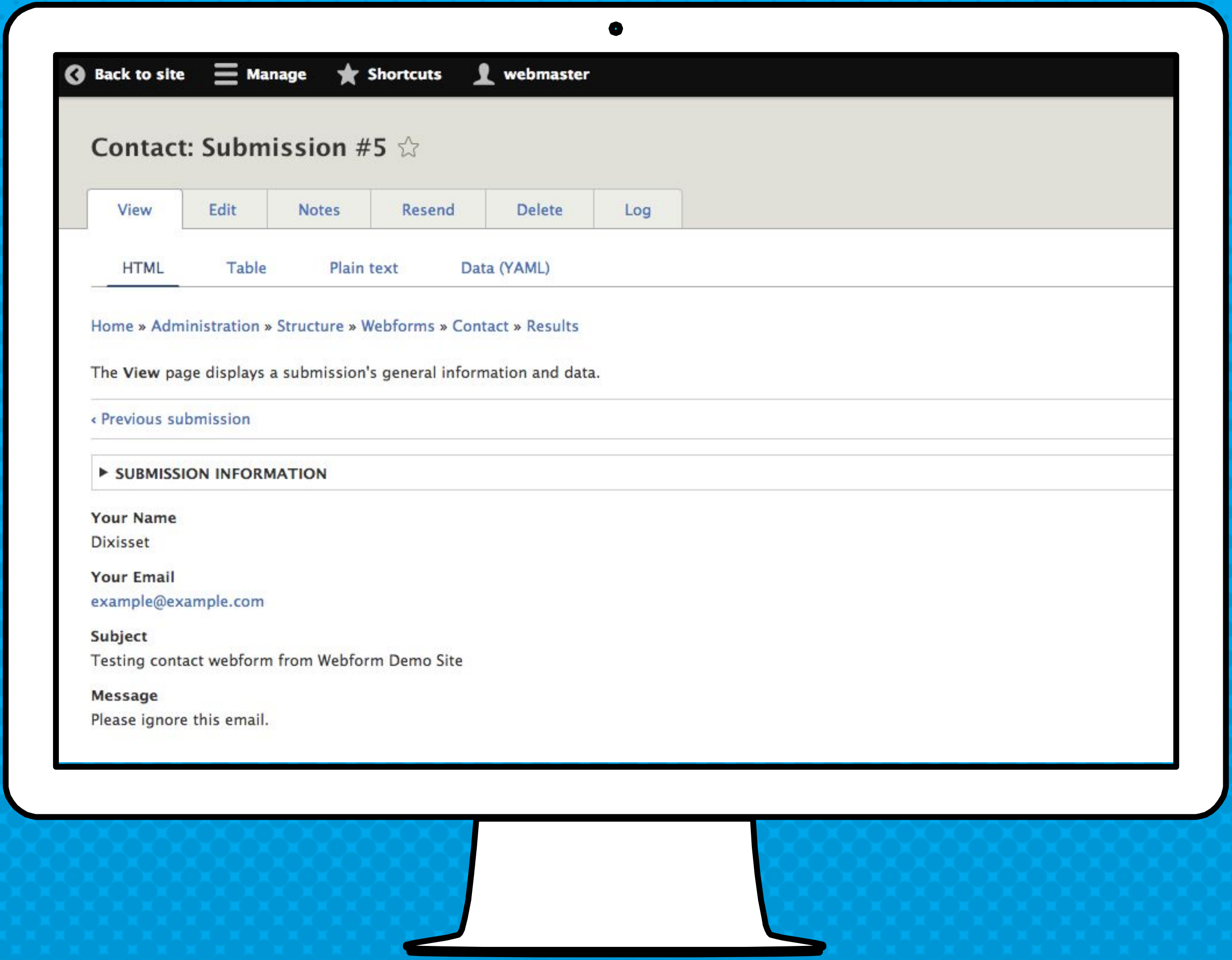
Your Name *

Your Email *

Subject *

Message *

THIS IS A WEBFORM SUBMISSION ENTITY



Contact: Submission #5

Home » Administration » Structure » Webforms » Contact » Results

The **View** page displays a submission's general information and data.

‹ Previous submission

▶ SUBMISSION INFORMATION

Your Name
Dixisset

Your Email
example@example.com

Subject
Testing contact webform from Webform Demo Site

Message
Please ignore this email.

ABOUT WEBFORM ENTITIES

- Webforms are config entities (exportable)
- Submissions are content entities (database)

- Webforms do not use Field API
- Submissions use an Entity–attribute–value model

ENTITY-ATTRIBUTE-VALUE MODEL

Entity–attribute–value model (EAV) is a data model to encode, in a space-efficient manner, entities where the number of attributes (properties, parameters) that can be used to describe them is potentially vast, but the number that will actually apply to a given entity is relatively modest.

-- https://en.wikipedia.org/wiki/Entity%E2%80%93attribute%E2%80%93value_model

A SIMPLE WAY
TO STORE
A LOT OF DATA

<demo>

Webform Entities

Overview:	/devel/entity/info
Export:	…/webform/manage/contact/export
API:	/webform/contact/api

ADDITIONAL RESOURCES

- Introduction to Entity API in Drupal 8 | Drupal
  http://dgo.to/2078191
- What Are Drupal Entities? | Drupalize.me
  https://drupalize.me/videos/what-are-drupal-entities
- Entities 101: Understanding Data Structures in Drupal
  https://youtu.be/LT83PfumjPU

DISCOVERING THE SOURCE ENTITY

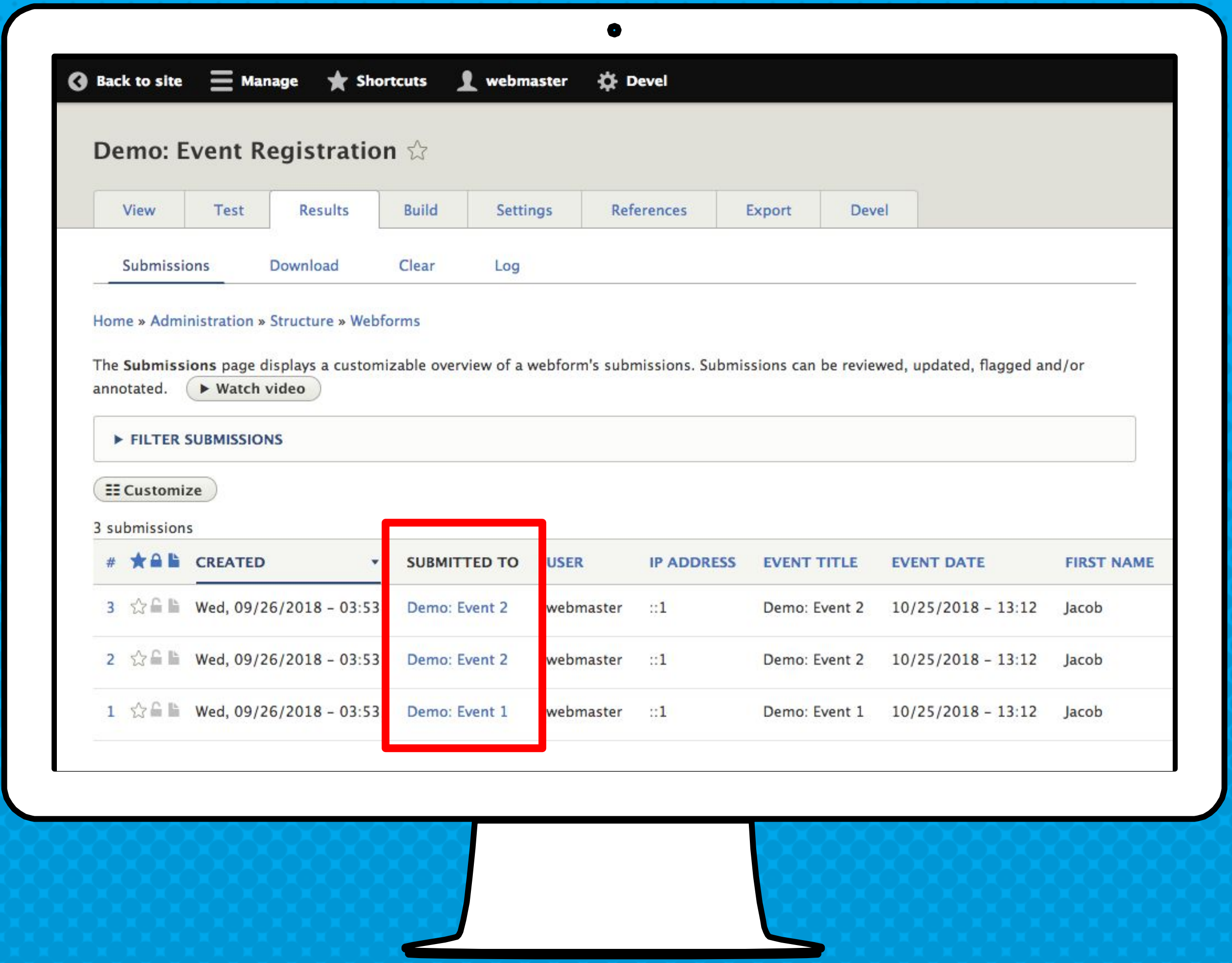
A SOURCE ENTITY
TRACKS & CREATES
A RELATIONSHIP TO
THE DRUPAL ENTITY
FROM WHICH A WEBFORM
WAS SUBMITTED

