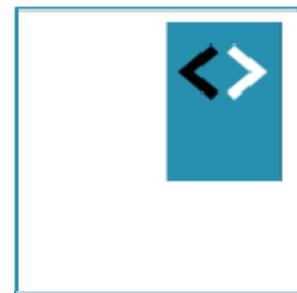




Ministerie van Defensie

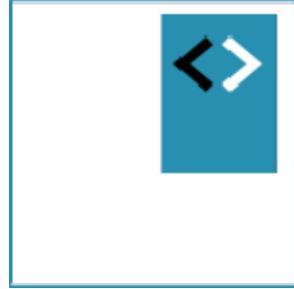
HTML, CSS en JavaScript

Module : Bootstrap



Peter Kassenaar – info@kassenaar.com

Peter Kassenaar – info@kassenaar.com



Kennismaken met Bootstrap

Pagina's opmaken en vormgeven met ondersteunde,
industrie-brede bibliotheken

"Het wiel niet opnieuw uitvinden"

Traditioneel Responsive Web Design (RWD)

- Vaak twee sites: desktop + mobile
 - Niet altijd een verkeerde oplossing!
- Traditioneel: Design for desktop → scale down
 - 'Graceful degredation'
 - Basisgrid: 960px (of varianten)
 - Media queries
 - "Hide elements below certain treshold"

Adaptive / responsive design

HowToWat.ch

HOME SEARCH ABOUT MOBILE APP

Where are your favorite TV Shows and Movies?

search for movies and tv shows

Search Clear

Recent Searches

sanford and son dallas jericho race death pashto songs

New Releases:

Lone Survivor The LEGO Movie 3 Days to Kill The Battle of Set... Afterlife

Frozen (2013) Robocop (2014) Variable and Full o... The Monuments ...

amazon instant video amazon instant video amazon instant video amazon instant video amazon instant video

amazon instant video

amazon instant video

amazon instant video

amazon instant video

The screenshot displays the homepage of HowToWat.ch. At the top, there's a navigation bar with links for HOME, SEARCH, ABOUT, and MOBILE APP. Below the navigation is a large search bar containing the placeholder text "search for movies and tv shows". To the right of the search bar are two buttons: a green "Search" button with a magnifying glass icon and a green "Clear" button with a cross icon. Underneath the search bar is a section titled "Recent Searches" which lists several terms: "sanford and son", "dallas", "jericho", "race death", and "pashto songs". Below this is a section titled "New Releases:" featuring a grid of movie and TV show thumbnails. The first row includes "Lone Survivor", "The LEGO Movie", "3 Days to Kill", "The Battle of Set...", and "Afterlife". The second row includes "Frozen (2013)", "Robocop (2014)", "Variable and Full o...", and "The Monuments ...". Each thumbnail includes the Amazon Instant Video logo at the bottom.

<http://howtowat.ch/>



Where are your favorite TV Shows and Movies?

search for movies and tv shows

Search

Clear

Recent Searches

sanford and son

dallas

jericho

race death

pashto songs

New Releases:

Lone Survivor



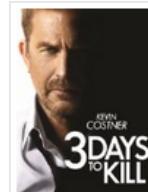
amazon
instant video

The LEGO M...



amazon
instant video

3 Days to Kill



amazon
instant video

The Battle of ...



amazon
instant video

Afterlife



amazon
instant video

Frozen (2013)



Robocop (20...



Variable and ...



The Monume...



HowToWat.ch

Where are your favorite TV Shows and Movies?

search for movies and tv shows

Search Clear

Recent Searches

- sanford and son dallas
- jericho race death
- pashto songs

New Releases:

Lone Survivor



amazon instant video

The LEGO Movie

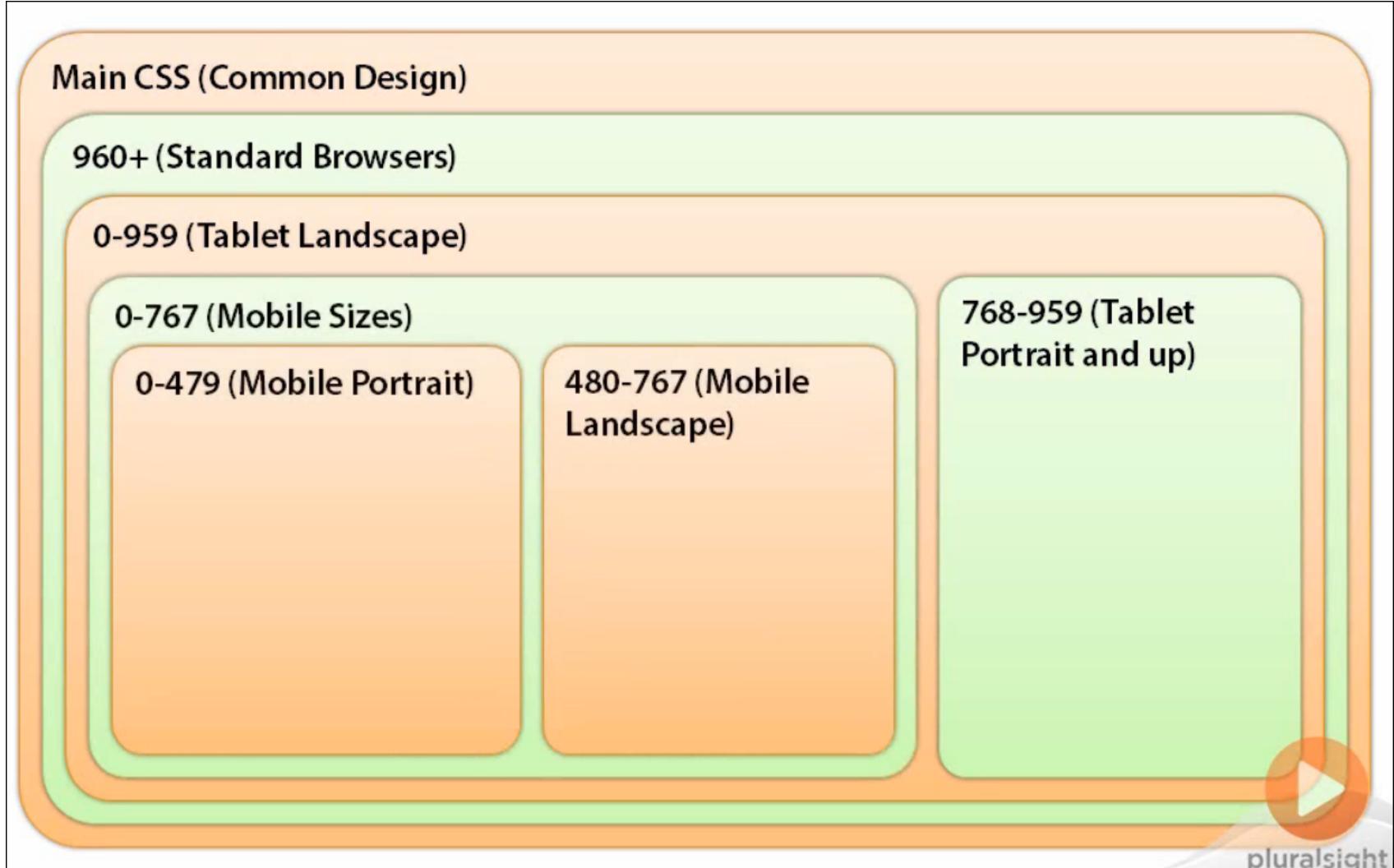


amazon instant video

3 Days to Kill



Vroeger: *Graceful degredation*



“Start met alles te tonen, verberg daarna de elementen die niet op het scherm passen”

```
<style>
    /* standaardbreedte, desktop */
    #main-content {
        width: 980px;
        border: 1px solid red;
        margin : 0 auto;
    }

    /* Media Query 1: tablet breedte */
    @media only screen and (min-width: 768px) and (max-width:959px) {
        #main-content {
            width: 980px;
        }
    }

    /* Media Query 2: small tablet/ phone breedte */
    @media only screen and (max-width: 767px){
        #main-content {
            width: 460px;
        }
        /* overige rules ... */
    }
</style>
```

Graceful Degredation

- Sinds ca. 2010-2011. Werkt ook best goed.
- Problemen:
 - (te) veel resources downloaden, CSS en JavaScript
 - Images vaak wel laden, maar daarna verborgen (display: none)

*“Least capable device gets the most CSS
to parse & render”*

Nu: Bootstrap, met *Progressive Enhancement*

- Websites en apps: *scale up, not down*
- Default behavior: mobile view
- Als een device meer mogelijkheden heeft, worden items toegevoegd.

