



# Building Beautiful Grails Apps with Twitter Bootstrap

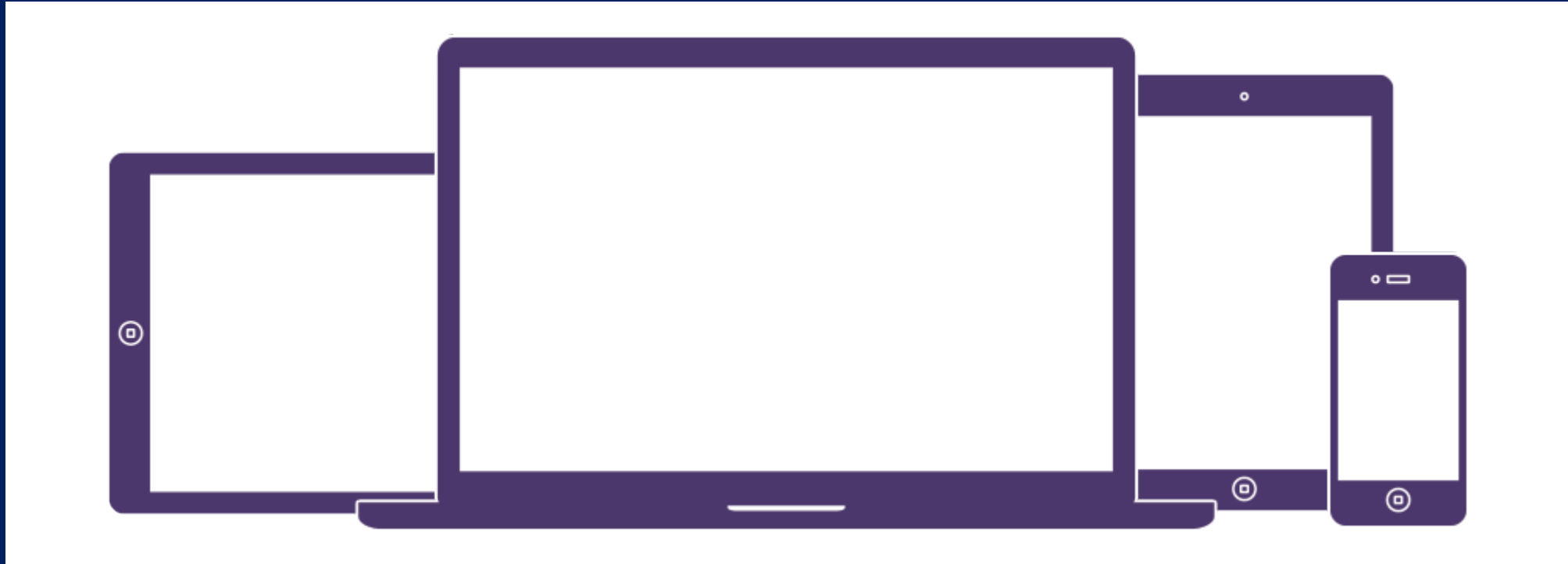
Presented by Jack Frosch

# Wha's Up?

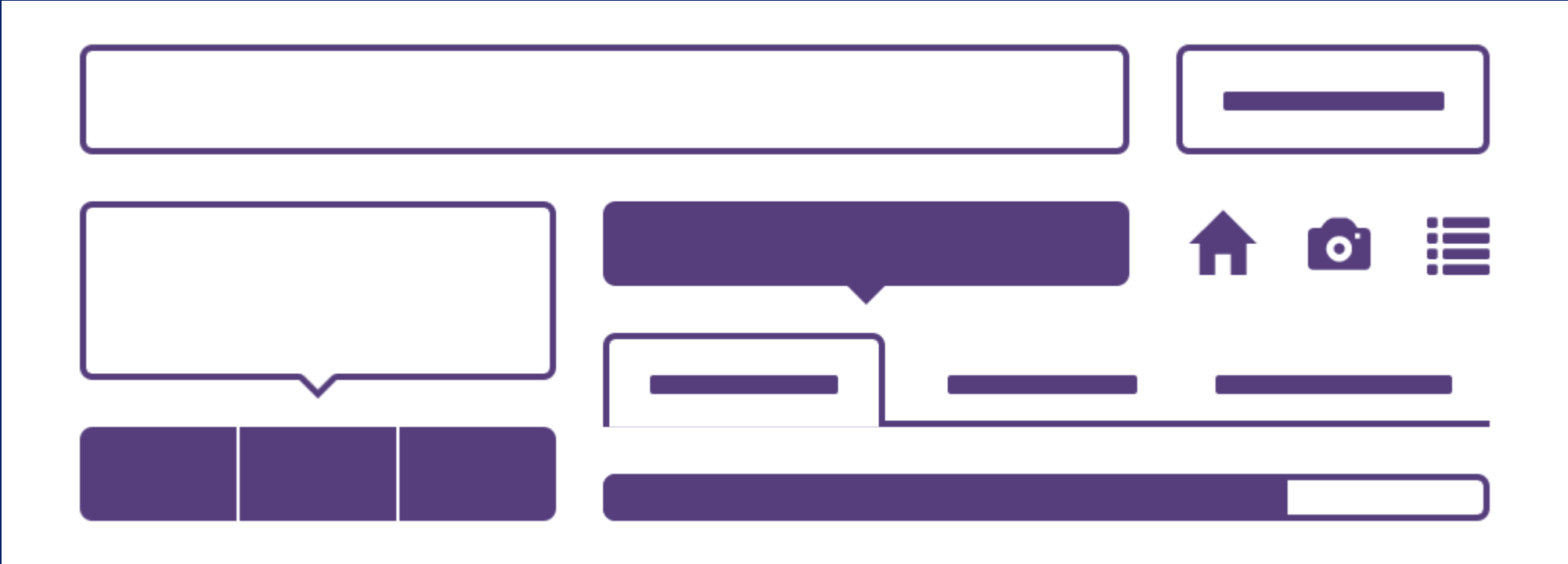
- Beautiful Bootstrap
- Start with Grails, Mix In Bootstrap
- Start with Bootstrap, Mix In Grails

# Beautiful Bootstrap

- What's Bootstrap?
- Getting Bootstrap
- Bootstrap's approach to layout
- Components
- Mobile-ready with built-in responsiveness



Bootstrap is a HTML/CSS/JS framework donated by Twitter  
It's one framework for rendering on every device  
i.e. You get built-in responsiveness on mobile devices



# Bootstrap is loaded with features including Components, Glyph Icons, Behaviors

The cool thing is, almost all of these are rendered by simply applying CSS classes



Bootstrap ships with basic CSS, but supports preprocessors

# Download

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Bootstrap (currently v3.3.4) has a few easy ways to quickly get started, each one appealing to a different skill level and use case. Read through to see what suits your particular needs.

## Bootstrap

Compiled and minified CSS, JavaScript, and fonts. No docs or original source files are included.

[Download Bootstrap](#)

## Source code

Source Less, JavaScript, and font files, along with our docs. **Requires a Less compiler and some setup.**

[Download source](#)

## Sass

[Bootstrap ported from Less to Sass](#) for easy inclusion in Rails, Compass, or Sass-only projects.

[Download Sass](#)

If you want to download Bootstrap, you can:

<http://getbootstrap.com/getting-started/#download>

# Bootstrap CDN

The folks over at [MaxCDN](#) graciously provide CDN support for Bootstrap's CSS and JavaScript. Just use these [Bootstrap CDN](#) links.

```
<!-- Latest compiled and minified CSS -->
<link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.4/css/bootstrap.min.css">

<!-- Optional theme -->
<link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.4/css/bootstrap-theme.min.css">

<!-- Latest compiled and minified JavaScript -->
<script src="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.4/js/bootstrap.min.js"></script>
```

Copy

You can also serve it fresh from a CDN  
(As we'll see, we can also load it with a Grails plugin)



12 columns											
6 columns						6 columns					
4 columns				4 columns				4 columns			
3 columns			3 columns			3 columns			3 columns		
2 columns		2 columns		2 columns		2 columns		2 columns		2 columns	
1 column	1 column	1 column	1 column	1 column	1 column	1 column	1 column	1 column	1 column	1 column	1 column
You can mix and match of course											
2 columns		8 columns								2 columns	