SOURCE ENTITY OVERVIEW

- Allows a webform to be reused multiple times
- Determined via the current route or query string

- Webform nodes use source entities
- Webform blocks use source entities
- Even paragraphs use source entities

THESE ARE SOURCE ENTITIES



Demo: Event Registration

Home » Administration » Structure » Webforms

The **Submissions** page displays a customizable overview of a webform's submissions. Submissions can be reviewed, updated, flagged and/or annotated. ▶ Watch video

3 submissions

#		CREATED	SUBMITTED TO	USER	IP ADDRESS	EVENT TITLE	EVENT DATE	FIRST NAME
3		Wed, 09/26/2018 - 03:53	Demo: Event 2	webmaster	::1	Demo: Event 2	10/25/2018 - 13:12	Jacob
2		Wed, 09/26/2018 - 03:53	Demo: Event 2	webmaster	::1	Demo: Event 2	10/25/2018 - 13:12	Jacob
1		Wed, 09/26/2018 - 03:53	Demo: Event 1	webmaster	::1	Demo: Event 1	10/25/2018 - 13:12	Jacob

THE SOURCE ENTITY CAN BE USED TO TRACK…

- **Site Feedback**
  A form that tracks which page the comments are related to.
- **Event Registration**
  A registration form that tracks which event a user has registered for.
- **Application Evaluation**
  An evaluation form attached to applications.

<demo>

Webform Source Entity

```
Overview:…/webform/submissions/manage
Node:    …/manage/contact/references
```

```
@see \Drupal\webform\Plugin\WebformSourceEntity\QueryStringWebformSourceEntity

public function getSourceEntity(array $ignored_types) {
  // Get and check source entity type.
  $source_entity_type = $this->request->query->get('source_entity_type');
  if (!$source_entity_type ||
    !$this->entityTypeManager->hasDefinition($source_entity_type)) {
    return NULL;
  }

  // Get and check source entity id.
  $source_entity_id = $this->request->query->get('source_entity_id');
  if (!$source_entity_id) {
    return NULL;
  }

  // Get and check source entity.
  $source_entity = $this->entityTypeManager
    ->getStorage($source_entity_type)->load($source_entity_id);

  return ($source_entity) ? $source_entity : NULL;
}
```

```
@see \Drupal\webform\Plugin\WebformSourceEntityInterface

/**
 * Interface of a webform source entity plugin.
 */
interface WebformSourceEntityInterface
  extends PluginInspectionInterface {

  /**
   * Detect and return a source entity from current context.
   *
   * @param string[] $ignored_types
   *   Entity types that may not be used as a source entity.
   *
   * @return \Drupal\Core\Entity\EntityInterface|null
   *   Source entity or NULL when no source entity is found.
   */
  public function getSourceEntity(array $ignored_types);

}
```

UNDERSTANDING FORM API (FAPI)

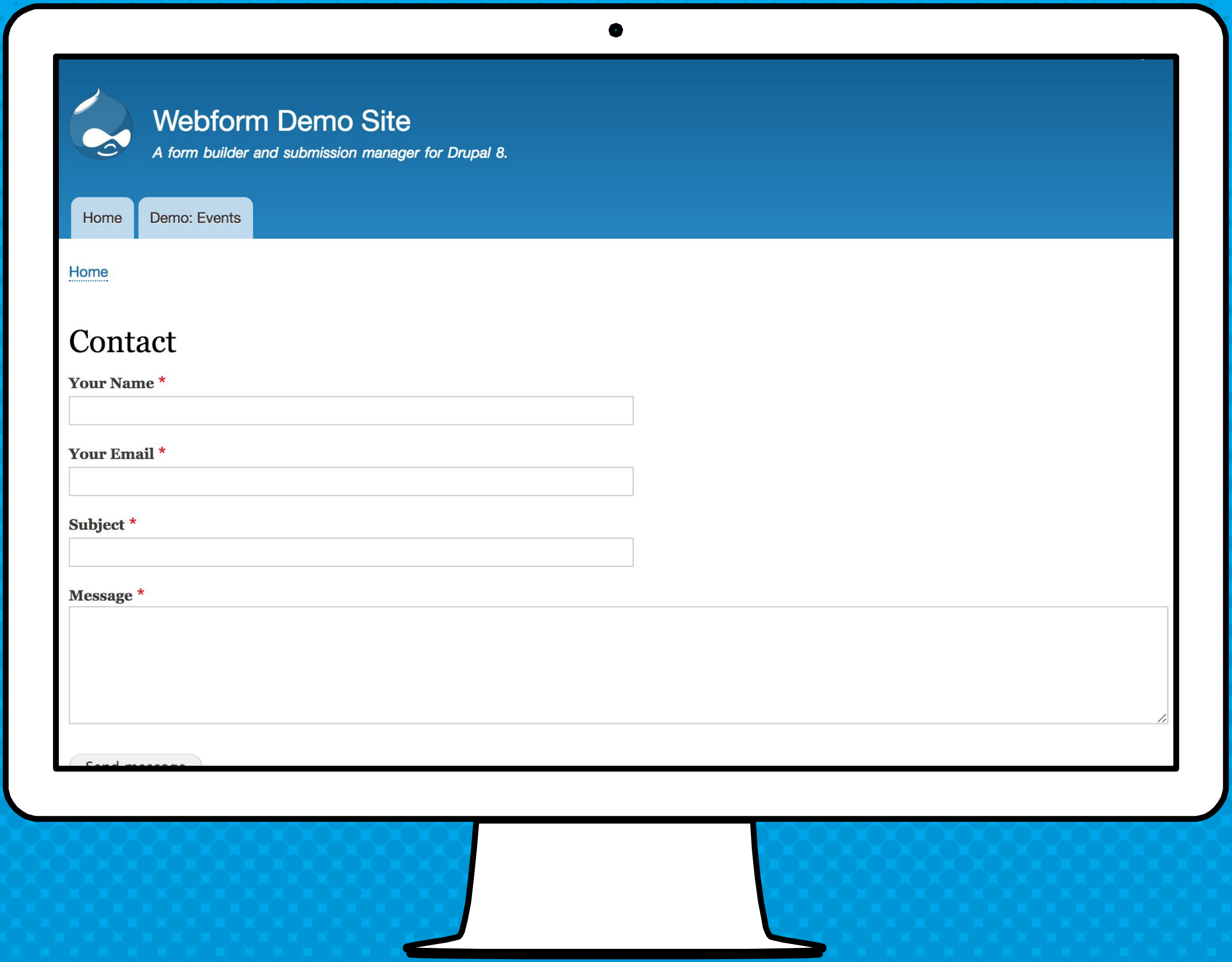
WEBFORMS ARE
RENDER ARRAYS
WHICH CONTAIN
ELEMENTS THAT
BUILD, VALIDATE, & SUBMIT
FORM VALUES
USING DRUPAL'S
FORM API (FAPI)

RENDER ARRAYS ARE THE BASIC BUILDING BLOCKS OF DRUPAL CONTENT

Drupal's Form API Overview

- An element is anything displayed on a page
- An input is an element that collects data
- A composite is a group of elements
- A form is collections of elements and inputs

THIS IS A FORM



Webform Demo Site

A form builder and submission manager for Drupal 8.

