



# **Open Data Übung: Einführung User Experience und Usability Patterns**

**Termin 8, 21. April 2016**

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# Terminübersicht Übungen

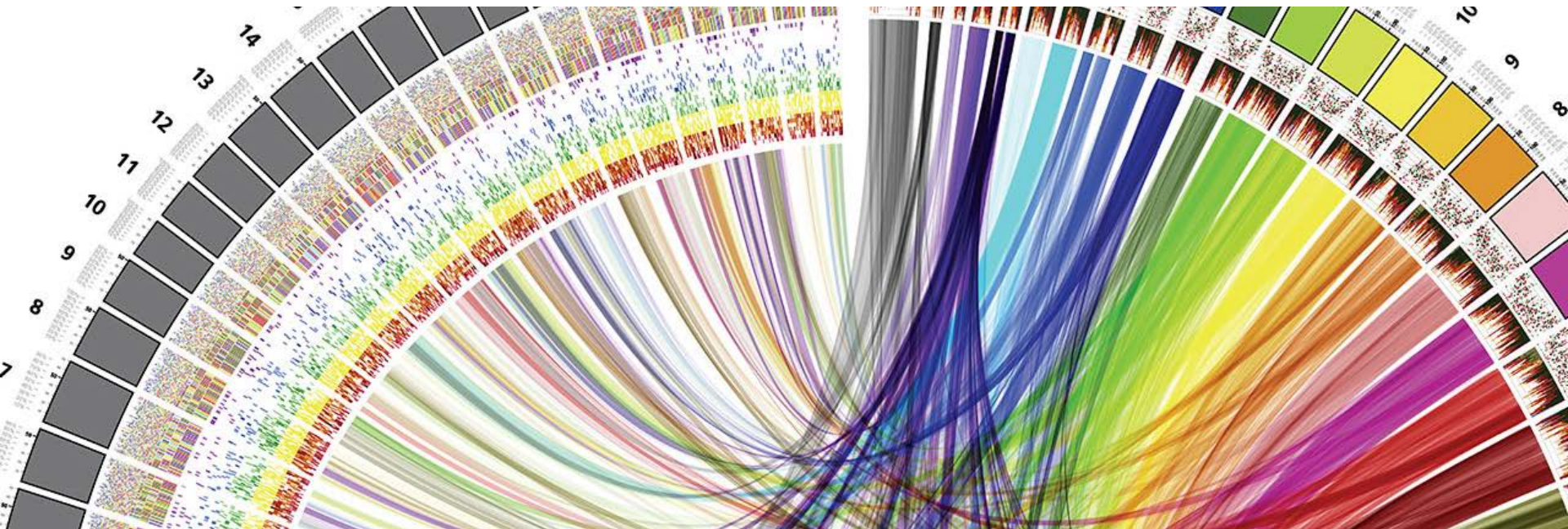
- > 25.02.2016: Informationen zu den Übungen, App-Demos & Einführung in Tools
- > 03.03.2016: Einführung Web-Programmierung
- > 10.03.2016: Open Data Speed Dating
- > 17.03.2016: Einführung D3.js & Daten einbinden in D3.js
- > 24.03.2016: Anpassen von bestehenden Apps & Bibliotheken, die D3.js verwenden
- > 31.03.2016: Osterferien
- > 07.04.2016: Daten visualisieren & Layouts
- > 14.04.2016: Skalen und Achsen & Responsive Design
- > **21.04.2016: User Experience, Usability Patterns**
- > 28.04.2016: Zwischenpräsentation & Datenaktualisierung und Transitionen
- > 05.05.2016: Auffahrt
- > 12.05.2016: Interactivity & Geomapping
- > 19.05.2016: 3D Web-Programmierung mit Three.js & Programming Coaching
- > 26.05.2016: Abschlusspräsentationen
- > 02.06.2016: frei

# Zwischenpräsentation nächste Woche

- > Anmeldung bis **Sonntag, 24. April 2016** an [mirjam.laederach@iwi.unibe.ch](mailto:mirjam.laederach@iwi.unibe.ch)
- > Für Demonstration der App die IWI Sandbox verwenden: <https://sandbox.iwi.unibe.ch>
- > Demonstration soll enthalten:
  1. Welche Daten?
  2. Wie was das Vorgehen bis jetzt?
  3. Aktueller Stand der App: Skizzen, Datentabellen, Visualisierung etc.
- > Folien nicht nötig, Feedback steht im Zentrum
- > Anzahl Minuten für Demonstration wird noch mitgeteilt (hängt von Anzahl Gruppen ab)