Bootstrap layout is based on 12 columns

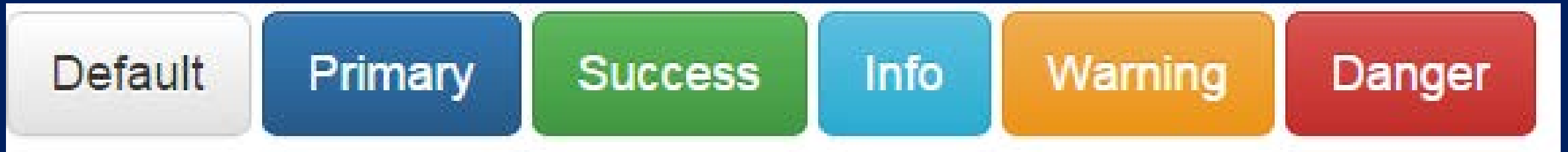
col-md-12											
col-md-6						col-md-6					
col-md-4				col-md-4				col-md-4			
col-md-3			col-md-3			col-md-3			col-md-3		
col-md-2		col-md-2		col-md-2		col-md-2		col-md-2		col-md-2	
col-md-1	col-md-1	col-md-1	col-md-1	col-md-1	col-md-1	col-md-1	col-md-1	col-md-1	col-md-1	col-md-1	col-md-1
You can mix and match of course											
col-md-2		col-md-8								col-md-2	

Number of columns dictated by CSS class















col-sm-12											
col-sm-6						col-sm-6					
col-sm-4				col-sm-4				col-sm-4			
col-sm-3			col-sm-3			col-sm-3			col-sm-3		
col-sm-2		col-sm-2		col-sm-2		col-sm-2		col-sm-2		col-sm-2	
col-sm-1	col-sm-1	col-sm-1	col-sm-1	col-sm-1	col-sm-1	col-sm-1	col-sm-1	col-sm-1	col-sm-1	col-sm-1	col-sm-1
You can mix and match of course											
col-sm-2		col-sm-8								col-sm-2	

col-md-12											
col-md-6											
col-md-6											
col-md-4											
col-md-4											
col-md-4											
col-md-3											
col-md-3											

Bootstrap defines 4 device tiers:  
 xs (phones); sm (tablets); md (desktops); lg (large desktops)  
 Smaller tiers scale up when viewport grows  
 Larger tiers stack when viewport shrinks



Bootstrap defines 5 colors defined by in CSS classes; i.e.  
btn-danger → red button  
bg-primary → dark blue background

 glyphicon glyphicon-music	 glyphicon glyphicon-search	 glyphicon glyphicon-heart	 glyphicon glyphicon-star	 glyphicon glyphicon-star-empty
 glyphicon glyphicon-th	 glyphicon glyphicon-th-list	 glyphicon glyphicon-ok	 glyphicon glyphicon-remove	 glyphicon
 glyphicon glyphicon-cog	 glyphicon glyphicon-trash	 glyphicon glyphicon-home	 glyphicon	

Visit [getbootstrap.com/components](https://getbootstrap.com/components) for details

#### EXAMPLE

**Well done!** You successfully read this important alert message.

**Heads up!** This alert needs your attention, but it's not super important.

**Warning!** Better check yourself, you're not looking too good.

**Oh snap!** Change a few things up and try submitting again.

Bootstrap defines many components; i.e.  
 250+ glyphs in font format  
 Navs (tabs, pills); Navbar; BreadCrumbs; Pagination;  
 Dropdown menus with headers, dividers, etc.;  
 Label; Badges; Thumbnails; Alerts; Jumbotron; and more!

# Bootstrap Theme Demo

# Start with Grails, Mix In Bootstrap

- Grails Scaffolding without Bootstrap
- The Twitter Bootstrap plugin
- Applying Bootstrap to Grails Scaffolding templates
- Applying Bootstrap to your pages



Fixed size: 960px (main.css)

### APPLICATION STATUS

App version: 0.1  
Grails version: 2.4.4  
Groovy version: 2.3.7  
JVM version: 1.7.0\_76  
Reloading active: true  
Controllers: 4  
Domains: 2  
Services: 3  
Tag Libraries: 15

### INSTALLED PLUGINS

dataBinding - 2.4.4  
restResponder - 2.4.4  
logging - 2.4.4

### Welcome to Grails

Congratulations, you have successfully started your first Grails application! At the moment this is the default page, feel free to modify it to either redirect to a controller or display whatever content you may choose. Below is a list of controllers that are currently deployed in this application, click on each to execute its default action:

#### Available Controllers:

- [asset.pipeline.AssetsController](#)
- [demo.PizzaController](#)
- [demo.ToppingController](#)
- [grails.plugin.databasemigration.DbdocController](#)

# Basic Grails Scaffolding home page





## Welcome to Grails

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- [demo.PizzaController](#)
- [demo.ToppingController](#)
- [grails.plugin.databasemigration.DbdocController](#)

*We lost our application status and plugin list*

*Grails scaffolding templates use the main.css & mobile.css stylesheets. When viewport width drops below 480px, the mobile styles apply*

Grails Scaffolding home page on a phone  
(Bootstrap XS device tier)

*Here's the application status and plugin div:*

```
<div id="status" role="complementary">
  <h1>Application Status</h1>
  <ul>
    <li>App version: <g:meta name="app.version"/></li>
    <li>Grails version: <g:meta name="app.grails.version"/></li>
    <li>Groovy version: ${GroovySystem.getVersion()}</li>
    <li>JVM version: ${System.getProperty('java.version')}</li>
    <li>Reloading active: ${grails.util.Environment.reloadingAgentEnabled}</li>
    <li>Controllers: ${grailsApplication.controllerClasses.size()}</li>
    <li>Domains: ${grailsApplication.domainClasses.size()}</li>
    <li>Services: ${grailsApplication.serviceClasses.size()}</li>
    <li>Tag Libraries: ${grailsApplication.tagLibClasses.size()}</li>
  </ul>
  <h1>Installed Plugins</h1>
  <ul>
    <g:each var="plugin" in="${applicationContext.getBean('pluginManager').allPlugins}">
      <li>${plugin.name} - ${plugin.version}</li>
    </g:each>
  </ul>
</div>
```

*Style defined on index.gsp:*

```
@media screen and (max-width: 480px) {
  #status {
    display: none;
  }

  #page-body {
    margin: 0 1em 1em;
  }

  #page-body h1 {
    margin-top: 0;
  }
}
```

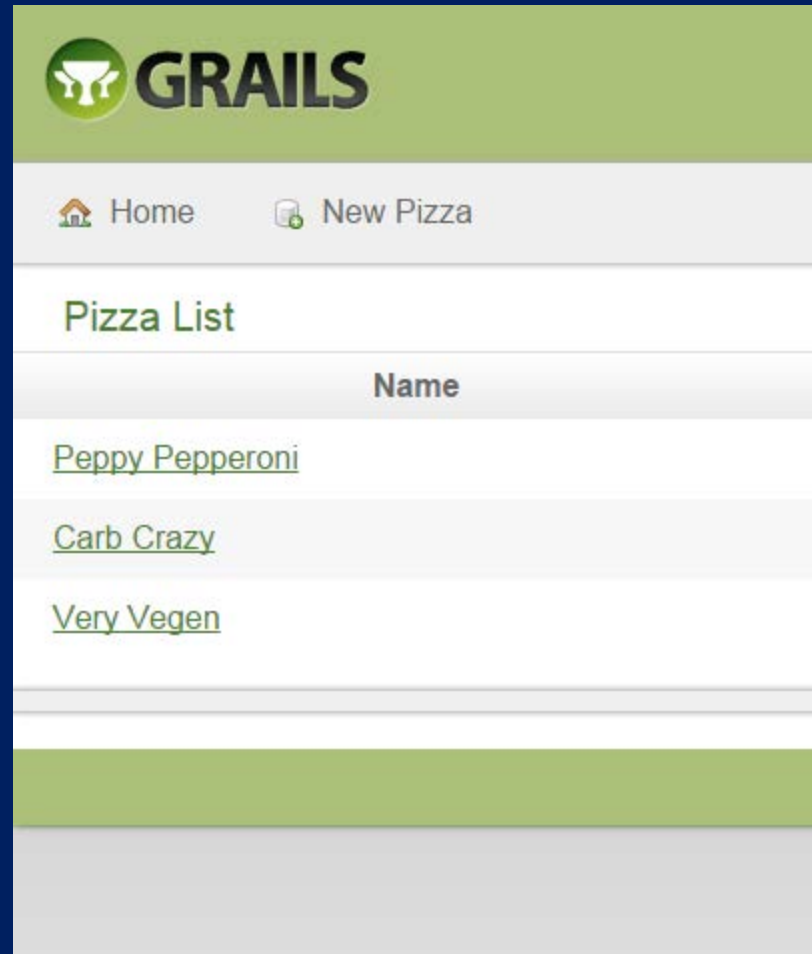
Grails Scaffolding home page markup

## Pizza List

Name	Base Price	Total Price
<a href="#">Peppy Pepperoni</a>	8	11.25
<a href="#">Carb Crazy</a>	9.5	16.25
<a href="#">Very Vegen</a>	7.5	13.25