Contact

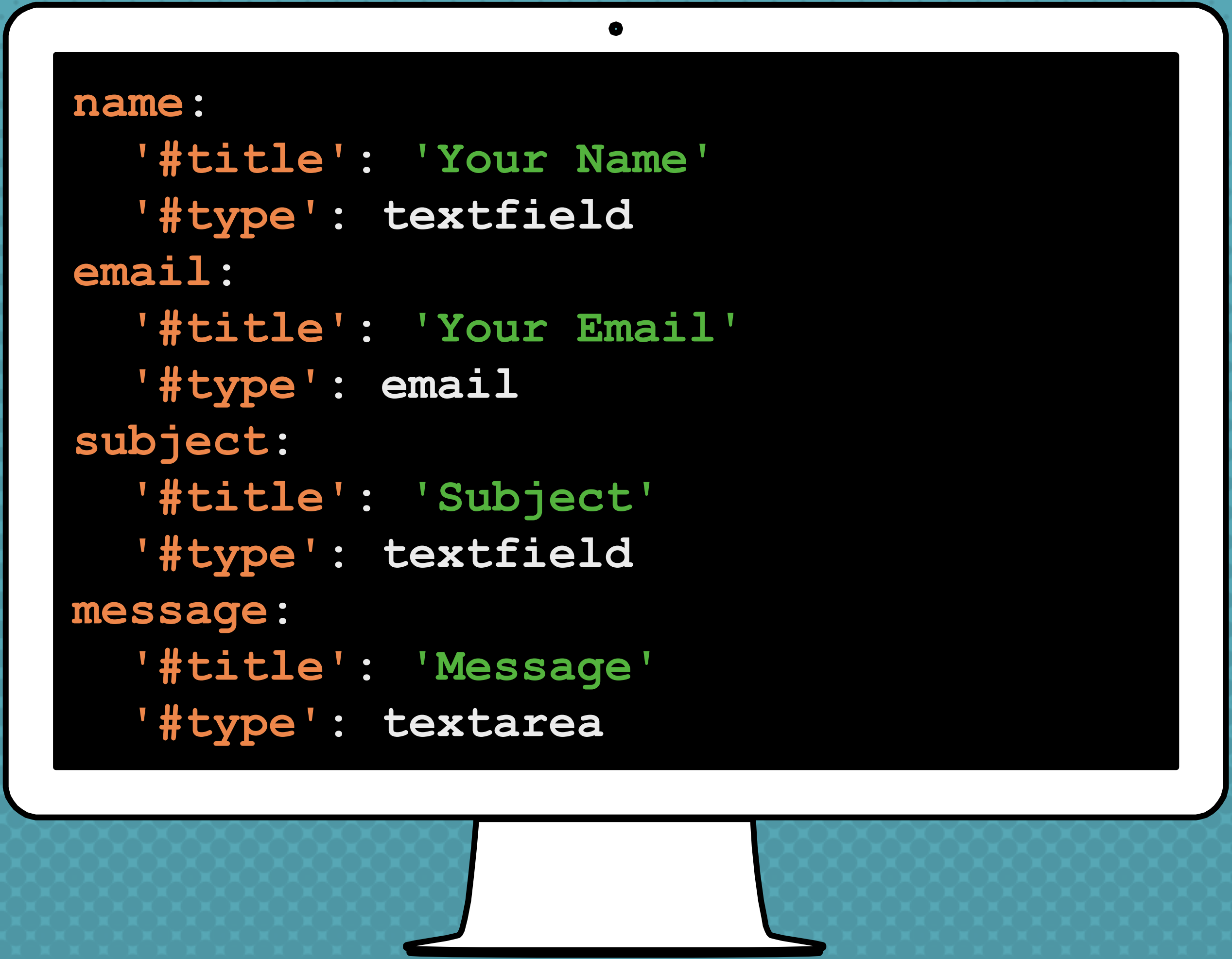
Your Name *

Your Email *

Subject *

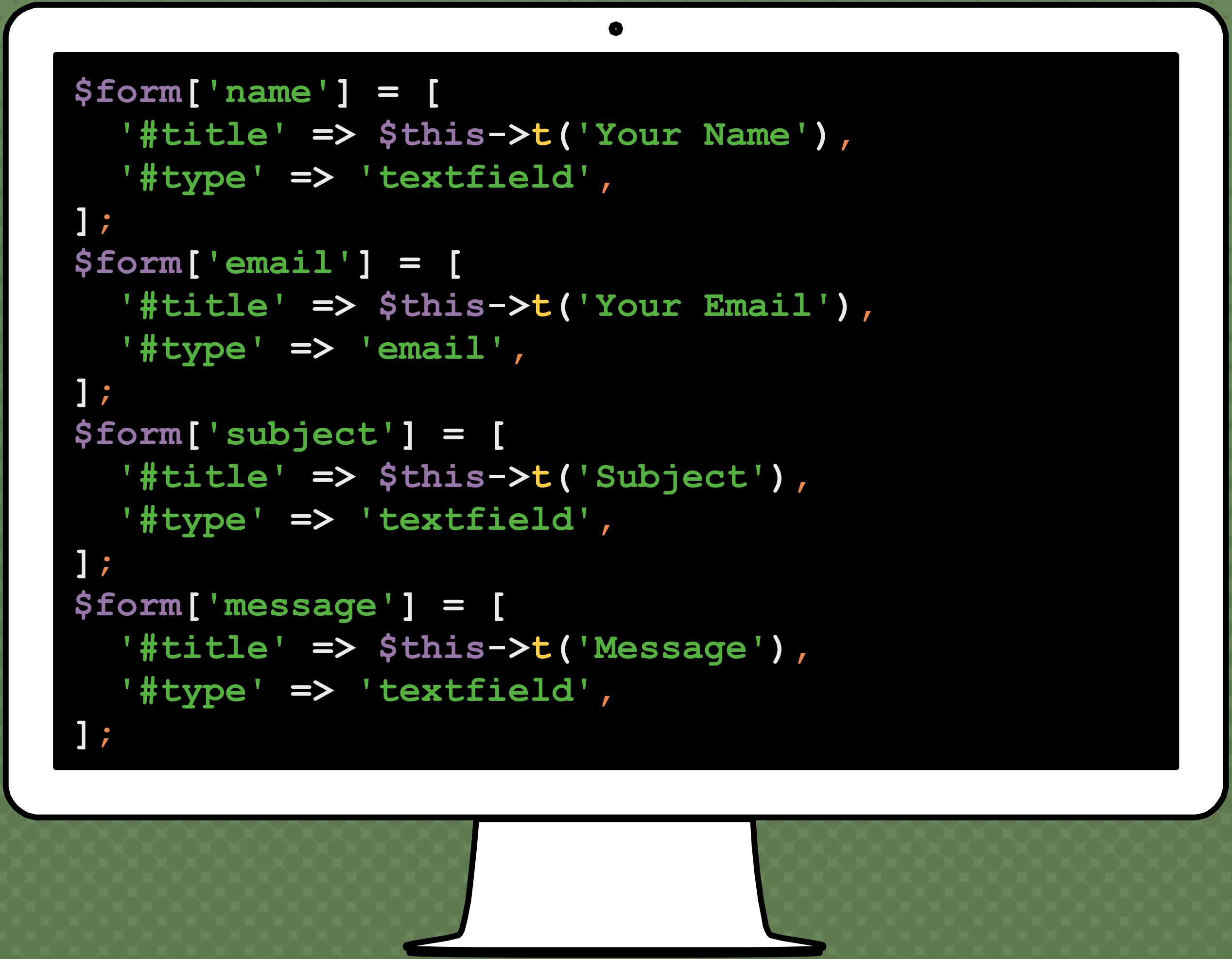
Message *

THIS IS A RENDER ARRAY AS YAML



```yaml
name:
   '#title': 'Your Name'
   '#type': textfield
email:
   '#title': 'Your Email'
   '#type': email
subject:
   '#title': 'Subject'
   '#type': textfield
message:
   '#title': 'Message'
   '#type': textarea
```