Mobile First Responsive Web Design

Main CSS (Common Design) (0-480)

> 480px

> 768px

> 992px

> 1200px



pluralsight

“Ga uit van het kleinste scherm en voeg dingen toe bij grotere schermen”

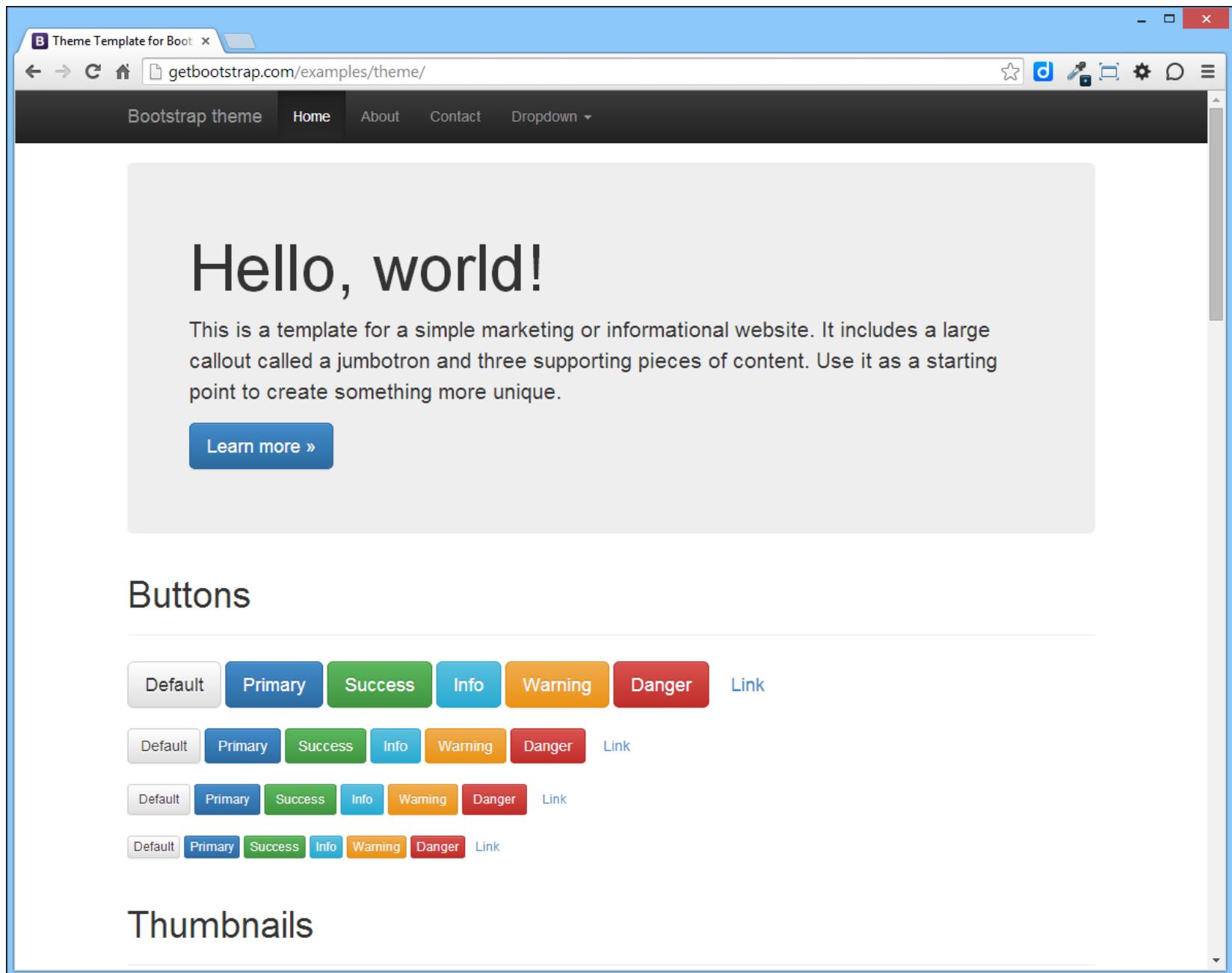
```
<style>
/* standaardbreedte, mobile phone */
#main-content {
    width: 320px;
    border: 1px solid red;
    margin : 0 auto;
}

/* Media Query 1: small tablet/ large phone breedte */
@media only screen and (min-width: 768px){
    #main-content {
        width: 680px;
    }
    /* overige rules ... */
}

/* Media Query 2: desktop breedte */
@media only screen and (min-width: 992px)  {
    #main-content {
        width: 980px;
    }
    /* overige rules ... */
}
</style>
```