Basic Grails Scaffolding list page

*We lost our base and  
total price data*



Grails Scaffolding list page on a phone  
(Bootstrap XS device tier)



## Edit Pizza

Name \*

Base Price \*

Toppings 

Anchovy

Black Olive

Canadian Bacon


Extra Cheese

Green Pepper

Total Price \*

[Update](#)

Basic Grails Scaffolding edit page



Home Pizza List New Pizza

### Edit Pizza

Name \*  
Peppy Pepperoni

Base Price \*  
8

Toppings  
Anchovy  
Black Olive  
Canadian Bacon  
Extra Cheese  
Green Pepper

Total Price \*  
11.25

Update

*Our edit labels and  
fields stack nicely!*

Grails Scaffolding edit page on a phone  
(Bootstrap XS device tier)

# Basic Scaffolding Demo

<https://grails.org/plugin/twitter-bootstrap>

## Plugin Bootstrap CSS framework resource files

Tags: [css](#), [resources](#), [framework](#), [bootstrap](#), [grails2.4](#), [assets](#) | Latest: **3.3.4** | Last Updated: **16 March 2015**  
| Grails version: 1.3.7 > \*

Authors: Karol Balejko, Nicholas Wittstruck, Michael Legart | License: [Apache License 2.0](#) | Organization: [GroovyDev](#)

### Dependency:

```
compile ":twitter-bootstrap:3.3.4"
```

*The docs are just slightly confusing!*

## Installation

Add the following to your grails-app/conf/BuildConfig

```
...
plugins {
...
    runtime ':twitter-bootstrap:3.3.1'
...
}
```

```
plugins {
    // plugins for the build system only
    build ":tomcat:7.0.55"

    // plugins for the compile step
    compile ":scaffolding:2.1.2"
    compile ':cache:1.1.8'
    compile ":asset-pipeline:1.9.9"

    // plugins needed at runtime but not for compilation
    runtime ":hibernate4:4.3.6.1" // or ":hibernate:3.6.10.18"
    runtime ":database-migration:1.4.0"
    runtime ":jquery:1.11.1"

    runtime ":twitter-bootstrap:3.3.4"
```

# Installing Grails Twitter Bootstrap Plugin



# Including the resources with Asset-Pipeline plugin

The recommended way is to use the [asset-pipeline plugin](#) (minimal 0.1.7). It is the default since Grails 2.4.0 and replaces the resources plugin.

To include your bootstrap resources add the following to your application's css or js file.

Javascript `grails-app/assets/javascripts/application.js` :

```
//= require bootstrap  
  
console.log("My javascript goes here");
```

Stylesheet `grails-app/assets/javascripts/application.css` :

```
/*  
*= require bootstrap  
*/
```

*Be sure to declare the bootstrap.js requirement after the jquery.js requirement!*