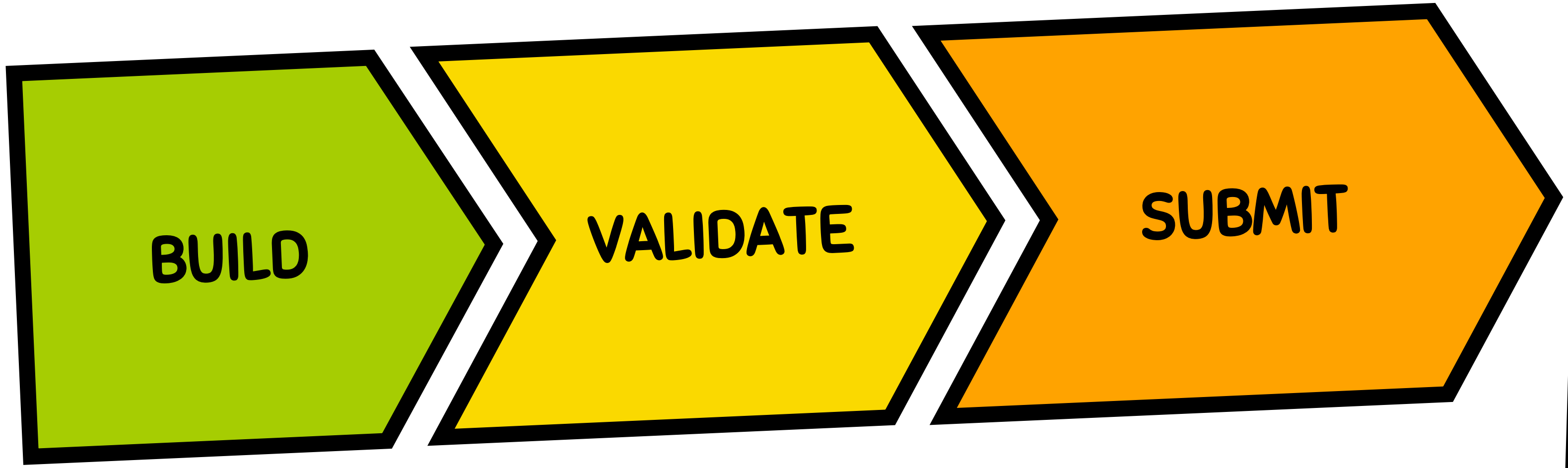
THIS IS A RENDER ARRAY AS PHP



```
$form['name'] = [
  '#title' => $this->t('Your Name'),
  '#type' => 'textfield',
];
$form['email'] = [
  '#title' => $this->t('Your Email'),
  '#type' => 'email',
];
$form['subject'] = [
  '#title' => $this->t('Subject'),
  '#type' => 'textfield',
];
$form['message'] = [
  '#title' => $this->t('Message'),
  '#type' => 'textfield',
];
```

```php
@see \Drupal\system\Form\SiteInformationForm

class SiteInformationForm extends ConfigFormBase {
 public function buildForm(array $form, FormStateInterface $form_state) {
   $site_config = $this->config('system.site');
   $form['site_information'] = [
     '#type' => 'details',
     '#title' => t('Site details'),
   ];
   $form['site_information']['site_name'] = [
     '#type' => 'textfield',
     '#title' => t('Site name'),
     '#default_value' => $site_config->get('name'),
     '#required' => TRUE,
   ];
   $form['site_information']['site_slogan'] = [
     '#type' => 'textfield',
     '#title' => t('Slogan'),
     '#default_value' => $site_config->get('slogan'),
   ];
   return parent::buildForm($form, $form_state);
 }
}
```

HOW DRUPAL HANDLES A FORM



```
@see \Drupal\Core\Form\FormInterface

interface FormInterface {
  /**
   * Returns a unique string identifying the form.
   */
  public function getFormId();

  /**
   * Form constructor.
   */
  public function buildForm(array $form, FormStateInterface $form_state);

  /**
   * Form validation handler.
   */
  public function validateForm(array &$form, FormStateInterface $form_state);

  /**
   * Form submission handler.
   */
  public function submitForm(array &$form, FormStateInterface $form_state);
}
```

ADDITIONAL RESOURCES

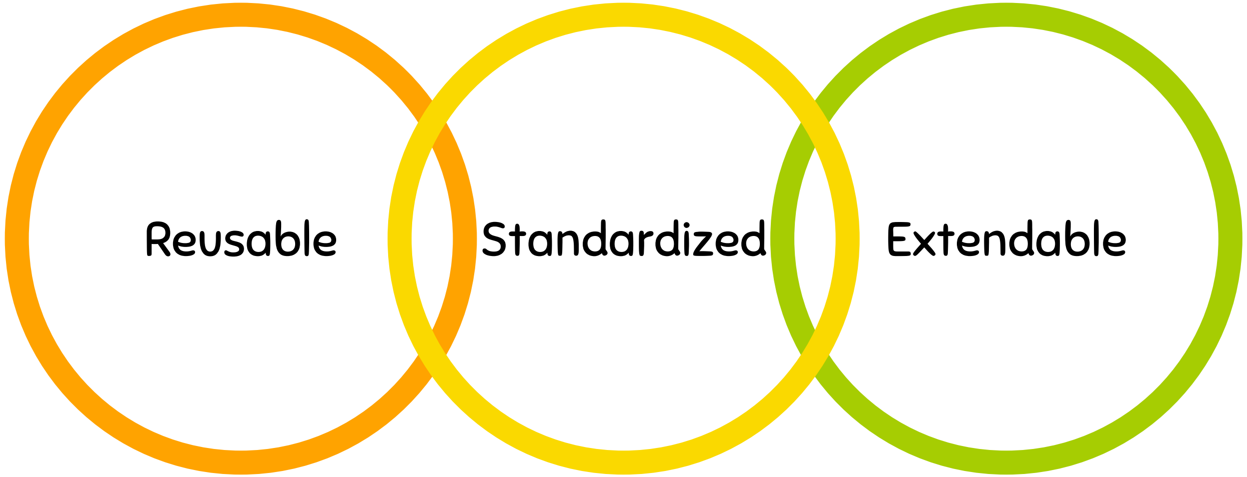
- Form API | Drupal.org
  http://dgo.to/2817929
- Forms (Form API) | Drupalize.me
  https://drupalize.me/topic/forms-form-api
- Examples for Developers
  https://www.drupal.org/project/examples

CREATING FORM ELEMENTS

A FORM ELEMENT IS DEFINED USING A RENDER ARRAY, WHICH IS PROCESSED BY A RENDER ELEMENT PLUGIN, WHICH CREATES AN INPUT ON A FORM