Bootstrap quick tour

- Progressive Enhancement voor het Grid System
 - Grid : pagina's makkelijk verdelen in rijen en kolommen
 - Kolommen worden onder elkaar (gestapeld) weergegeven op kleine schermen
- Basis componenten alvast gestyled:
 - Buttons, images, thumbnails, dropdowns, enzovoort.
 - Wiel niet opnieuw uitvinden
- <http://getbootstrap.com/examples/theme/>





≡
MENU

Wij zijn WebNL

Regisseurs van online succes

VRAAG EEN BROCHURE AAN

› [Of neem contact op met Koen](#)

you are
in charge

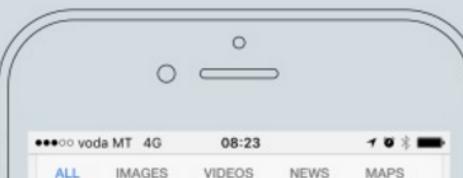
you live
in a world
that you
either cre
or tolerat

you are
ridiculo
in charc

PROJECT

HOPPE
food group

BLOG



<https://www.webnl.nl/>

LINK | Lezen wat je leuk vind

www.uitgeverijlink.nl

link

BOEKEN ■ AUTEURS ■ SHORTS ■ NIEWS ■ PERS ■ CONTACT ■ MANUSCRIPTEN

(zoeken) Registreer | Over ons | winkelmandje [0]

f t

GUIDO EEKHOUT
De politieman van de paus

Een historische roman met een spannend plot, een overtuigend tijdsbeeld en een zinderende finale in de onderwereld van Rome waarbij een complot in de hoogste regionen van het Vaticaan wordt blootgelegd.

lees meer...

MARC ELIOT
New York Times bestseller-auteur
NICHOLSON
EEN BIOGRAFIE

Het levensverhaal van Jack Nicholson, een van de allergrootste acteurs van de laatste decennia. Alles over zijn films, zijn prijzen... en zijn verslaving aan drugs en vrouwen.

lees meer...

ALEX ADAMS
DE PASSAGE

VIOLET LEROY
DE HELFT VAN MIJN ZIEL

PARIS

BEVERLY SWERLING
TEMPEL CODE

Theming Bootstrap

- Voorkom het standaard 'Bootstrap-sausje'
- Thema's – kopen
 - <http://builtwithbootstrap.com/>
- Zelf maken :
 - <http://getbootstrap.com/customize>

getbootstrap.com

B Home Documentation Examples Themes Jobs Expo Blog v4.1 ▾

Bootstrap

Build responsive, mobile-first projects on the web with the world's most popular front-end component library.

Bootstrap is an open source toolkit for developing with HTML, CSS, and JS. Quickly prototype your ideas or build your entire app with our Sass variables and mixins, responsive grid system, extensive prebuilt components, and powerful plugins built on jQuery.

[Get started](#) [Download](#)

Currently v4.1.0



Lay-out en gridsysteem

B Home Documentation Examples Themes Jobs Expo Blog v4.1 ▾ Q Twitter

Search...

- Getting started
- Layout **Overview**
- Grid
- Media object
- Utilities for layout
- Content
- Components
- Utilities
- Extend
- Migration
- About

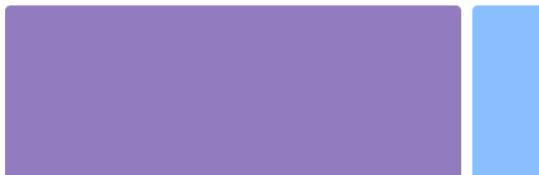
Overview

Components and options for laying out your Bootstrap project, including wrapping containers, a powerful grid system, a flexible media object, and responsive utility classes.

Containers

Containers are the most basic layout element in Bootstrap and are **required when using our default grid system**. Choose from a responsive, fixed-width container (meaning its `max-width` changes at each breakpoint) or fluid-width (meaning it's `100%` wide all the time).

While containers *can* be nested, most layouts do not require a nested container.