# Agenda

1. **Begrifflichkeiten und Usability-Standards**
2. User Interface Design Patterns
3. Bootstrap Components



# Begrifflichkeiten

- > **Usability:** Software-Ergonomie, Gebrauchstauglichkeit, Bedienbarkeit
- > **User Experience:** Nutzererlebnis oder Nutzungserlebnis
- > **Interaction Design:** Gestaltung der Funktion und des Verhalten
- > **Interfacedesign:** Gestaltung von Benutzeroberflächen
- > **Screendesign:** Präsentation von Inhalten auf Monitoren
- > **User Interface (UI):** Benutzerschnittstelle
- > **Graphical User Interface (GUI):** Grafische Benutzeroberflächen
- > **Responsive Webdesign:** Anpassung der Website auf Endgerät
- > **Accessibility:** Barrierefreiheit

# Relevante ISO-Standards

> Stufen der Nutzungsqualität von interaktiven Systemen:



Quelle: Leitfaden Usability, DAkkS Deutsche Akkreditierungsstelle, 2010  
[http://www.dakks.de/sites/default/files/71-SD-2-007\\_Leitfaden%20Usability%201.3.pdf](http://www.dakks.de/sites/default/files/71-SD-2-007_Leitfaden%20Usability%201.3.pdf)

# DIN EN ISO 9241 – 110: Grundsätze der Dialoggestaltung

Die sieben Gestaltungsgrundsätze gemäss DIN EN ISO 9241 Teil 110:

1. Aufgabenangemessenheit
2. Selbstbeschreibungsfähigkeit
3. Steuerbarkeit
4. Erwartungskonformität
5. Fehlertoleranz
6. Individualisierbarkeit
7. Lernförderlichkeit

Quelle: DIN EN ISO 9241-110: Europäisches Komitee für Normung, Ergonomie der Mensch-System-Interaktion. Teil 110: Grundsätze der Dialoggestaltung, 2006. Deutsches Institut für Normung, Berlin.



# DIN EN ISO 9241 – 110:

## 1. Aufgabenangemessenheit

*"Ein Dialog ist aufgabenangemessen, wenn er den Benutzer unterstützt, seine Arbeitsaufgabe effektiv und effizient zu erledigen."*

- > Erläuterungen:
  - **Effektivität:** Vollständigkeit und Genauigkeit, mit der ein Benutzer ein bestimmtes Ziel erreichen kann
  - **Effizienz:** Aufwand des Benutzers im Verhältnis der Aufgabe
- > Umsetzung:
  - Nur notwendige Informationen anzeigen, keine Informationsüberflutung
  - Standardwerte (z.B. aktuelles Datum) automatisch eintragen
  - Texteingabe automatisch ins erste Eingabefeld positionieren
  - Logische Anordnung der Eingabefelder (z.B. Adresse)
- > Positive oder negative Beispiele?
- > Wichtig: Entwickler muss Arbeitsabläufe der Benutzer kennen

Quelle: DIN EN ISO 9241-110: Grundsätze der Dialoggestaltung, 2006  
Aufgabenangemessenheit <http://www.fit-fuer-usability.de/archiv/aufgabenangemessenheit/>



# DIN EN ISO 9241 – 110:

## 2. Selbstbeschreibungsfähigkeit

*"Ein Dialog ist in dem Maße selbstbeschreibungsfähig, in dem für den Benutzer zu jeder Zeit offensichtlich ist, in welchem Dialog, an welcher Stelle er sich befindet, welche Handlungen unternommen werden können und wie diese ausgeführt werden können."*

- > **Orientierung:**
  - Wo komme ich her?
  - Wo bin ich?
  - Wo kann ich hin?
- > **Beherrschbarkeit/Antizipierbarkeit:** Links, Navigationspunkten und Buttons richtig beschriften und Erwartung einhalten
- > **Rückmeldung:** nach jeder Aktion Feedback geben, schafft Sicherheit
- > **Hilfestellung:** Möglichkeit für weitere Informationen und Hilfe geben

Quelle: DIN EN ISO 9241-110: Grundsätze der Dialoggestaltung, 2006  
<http://wifimaku.com/online-marketing/relaunch-und-usability/usability-in-der-konzeptionsphase/>