PLUGINS ARE
SMALL PIECES OF
FUNCTIONALITY THAT
ARE SWAPPABLE

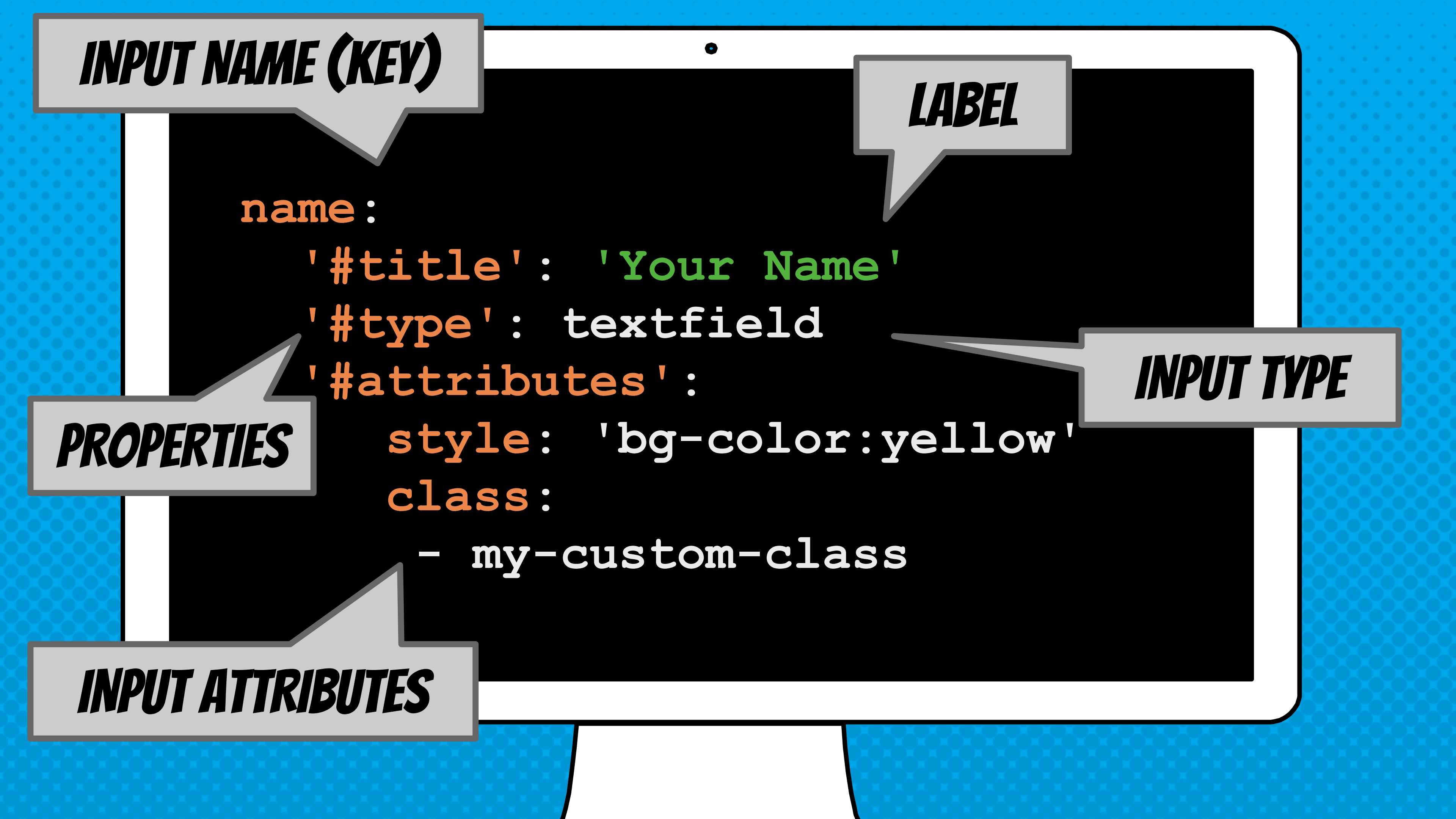
PLUGINS ARE...



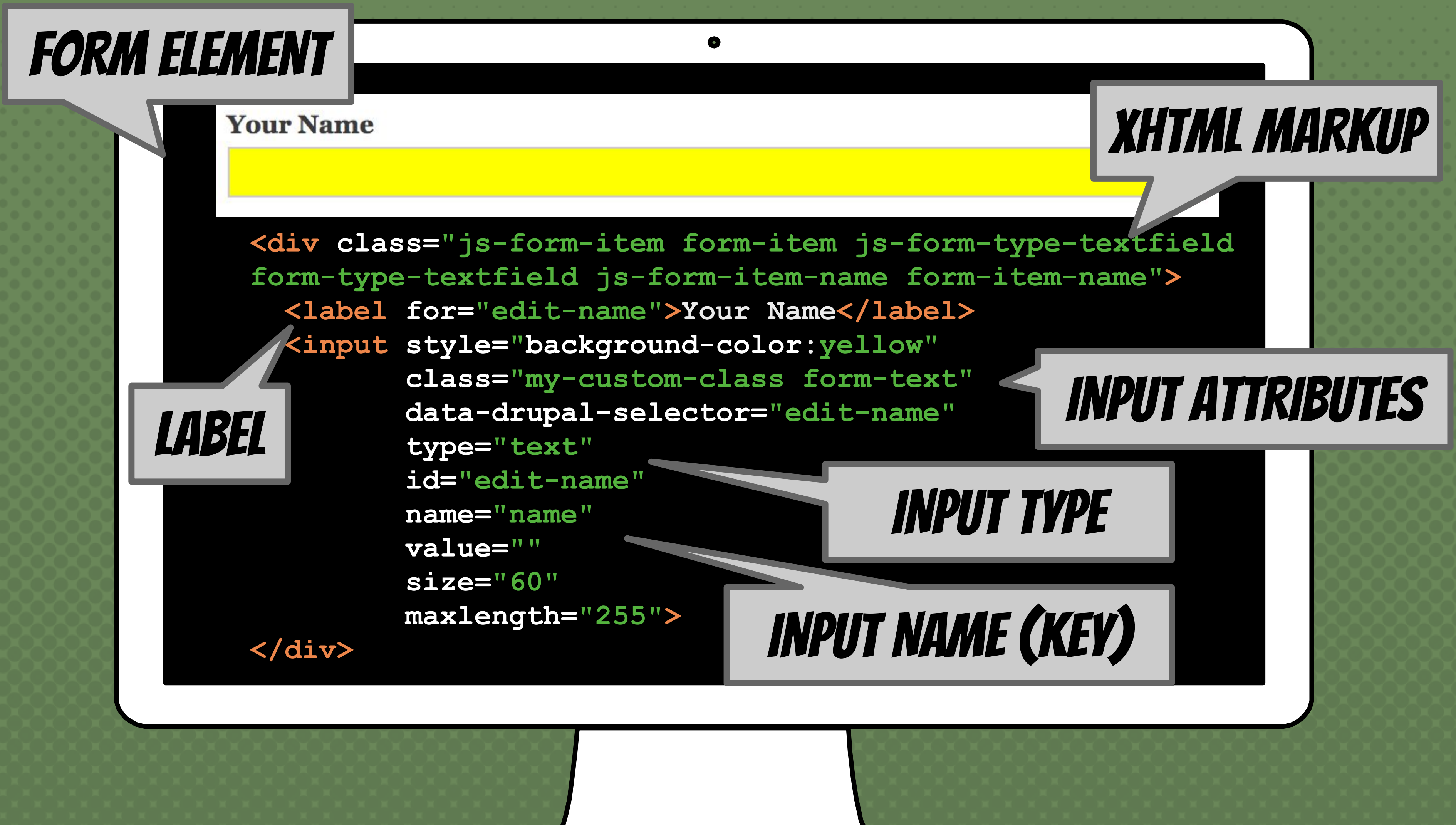
FORM ELEMENTS OVERVIEW

- Form elements are plugins
- Form elements extend render elements

- Element properties begin with a hash (#)
- Elements must have keys



```
name:
  '#title': 'Your Name'
  '#type': textfield
  '#attributes':
    style: 'bg-color:yellow'
    class:
     - my-custom-class
```



```
<div class="js-form-item form-item js-form-type-textfield
form-type-textfield js-form-item-name form-item-name">
  <label for="edit-name">Your Name</label>
  <input style="background-color:yellow"
         class="my-custom-class form-text"
         data-drupal-selector="edit-name"
         type="text"
         id="edit-name"
         name="name"
         value=""
         size="60"
         maxlength="255">
</div>
```

Form Element Plugin Methods

× Define properties	`FormElement::getInfo`
× Set input value	`FormElement::valueCallback`
× Build input	`FormElement::buildElementName`
× Process input	`FormElement::processElementName`
× Render input	`FormElement::preRenderElementName`
× Validate value	`FormElement::validateElementName`