Copy

```
<div class="container">
  <!-- Content here -->
</div>
```

Content

The screenshot shows the Bootstrap Documentation website. The top navigation bar includes a logo, Home, Documentation (which is the active page), Examples, Themes, Jobs, Expo, and Blog. A search bar is also present. The left sidebar lists various documentation sections: Getting started, Layout, Content (which is circled in red), Reboot, Typography, Code, Images, Tables, Figures, Components, Utilities, Extend, Migration, and About. The main content area features a large heading 'Reboot' and a paragraph describing it as a collection of element-specific CSS changes to kickstart Bootstrap. Below this is a section titled 'Approach' with a paragraph explaining how Reboot builds upon Normalize and provides guidelines for overriding styles.

Reboot

Reboot, a collection of element-specific CSS changes in a single file, kickstart Bootstrap to provide an elegant, consistent, and simple baseline to build upon.

Approach

Reboot builds upon Normalize, providing many HTML elements with somewhat opinionated styles using only element selectors. Additional styling is done only with classes. For example, we reboot some `<table>` styles for a simpler baseline and later provide `.table`, `.table-bordered`, and more.

Here are our guidelines and reasons for choosing what to override in Reboot:

- Update some browser default values to use `rems` instead of `ems` for scalable component spacing.
- Avoid `margin-top`. Vertical margins can collapse, yielding unexpected results. More importantly though, a single direction of `margin` is a simpler mental model.
- For easier scaling across device sizes, block elements should use `rems` for `margins`.
- Keep declarations of `font`-related properties to a minimum, using `inherit` whenever possible.

Standaardregels voor typografie, code, afbeeldingen

Meer basiscomponenten - CSS

Layouts voor : code, tables, forms, buttons, images

The screenshot shows the Bootstrap documentation website at version 4.1. The left sidebar is open, showing a list of components. The 'Alerts' item is circled in red. The main content area is titled 'Alerts' and provides a brief description of what they are used for. Below this, there is a section titled 'Examples' which shows nine different colored alert boxes: primary, secondary, success, danger, warning, info, light, and dark. Each example contains the text 'A simple [color] alert—check it out!'. At the bottom of the examples section, there is a snippet of HTML code for creating a primary alert.

Alerts

Provide contextual feedback messages for typical user actions with the handful of available and flexible alert messages.

Examples

A simple primary alert—check it out!

A simple secondary alert—check it out!

A simple success alert—check it out!

A simple danger alert—check it out!

A simple warning alert—check it out!

A simple info alert—check it out!

A simple light alert—check it out!

A simple dark alert—check it out!

```
<div class="alert alert-primary" role="alert">
```

Utilities

Randen, float, flex, positie, schaduw en meer.

The screenshot shows a browser window displaying the Bootstrap 4.1 Utilities borders documentation. The URL in the address bar is `getbootstrap.com/docs/4.1/utilities/borders/`. The page has a dark purple header with a logo and navigation links for Home, Documentation, Examples, Themes, Jobs, Expo, and Blog. A search bar is also present. On the left, a sidebar lists various utility categories: Getting started, Layout, Content, Components, Utilities (which is highlighted with a red circle), Borders (also circled in red), Clearfix, Close icon, Colors, Display, Embed, Flex, Float, Image replacement, Position, Screenreaders, Shadows, Sizing, and Grid. The main content area features a large heading 'Borders' and a paragraph explaining the use of border utilities to style borders and border-radius. Below this, a section titled 'Border' provides information on adding or removing borders. A 'Additive' section shows five small gray boxes with different border styles applied. At the bottom, there is a code snippet showing the HTML for creating these specific border variations:

```
<span class="border"></span>
<span class="border-top"></span>
<span class="border-right"></span>
<span class="border-bottom"></span>
<span class="border-left"></span>
```

Dynamische onderdelen: met JavaScript

Modal, dropdown, tabs, tooltips, alert, carrousel,...

The screenshot shows the Bootstrap documentation for the Carousel component. On the left, there is a sidebar with a search bar at the top and a list of components. The 'Carousel' item is highlighted with a red circle. The main content area has a title 'Carousel' and a description explaining it's a slideshow component for cycling through elements. Below this is a section titled 'How it works' with explanatory text. At the bottom, there are notes about nested carousels and requirements for building from source.

Search...

Getting started

Layout

Content

Components

Alerts

Badge

Breadcrumb

Buttons

Button group

Card

Carousel

Collapse

Dropdowns

Carousel

A slideshow component for cycling through elements—images or slides of text—like a carousel.