*Beware of conflicting CSS declarations!*

*You'll want to remove or disable the mobile.css requirement*

## Configuring Grails to use Twitter Bootstrap



Panels organize and call out sections

## Status

Application Status

Installed Plugins

## Welcome to Grails

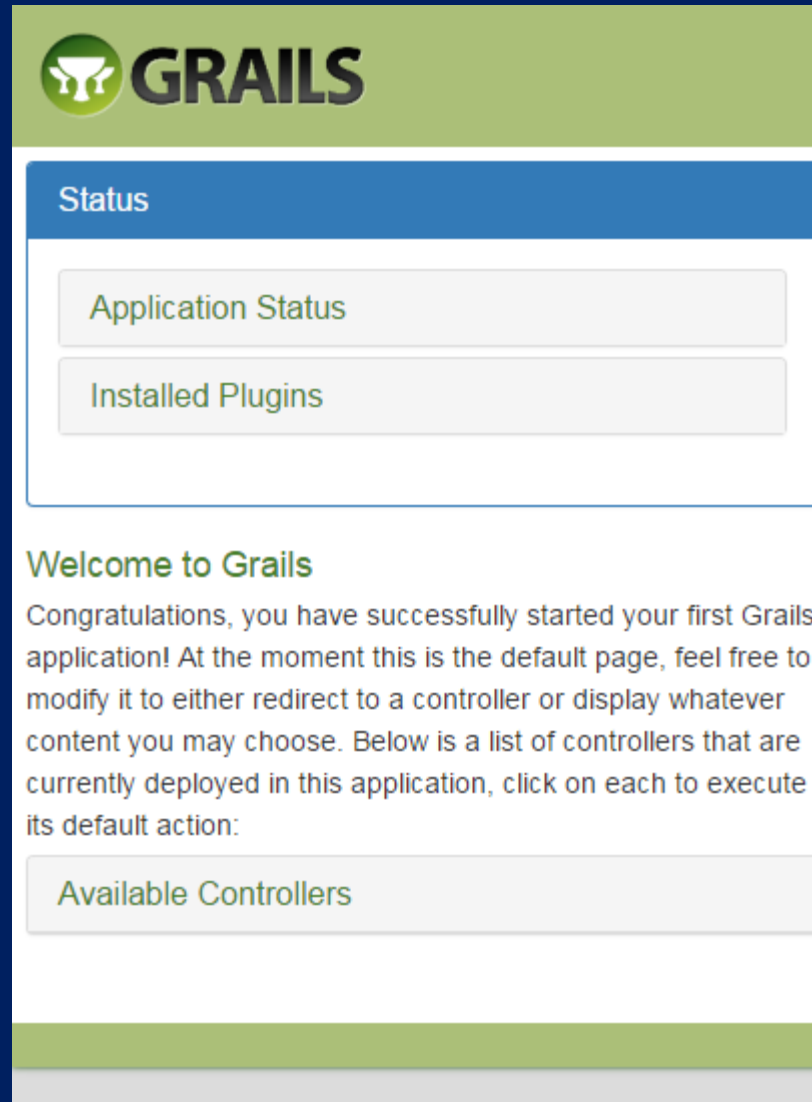
Congratulations, you have successfully started your first Grails application! At the moment this is the default page, feel free to modify it to either redirect to a controller or display whatever content you may choose. Below is a list of controllers that are currently deployed in this application, click on each to execute its default action:

Available Controllers

Accordion controls preserve screen real estate until needed

# Bootstrap Enhanced to Grails Scaffolding home page

*We kept our application status and plugin list – and they're nicely wrapped in a Bootstrap panel using panel-primary class for color accent*



*Accordion components allow us to show what must be shown and hide what may not be important at the moment*

Bootstrap enhanced Grails Scaffolding home page on a phone  
(Bootstrap XS device tier)

[Home](#)[New Pizza](#)

## Pizza List

Name	Base Price	Popularity	Total Price	Year Introduced
Peppy Pepperoni	8	75	11.25	2,000
Feisty Fishy	9	15	14.5	2,010
Carb Crazy	9.5	90	16.25	2,011
Very Vegen	7.5	45	13.25	2,008

[<<](#) [>>](#)

Bootstrap enhanced Grails Scaffolding home page

*Because we're not using mobile css, we retain our field values – and get a scrollbar courtesy of Bootstrap*

Name	Base Price	Popularity	Total Price
Peppy Pepperoni	8	75	11.25
Feisty Fishy	9	15	14.5
Carb Crazy	9.5	90	16.25
Very Vegen	7.5	45	13.25

*Table decoration options include table-striped, table-hover (shown here), table-bordered, and table-condensed for less cell padding*

Bootstrap enhanced Grails Scaffolding home page on a phone  
(Bootstrap XS device tier)

# Enhanced Scaffolding Demo

# Final words about adding Bootstrap to Grails

- The dynamic nature of the scaffolding templates actually makes integrating Bootstrap features harder
- Your existing custom applications will likely be easier to integrate Bootstrap
  - Find the Bootstrap component you want to use
  - Find the place in your custom page you want to use it
  - Use it!

For a green field app, maybe the best approach is start with a beautiful design...