# DIN EN ISO 9241 – 110:

## 3. Steuerbarkeit

*"Ein Dialog ist steuerbar, wenn der Benutzer in der Lage ist, den Dialogablauf zu starten sowie seine Richtung und Geschwindigkeit zu beeinflussen, bis das Ziel erreicht ist."*

### > **Möglichkeiten dem Benutzer Steuerbarkeit zu vermitteln:**

- Möglichkeiten, Medien zu nutzen oder auszuschalten
- Alternative Navigationsmöglichkeiten
- Sicherstellung der korrekten Funktionsweise der Zurück-Schaltfläche
- Jederzeit mögliche Erreichbarkeit der Startseite
- Abbruchmöglichkeiten

### > **Beispiele:**

- Eine Tabelle hat Buttons, mit deren Hilfe die Informationen spaltenweise sortiert werden können.
- Eine Suchmaschine bietet die Möglichkeit, die Zahl der auf einer Seite angezeigten Treffer einzustellen.
- Ein Tool ermöglicht es den Benutzern, einen Dateidownload zu unterbrechen und später fortzusetzen.
- Umfangreiche Grafiken werden als "Thumbnails" dargestellt, die bei Bedarf vom Benutzer vergrößert werden können.

Quellen: <http://www.handbuch-usability.de/steuerbarkeit.html>  
<http://www.kommdesign.de/texte/din.htm#Steuerbarkeit>

# DIN EN ISO 9241 – 110:

## 4. Erwartungskonformität

*"Ein Dialog ist erwartungskonform, wenn er konsistent ist und den Merkmalen des Benutzers entspricht, z.B. den Kenntnissen aus dem Arbeitsgebiet, der Ausbildung und der Erfahrung des Benutzers sowie den allgemein anerkannten Konventionen."*

Kognitive und verhaltens- sowie lernpsychologische Faktoren:

- > **Konsistenz:** Erfassen von Zusammenhängen wenn Muster erkannt wird (interne Konsistenz)
- > **Erfahrung:** Anwendungswissen aus älteren Versionen oder anderen Programmen hilft sich zurechtzufinden

Beispiele:

- > Einheitliche Gestaltung der jeweiligen Software
- > Ähnliche Icons in unterschiedlichen Programmen

Quelle: <http://www.handbuch-usability.de/erwartungskonformitaet.html>

# DIN EN ISO 9241 – 110:

## 5. Fehlertoleranz

*"Ein Dialog ist fehlertolerant, wenn das beabsichtigte Arbeitsergebnis trotz erkennbar fehlerhafter Eingaben entweder mit keinem oder mit minimalem Korrekturaufwand seitens des Benutzers erreicht werden kann."*

Potentielle Fehler sind:

- > **Vermeidbare Fehler:** Programmierfehler, Navigationsfehler, fehlerhafte Eingabemöglichkeiten auf Formularen etc.
- > **Bekannte, nicht vermeidbare Fehler:** Tippfehler, versehentlich Abschicken des Formulars -> Validieren der Eingaben
- > **Nicht antizipierbare Fehler:** schwer identifizierbare Programmierfehler aufgrund unerwarteten Besucherverhaltens -> Debugging-Meldung

Quelle: <http://www.handbuch-usability.de/fehlertoleranz.html>

# DIN EN ISO 9241 – 110:

## 6. Individualisierbarkeit

*"Ein Dialog ist individualisierbar, wenn das Dialogsystem Anpassungen an die Erfordernisse der Arbeitsaufgabe, individuelle Vorlieben des Benutzers und Benutzerfähigkeiten zulässt."*

Möglichkeiten für die Individualisierung von Anwendungen sind:

- > **Anpassung der Darstellung:** Schriftgrösse, Farben, Formen
- > **Anpassung von Funktionen:** Anwendungsumgebung flexibel gestalten, zu-/abschalten von Funktionen bspw. in Menu-Bars
- > **Anpassung von Werten:** Zeitzone, Sprache, Ort, Währung, Masseinheiten, Formate, Bandbreite etc.
- > **Anpassung von Standard-Eingaben:** Default-Werte eingeben
- > **Anpassung von Abläufen (Workflows):** Organisations-spezifische Geschäftsprozesse abbilden

Quelle: <http://www.fit-fuer-usability.de/archiv/individualisierbarkeit/>

# DIN EN ISO 9241 – 110:

## 7. Lernförderlichkeit

*"Ein Dialog ist lernförderlich, wenn er den Benutzer beim Erlernen des Dialogsystems unterstützt und anleitet."*

- > Mentalen Modelle der Benutzer aktivieren
- > Im Grundsatz gilt: "Je seltener ein Besucher eine Website besucht, desto weniger ist es ihm zuzumuten, dass er ihre Bedienung erst erlernen muss."