How it works

The carousel is a slideshow for cycling through a series of content, built with CSS 3D transforms and a bit of JavaScript. It works with a series of images, text, or custom markup. It also includes support for previous/next controls and indicators.

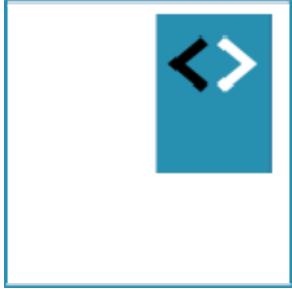
In browsers where the [Page Visibility API](#) is supported, the carousel will avoid sliding when the webpage is not visible to the user (such as when the browser tab is inactive, the browser window is minimized, etc.).

Please be aware that nested carousels are not supported, and carousels are generally not compliant with accessibility standards.

Lastly, if you're building our JavaScript from source, it [requires util.js](#).

In dat geval: jQuery.js en bootstrap.js bijvoegen.

Geen vaste regels voor – gewoon controleren.



Getting Bootstrap

Downloaden of via CDN

Makkelijkst: Bootstrap via CDN

BootstrapCDN

Skip the download with [BootstrapCDN](#) to deliver cached version of Bootstrap's compiled CSS and JS to your project.

```
<link rel="stylesheet" href="https://stackpath.bootstrapcdn.com/bootstrap/4.1.0/css/bootstrap.min.css" integrity="sha384-u...<script src="https://stackpath.bootstrapcdn.com/bootstrap/4.1.0/js/bootstrap.min.js" integrity="sha384-uefMccjFJAiV6A...</script>
```

If you're using our compiled JavaScript, don't forget to include CDN versions of jQuery and Popper.js before it.

```
<script src="https://code.jquery.com/jquery-3.3.1.slim.min.js" integrity="sha384-q8i/X+965Dz0rT7abK41JStQIAqVgRVzbz...<script src="https://cdn.jsdelivr.net/npm/popper.js@1.14.0/dist/umd/popper.min.js" integrity="sha384-cs/chFZiN24...</script>
```

Plaats links in <head> van pagina

Bootstrap via Package Manager

- NPM
 - Node.JS: nodejs.org
 - Npm install bootstrap
- Andere package managers
 - (Bower: verouderd, maar soms nog gebruikt)
 - <http://bower.io/>
 - bower install bootstrap
 - Nuget:
 - Install-Package bootstrap

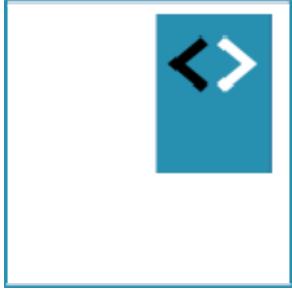
Daarna: zelf tags/referenties toevoegen

Bootstrap basic template

```
<!DOCTYPE html>
<html>
<head>
    <title>Bootstrap Basic Page Template</title>
    <meta charset="utf-8"/>
    <meta name="viewport" content="width=device-width, initial-scale=1">
    <!-- ***** -->
    <!-- Bootstrap CSS -->
    <!-- ***** -->
    <link href="css/bootstrap.css" rel="stylesheet" />

</head>
<body>

    <!-- ***** -->
    <!-- JavaScript -->
    <!-- ***** -->
    <script src="js/jquery-1.9.0.js"></script>
    <script src="js/bootstrap.js"></script>
</body>
</html>
```



Bootstrap Grid system

Optimale rijen en kolommen voor elke device

Makkelykst: auto-lay-out columns

- Kolommen worden automatisch door de browser verdeeld

```
<div class="container">
  <div class="row">
    <div class="col">
      1 of 2
    </div>
    <div class="col">
      2 of 2
    </div>
  </div>
  <div class="row">
    <div class="col">
      1 of 3
    </div>
    <div class="col">
      2 of 3
    </div>
    <div class="col">
      3 of 3
    </div>
  </div>
</div>
```

Vaker: zelf breedte bepalen

- Totale pagina-breedte: 12 kolommen
- col-*
- col-xs-*
- col-sm-*
- col-md-*
- col-lg-*

Rijen en kolommen

- Algemeen: maak een `<div class="container">`
- Maak je rijen binnen de container
 - `<div class="row">`
 - Maak je kolommen binnen de rij
 - `<div class="col-md-6">...</div>`
 - `<div class="col-md-6">...</div>`

Media queries

We use the following media queries in our Less files to create the key breakpoints in our grid system.

```
/* Extra small devices (phones, less than 768px) */  
/* No media query since this is the default in Bootstrap */  
  
/* Small devices (tablets, 768px and up) */  
@media (min-width: @screen-sm-min) { ... }  
  
/* Medium devices (desktops, 992px and up) */  
@media (min-width: @screen-md-min) { ... }  
  
/* Large devices (large desktops, 1200px and up) */  
@media (min-width: @screen-lg-min) { ... }
```

Grid options

See how aspects of the Bootstrap grid system work across multiple devices with a handy table.