# Start with Bootstrap, Mix In Grails

- Pick a theme, any theme
- HTML, CSS and JavaScript... Oh my!
- Coercing a commercial theme to work with Grails



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## + Material Admin Responsive Template



\$16

775

Updated 3 weeks ago

## + Unify - Responsive Website Template

## + The Project - Multipurpose Template

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bootstrap

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- WordPress
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Tags

- responsive
- portfolio
- HTML

Price

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**Materialism - Angular Bootstrap Admin Template**

ThemeGuys

in Site Templates / Admin Templates

Enable Responsive Layout: Yes, High Resolution: Yes, Compatible Browsers: IE10, IE11, Firefox, Safari, Chrome, Compatible With: AngularJS, Bootstrap 3.x

\$21

3 ratings

129 Sales

**Boson - Responsive Bootstrap HTML5 Template**

CKThemes

in Site Templates / Corporate / Business

Enable Responsive Layout: Yes, High Resolution: Yes, Compatible Browsers: IE10, IE11, Firefox, Safari, Opera, Chrome, Compatible With: Bootstrap 3.x, Columns: 4+

\$16

11 ratings

228 Sales

ThemeForest.net

Low cost, visually appealing, very robust themes

(Beware: Not just Bootstrap themes sold here!)



### Easy to Install

Simply download a CSS file and replace the one in Bootstrap. No messing around with hex values.

### Open Source

Bootstrap themes are released under the MIT License and maintained by the community on [GitHub](#).

### Tuned for 3.3.4

Themes are built for the latest version of Bootstrap. [Version 2](#) and [others](#) are also available to download.

### Modular

Changes are contained in just two LESS or SASS files, enabling modification and ensuring forward compatibility.

### Get Plugged In

An [API](#) is available for integrating with your platform. In use by [NodeBB](#), [BootSnap](#), and others.

### Stay Updated

Be notified about updates by subscribing via [RSS feed](#), [email](#), or [Tumblr](#).

BootsWatch.com  
Visually appealing themes that are free, but limited



# Start Bootstrap

## Free Bootstrap Themes & Templates

Created and Maintained by Iron Summit Media Strategies



Fork



Star

4,587



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➔ Browse Themes & Templates

StartBootstrap.com  
Visually appealing themes that are free, but limited



Most themes have markup/JavaScript that's not too well organized

# WrapBootstrap.com

## Unity Theme

### Demo

# Some steps to transforming a Bootstrap Theme to Grails – Order out of Chaos

- Identify common header, menu bar, footer, sidebar, etc. markup
- In each common block of markup, identify any context specific attributes or markup
  - A menu bar might have an 'active' attribute to signal which menu item corresponds to the current page or module
  - You'll need to keep track of that state somewhere
- Consolidate common, repeated markup
  - Extract the common markup into a layout
    - Replace link and JavaScript source references with asset pipeline tags
  - Extract context specific content into a separate page
    - Reference the layout in a meta tag in the head section
    - Where content is repeated, try to use a template
  - Beware of timing issues related to page rendering
    - Static markup is rendered as it's encountered, but I've seen templates get rendered out of sequence
    - This can cause page state to be incorrect for the template's needs



# Some steps to transforming a Bootstrap Theme to Grails

...

- The next steps are optional depending on how close you want to stay to pure HTML rather than rely on a lot of Grails tags
  - There are good arguments for staying pure and equally good arguments for leveraging Grails tag productivity
  - If you stay with pure HTML, you'll need to ensure your security and url mappings align with the urls/uris used in the page. There's no referencing controllers and actions!
  - Replace all <a> tags with g:link (or not)
- Replace manual table markup with g:forEach wrappers around <tr> elements
- Forms
  - Replace HTML forms with g:forms
  - Replace form controls with Grails equivalents if desired



# Custom Site Demo (time permitting)

# Resources

- Get Grails: [grails.org](http://grails.org)
- Get Bootstrap: [getbootstrap.com](http://getbootstrap.com)
- Get some themes
  - [Wrapbootstrap.com](http://Wrapbootstrap.com)
  - [Themeforest.com](http://Themeforest.com)
- Get Jack
  - LinkedIn: [jackfrosch](#)
  - Twitter: [@jackfrosch](#)
  - Email: [jackfrosch@gmail.com](mailto:jackfrosch@gmail.com)

Questions?