FORM ELEMENT TIPS

- Copy and extend existing elements
- Use #element_validate to alter form values
- For composite elements you must use #tree

```php
// @see \Drupal\Core\Render\Element\Textfield

class Textfield extends FormElement {

  public function getInfo() {}

  public static function valueCallback(&$element, $input,
    FormStateInterface $form_state) {
    if ($input !== FALSE && $input !== NULL) {
      return str_replace(["\r", "\n"], '', $input);
    }
    return NULL;
  }

  public static function preRenderTextfield($element) {
    $element['#attributes']['type'] = 'text';
    Element::setAttributes($element, ['id', 'name', 'value', 'size',
      'maxlength', 'placeholder']);
    static::setAttributes($element, ['form-text']);
    return $element;
  }
}
```

@see \Drupal\Core\Render\Element\FormElementInterface

```php
/**
 * Provides an interface for form element plugins.
 */
interface FormElementInterface extends ElementInterface {

  /**
   * Determines how user input is mapped to an
   * element's #value property.
   */
  public static function valueCallback(&$element, $input,
    FormStateInterface $form_state);

}
```

ADDITIONAL RESOURCES

- Render arrays | Drupal.org
  http://dgo.to/2456267
- Form Element Reference | Drupalize.me
  https://drupalize.me/tutorial/form-element-reference
- Form and render elements | Drupal API
  https://api.drupal.org/api/drupal/elements

Creating Webform Elements

WEBFORM ELEMENTS ARE WRAPPERS THAT ENHANCE DRUPAL FORM ELEMENTS

Webform Element Plugins Overview

- Requires a corresponding FormElement
- Both plugins must use the same plugin ID (#type)
- Handles everything related to an element
- Base classes help organize related elements
- Traits also help organize related behaviors

Webform Element Plugin Methods

Defines default properties	`WebformElement::getDefaultProperties`
Prepares an element	`WebformElement::prepare`
Determine behaviors	`WebformElement::hasMultipleValues`
Display submission value	`WebformElement::buildHtml`
Exports values	`WebformElement::getTableColumn`
Builds configuration form	`WebformElement::form`

<demo>

Webform Elements

Overview: .../reports/webform-plugins/elements

Modules: webform_example_element.module
webform_example_composite.module

```php
@see \Drupal\webform\Plugin\WebformElementInterface

interface WebformElementInterface {
  function getDefaultProperties();
  // Inspection.
  function isInput(array $element);
  function isContainer(array $element);
  function isComposite();
  function supportsMultipleValues();
  // Element processing.
  function initialize(array &$element);
  function prepare(array &$element, $webform_submission);
  function finalize(array &$element, $webform_submission);
  // Submission rendering.
  function buildHtml(array $element, $webform_submission);
  function buildText(array $element, $webform_submission);
  // Entity operations.
  function preCreate(array &$element, array $values);
  function postLoad(array &$element, $webform_submission);
  function postSave(array &$element, $webform_submission);
  function postDelete(array &$element, $webform_submission);
  // Configuration form.
  function form(array $form, $form_state);
}
```

```php
@see \Drupal\webform_example_composite\Element\WebformExampleComposite

class WebformExampleComposite extends WebformCompositeBase {

  public function getInfo() {
    return parent::getInfo() + ['#theme' => 'webform_example_composite'];
  }

  public static function getCompositeElements(array $element) {
    $elements = [];
    $elements['first_name'] = [
      '#type' => 'textfield',
      '#title' => t('First name'),
    ];
    $elements['last_name'] = [
      '#type' => 'textfield',
      '#title' => t('Last name'),
    ];
    return $elements;
  }
}
```

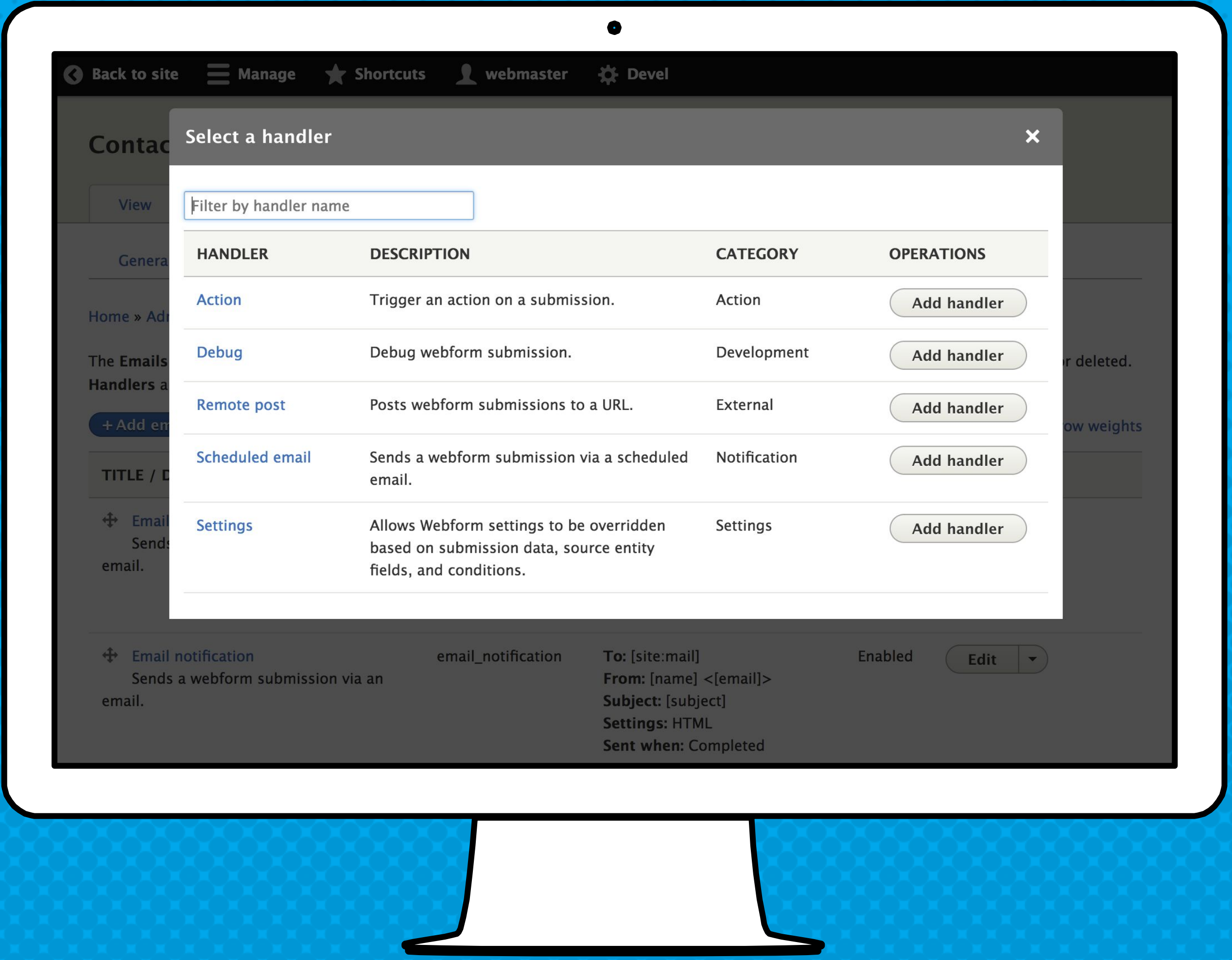
Creating Custom Webform Elements

- Create a custom module
- Extend or copy existing form element plugin
- Build a test webform
- Define webform element plugin
- Test webform integration
- Write tests

IMPLEMENTING WEBFORM HANDLERS

WEBFORM HANDLER PLUGINS ARE USED TO ROUTE SUBMITTED DATA TO APPLICATIONS & SEND EMAIL NOTIFICATIONS

THESE ARE WEBFORM HANDLERS



Select a handler

HANDLER	DESCRIPTION	CATEGORY	OPERATIONS
Action	Trigger an action on a submission.	Action	Add handler
Debug	Debug webform submission.	Development	Add handler
Remote post	Posts webform submissions to a URL.	External	Add handler
Scheduled email	Sends a webform submission via a scheduled email.	Notification	Add handler
Settings	Allows Webform settings to be overridden based on submission data, source entity fields, and conditions.	Settings	Add handler