	Extra small devices Phones (<768px)	Small devices Tablets (≥768px)	Medium devices Desktops (≥992px)	Large devices Desktops (≥1200px)
Grid behavior	Horizontal at all times	Collapsed to start, horizontal above breakpoints		
Container width	None (auto)	750px	970px	1170px
Class prefix	.col-xs-	.col-sm-	.col-md-	.col-lg-
# of columns	12			
Column width	Auto	60px	78px	95px
Gutter width	30px (15px on each side of a column)			
Nestable	Yes			
Offsets	Yes			
Column ordering	Yes			

Rijen en kolommen maken

```
<div class="container">
    <!-- Geen classes: altijd 100% breed binnen de container --&gt;
    &lt;div&gt;Ik ben de eerste div&lt;/div&gt;
    &lt;div&gt;Ik ben de tweede div&lt;/div&gt;
&lt;/div&gt;</pre>
```

```
<!-- 1. Met kolommen. 50%/50%-verdeling op medium devices and up -->
<div class="container">
    <div class="col-md-6">Ik ben de eerste div</div>
    <div class="col-md-6">Ik ben de tweede div</div>
</div>
```

```
<!-- 2. Verbeterde kolommen. Ingesloten door een .row -->
<div class="container">
    <div class="row">
        <div class="col-md-6">Ik ben de eerste div</div>
        <div class="col-md-6">Ik ben de tweede div</div>
    </div>
</div>
```

Algemene lessen

- Gebruik altijd een container. Gebruik voor 100% breedte een .container-fluid.
- Gebruik geen containers binnen containers.
Nooit.
- Gebruik geen .row buiten een container.
- Gebruik geen .col-* buiten een .row.

```
<!-- 3. ALTIJD twee kolommen. Ook op kleine devices -->
<div class="container">
    <div class="row">
        <div class="col-xs-6 light">Ik ben de eerste div</div>
        <div class="col-xs-6 dark">Ik ben de tweede div</div>
    </div>
</div>
```

```
<!-- 4. ALTIJD twee kolommen. 50%/50% op kleine devices,
      33%/66% op grotere devices -->
<div class="container">
    <div class="row">
        <div class="col-xs-6 col-md-3 light">Ik ben de eerste div</div>
        <div class="col-xs-6 col-md-9 dark">Ik ben de tweede div</div>
    </div>
</div>
```



Small

Medium/Large



Meer kolommen in één rij?

- Bootstrap wrapt automatisch bij 12 kolommen
(niet aanbevolen, werkt wel)

```
<div class="row">
    <div class="col-md-3">Ik ben de eerste div</div>
    <div class="col-md-3">Ik ben de tweede div</div>
    <div class="col-md-3">Ik ben de derde div</div>
    <div class="col-md-3">Ik ben de vierde div</div>
    <div class="col-md-3">Ik ben de eerste div</div>
    <div class="col-md-3">Ik ben de tweede div</div>
    <div class="col-md-3">Ik ben de derde div</div>
</div>
```

Kolommen van ongelijke lengte?

- Gebruik de `.clearfix visible-*` workaround

Responsive column resets

With the four tiers of grids available you're bound to run into issues where, at certain breakpoints, your columns don't clear quite right as one is taller than the other. To fix that, use a combination of a `.clearfix` and our [responsive utility classes](#).

`.col-xs-6.col-sm-3`

Resize your viewport or
check it out on your
phone for an example.