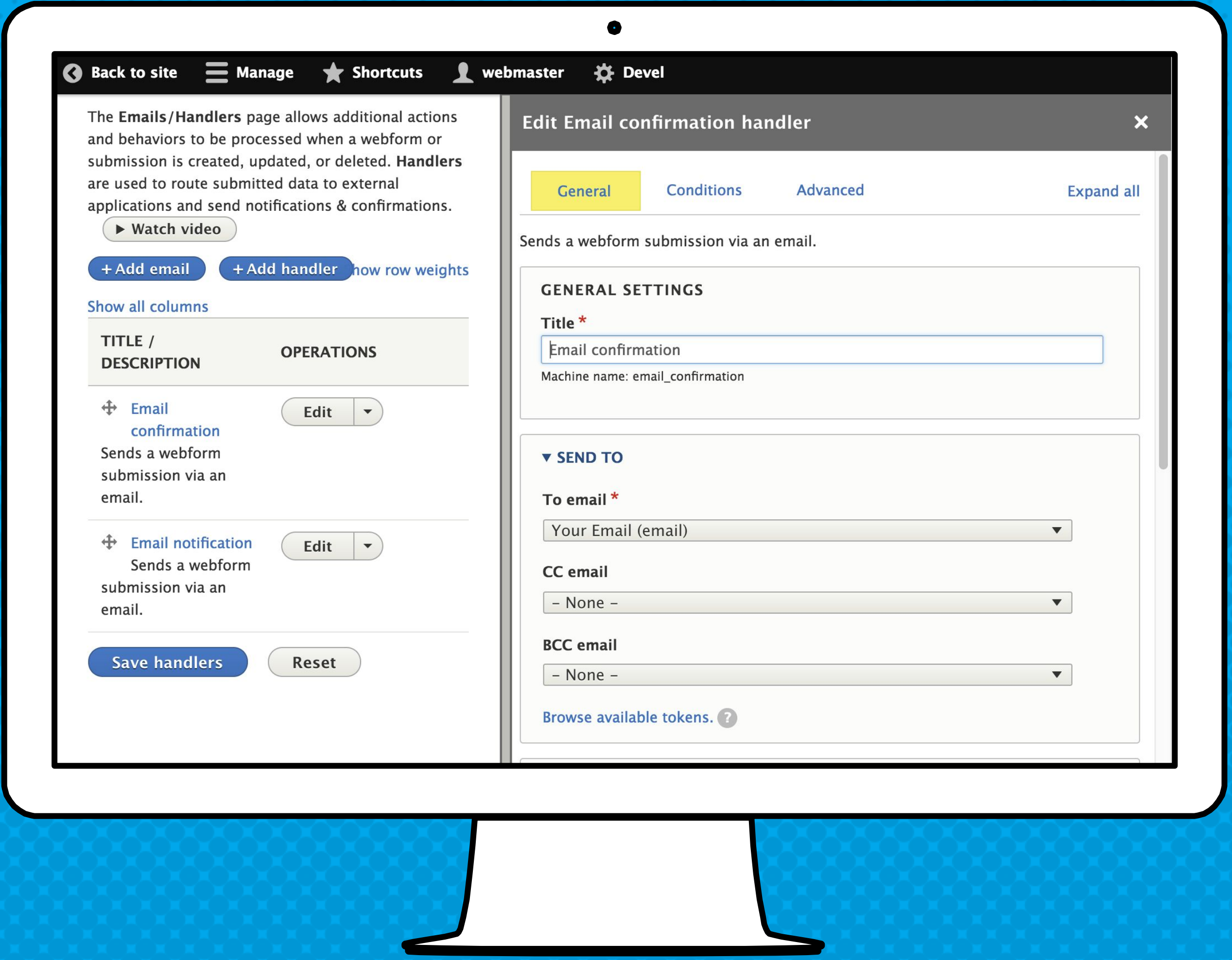
The Emails … r deleted.
Handlers a…

TITLE / D…

Email … Sends … email.

Email notification Sends a webform submission via an email.	email_notification	**To:** [site:mail] **From:** [name] <[email]> **Subject:** [subject] **Settings:** HTML **Sent when:** Completed	Enabled	Edit

THIS IS AN EMAIL HANDLER



The **Emails/Handlers** page allows additional actions and behaviors to be processed when a webform or submission is created, updated, or deleted. **Handlers** are used to route submitted data to external applications and send notifications & confirmations.

TITLE / DESCRIPTION	OPERATIONS
Email confirmation Sends a webform submission via an email.	Edit
Email notification Sends a webform submission via an email.	Edit

Edit Email confirmation handler

Sends a webform submission via an email.

GENERAL SETTINGS

Title *: Email confirmation

Machine name: email_confirmation

▼ SEND TO

To email *: Your Email (email)

CC email: – None –

BCC email: – None –

WEBFORM HANDLER PLUGIN OVERVIEW

- Contains methods that act like hooks
- Reacts to a submission's state
- Supports conditional logic

Webform Handler Plugin Methods

× Configuration settings	`WebformHandler::getConfiguration`
× Override settings	`WebformHandler::overrideSettings`
× Alter forms & elements	`WebformHandler::alterElementd`
× Entity operations	`WebformHandler::postSave`
× Element operations	`WebformHandler::createElement`
× Handler operations	`WebformHandler::createHandler`

<demo>

Webform Handlers

```
Overview: …/reports/webform-plugins/handlers
Test:     …/contact/settings/handlers
```

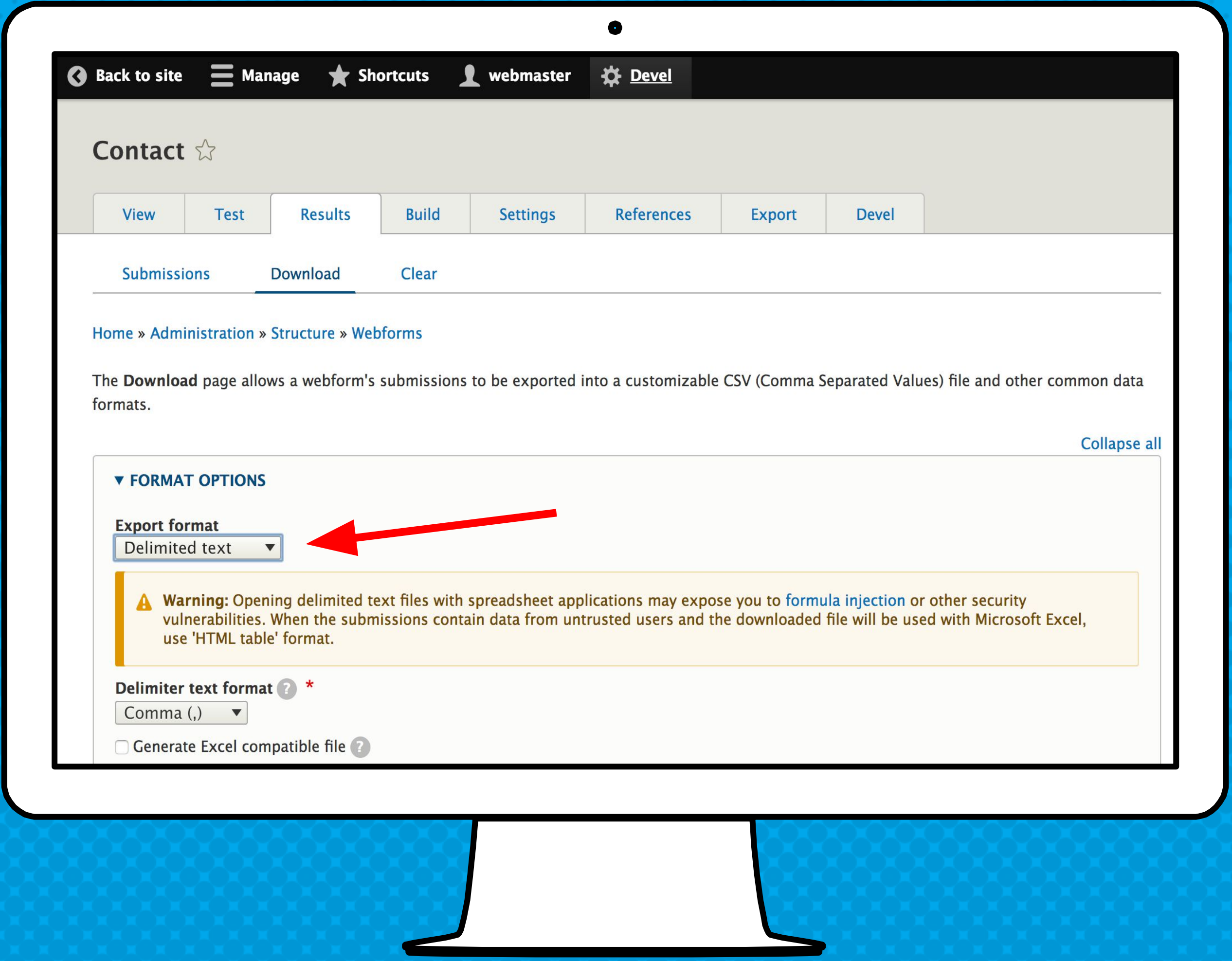
```
@see \Drupal\webform\Plugin\WebformHandlerInterface

interface WebformHandlerInterface {
  // Configuration form.
  function defaultConfiguration()
  function buildConfigurationForm(array $form, $form_state);
  function validateConfigurationForm(array &$form, $form_state);
  function submitConfigurationForm(array &$form, $form_state);
  // Elements.
  function alterElements(array &$elements, $webform);
  // Settings.
  function overrideSettings(array &$settings, $webform_submission);
  // Submission form.
  function alterForm(array &$form, $form_state, $webform_submission);
  function validateForm(array &$form, $form_state, $webform_submission);
  function submitForm(array &$form, $form_state, $webform_submission);
  function confirmForm(array &$form, $form_state, $webform_submission);
  // Operations.
  function postLoad($webform_submission);
  function postSave($webform_submission);
  function postDelete($webform_submission);
}
```

```
@see \Drupal\webform_example_handler\Plugin\WebformHandler\ExampleWebformHandler

class ExampleWebformHandler extends WebformHandlerBase {
  function defaultConfiguration() {
    return [
     'message' => 'This is a custom message.',
     'debug' => FALSE,
    ];
  }

  function confirmForm(array &$form, $form_state, $webform_submission){
    $message = $this->configuration['message'];
    $message = $this->tokenManager->replace($message,
      $webform_submission);

    $this->messenger()
      ->addStatus(Markup::create($message), FALSE);
  }
}
```

EXTENDING WEBFORM EXPORTERS

WEBFORM EXPORTER PLUGINS ARE USED TO DOWNLOAD SUBMISSIONS INTO SPREADSHEETS & OTHER APPLICATIONS

THESE ARE EXPORTERS



Contact ☆

Home » Administration » Structure » Webforms

The **Download** page allows a webform's submissions to be exported into a customizable CSV (Comma Separated Values) file and other common data formats.

▾ FORMAT OPTIONS

Export format: Delimited text

Warning: Opening delimited text files with spreadsheet applications may expose you to formula injection or other security vulnerabilities. When the submissions contain data from untrusted users and the downloaded file will be used with Microsoft Excel, use 'HTML table' format.

Delimiter text format *: Comma (,)

☐ Generate Excel compatible file

WEBFORM EXPORTER PLUGIN OVERVIEW

- Always extend an existing Webform Exporter
- Use DelimitedWebformExporter for CSV files
- Drush command is available for automation

Webform Exporter Plugin Methods

Configuration settings	`WebformExporter::getConfiguration`
Writing data	`WebformExporter::writeHeader`
File naming	`WebformExporter::getBaseFileName`

<demo>

Webform Exporters

```
Overview: …/reports/webform-plugins/exports
Test:     …/contact/results/download
```

```php
@see \Drupal\webform\Plugin\WebformExporterInterface

interface WebformExporterInterface {

  /**
   * Write header to export.
   */
  public function writeHeader();

  /**
   * Write submission to export.
   */
  public function writeSubmission($webform_submission);

  /**
   * Write footer to export.
   */
  public function writeFooter();
}
```

```php
@see \Drupal\webform\Plugin\WebformExporter\TableWebformExporter

class TableWebformExporter extends TabularBaseWebformExporter {

  public function writeSubmission($webform_submission) {
    // Get the submission's data as a simple associative array.
    $record = $this->buildRecord($webform_submission);
    // Build the table data.
    $row = [];
    foreach ($record as $item) {
      $row[] = '<td>' . nl2br(htmlentities($item)) . '</td>';
    }
    // Write the table row.
    $file_handle = $this->fileHandle;
    fwrite($file_handle, '<tr valign="top">');
    fwrite($file_handle, implode(PHP_EOL, $row));
    fwrite($file_handle, '</tr>');
  }

}
```

ARE WE DONE?

IMPLEMENTING WEBFORM HOOKS

Hooks are **functions that define or alter behaviors**

WEBFORM & DRUPAL HOOKS OVERVIEW

- Handler plugins and hooks are very similar
- Handlers are applied to a single form
- Hooks can be applied to all forms
- All entity hooks are applicable to webforms

PLUGINS & EVENT SUBSCRIBERS ARE THE "NEW" HOOKS FOR DRUPAL 8

Form Hooks

`hook_webform_submission_form_alter`

Element Hooks

`hook_webform_element_alter`

Option Hooks

`hook_webform_options_alter`

Handler Hooks

`hook_webform_handler_invoke_alter`

Entity Hooks

`hook_webform_submission_insert`
`hook_webform_submission_load`
`hook_webform_submission_save`
`hook_webform_submission_delete`
`etc…`

More Hooks…

`hook_webform_libraries_info_alter`
`hook_webform_access_rules_alter`

`@see webform.api.php`

```php
@see webform.api.php

/**
 * Act on a webform handler when a method is invoked.
 *
 * @param \Drupal\webform\Plugin\WebformHandlerInterface $handler
 *   A webform handler attached to a webform.
 * @param string $method_name
 *   The invoked method name converted to snake case.
 * @param array $args
 *   Argument being passed to the handler's method.
 */
function hook_webform_handler_invoke_alter($handler, $method_name, array &$args) {
  $webform_id = $handler->getWebform()->id();
  $handler_id = $handler->getHandlerId();
  // If contact webform email confirmation has been saved.
  if ($webform_id === 'contact'
    && $handler_id === 'email_confirmation'
    && $method_name === 'post_save') {
    $webform_submission = $handler->getWebformSubmission();
    // Do something with the webform submission.
  }
}
```

ARE WE THERE YET?

ADDITIONAL WEBFORM RESOURCES

CONNECTING WITH ME

- Jacob Rockowitz (Blog)
  http://jrockowitz.com

- jrockowitz on Drupal.org
  https://www.drupal.org/u/jrockowitz

- jrockowitz on Twitter
  https://twitter.com/jrockowitz

GETTING HELP & SUPPORT

- Drupal Slack #Webform
  https://drupal.slack.com/messages/C78MFLN9K

- Drupal Answers
  https://drupal.stackexchange.com/questions/tagged/webforms

- Webform Issue Queue
  https://www.drupal.org/project/issues/webform?version=8.x

SUPPORT WEBFORM MODULE & DRUPAL COMMUNITY

Get involved with the Drupal project and also consider helping to financially support the Webform module by becoming a backer or by making a one-time contribution to say thanks by joining the Webform module's Open Collective.

https://opencollective.com/webform

RALPH SAYS...

THANK YOU!!!

ANY QUESTIONS?