`.col-xs-6.col-sm-3`

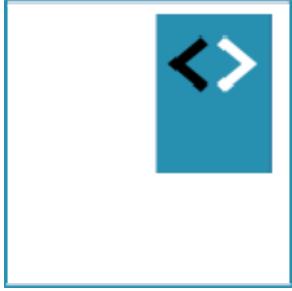
`.col-xs-6.col-sm-3`

`.col-xs-6.col-sm-3`

```
<div class="row">
  <div class="col-xs-6 col-sm-3">.col-xs-6 .col-sm-3</div>
  <div class="col-xs-6 col-sm-3">.col-xs-6 .col-sm-3</div>

  <!-- Add the extra clearfix for only the required viewport -->
  <div class="clearfix visible-xs"></div>

  <div class="col-xs-6 col-sm-3">.col-xs-6 .col-sm-3</div>
  <div class="col-xs-6 col-sm-3">.col-xs-6 .col-sm-3</div>
</div>
```



Element Styling

Basis HTML-elementen opmaken: forms, buttons, tables

Algemene werkwijze:

- Meestal is het niks meer of minder dan een class toevoegen aan een element
- Bootstrap zorgt voor de styling
- Aanpassen?
 - Schrijf een eigen CSS-override, OF
 - Pas het thema aan via Custom Build

Tables

- Gebruik `<table class="table">...</table>`
 - Beschikbaar:
 - `.table-striped`
 - `.table-bordered`
 - `.table-hover`
 - `.table-condensed`
- `<div class="table-responsive">...</div>`

Striped rows

Use `.table-striped` to add zebra-striping to any table row within the `<tbody>`.

Cross-browser compatibility

Striped tables are styled via the `:nth-child` CSS selector, which is not available in Internet Explorer 8.

EXAMPLE

#	First Name	Last Name	Username
1	Mark	Otto	@mdo
2	Jacob	Thornton	@fat
3	Larry	the Bird	@twitter

```
<table class="table table-striped">
  ...
</table>
```

Code

Tables

Basic example
Striped rows
Bordered table
Hover rows
Condensed table
Contextual classes
Responsive tables

Forms

Buttons
Images
Helper classes
Responsive utilities
Using Less
Using Sass
[Back to top](#)

Zie verder documentatie: <http://getbootstrap.com/css/#tables>

Forms

- Basiselementen krijgen automatisch styling
 - <input>, <textarea>, <select> EN
 - Elements met class="form-control"
 - 100% width
- Gebruik class="form-group" voor optimale padding/margin binnen formulier
- Groepeer bij elkaar horende labels/input fields

```
<div class="row">
  <h1>Voorbeeld formulier</h1>
  <form role="form">
    <div class="form-group">
      <label for="txtEmail">E-mail</label>
      <input type="email" class="form-control" id="txtEmail" placeholder="E-mailadres">
    </div>
    <div class="form-group">
      <label for="txtPassword">Password</label>
      <input type="password" class="form-control" id="txtPassword" placeholder="Wachtwoord">
    </div>
    <a href="#" class="btn btn-primary">Verzenden</a>
  </form>
</div>
```

Voorbeeld formulier

E-mail

Password

Verzenden

Mogelijkheden met forms

.form-inline

.form-horizontal

.form-static-control

disabled (zowel op elements als <fieldset>)

.has-feedback, .has-error, .has-warning

- Toevoegen via jQuery of via HTML5 validation

.form-control-feedback

.input-lg, .input-sm

```
<div class="form-group has-feedback has-success">
  <label for="txtEmail">E-mail</label>
  <input type="email" class="form-control"
    id="txtEmail" placeholder="E-mailadres">
  <span class="glyphicon glyphicon-ok form-control-feedback"></span>
</div>
```

Voorbeeld formulier met visuele validatie-feedback

E-mail

E-mailadres 

Password

Wachtwoord 

Verzenden

De classes .has-feedback, .has-error en .has-success zijn gebruikt.

Buttons

Basisklasse: .btn

6 states: .btn-default, .btn-success, .btn-info,
.btn-warning, .btn-danger, .btn-link

Omvang: .btn-lg, .btn-sm, .btn-xs, .btn-block

Combineer classes waar nodig

EXAMPLE

Default

Primary

Success

Info

Warning

Danger

Link

Images

- Belangrijkste: `.img-fluid`
 - `max-width: 100%, height: auto;`
- Voorgedefinieerde vormen:

EXAMPLE

The image shows three square placeholder boxes, each labeled "140x140". The first box is rounded at the corners. The second box is a perfect circle. The third box has rounded corners but is not perfectly circular.

```



```

Verder:

Helper classes

Context colors, close icon, context background, show/hide element, ...

Responsive utilities

.visible-*, .hidden-*, .visible-print, .hidden-print