### **Lernförderliche Anwendungen beinhalten:**

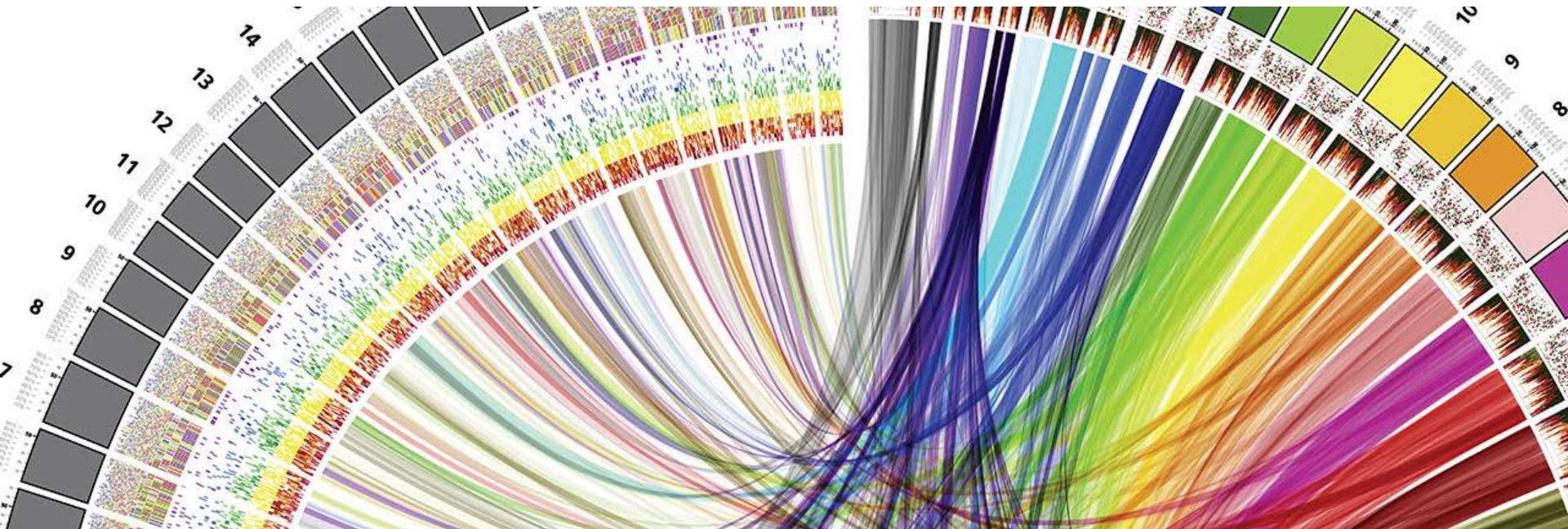
- > Frequently Asked Questions
- > Dialogsequenzen durch Dialogboxen
- > Tutorials, Hilfeinformationen, Assistenten, Guided Tour

Quellen: <http://www.fit-fuer-usability.de/archiv/lernfoerderlichkeit/>  
<http://www.handbuch-usability.de/lernfoerderlichkeit.html>



# Agenda

1. Begrifflichkeiten und Usability-Standards
2. **User Interface Design Patterns**
3. Bootstrap Components





# Design Patterns



Design patterns   Screenshots   Blog



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## Design patterns

User Interface Design patterns are recurring solutions that solve common design problems. Design patterns are standard reference points for the experienced user interface designer.

Dwell into the patterns below to learn a common language of web design.

Design patterns provide a common language between designers. They allow for debate over alternatives, where merely mentioning the name of a design pattern implicitly carries much more meaning than merely the name.

### User Interface Design Patterns

Getting input

Forms

Navigation

Tabs

Dealing with data

Tables

Social

Direct messaging Mini

Quelle: <http://ui-patterns.com/patterns>

# Design Patterns



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## Yahoo Design Pattern Library

Documentation   Forum

### Yahoo Design Pattern Library

Welcome! This library shares user interface patterns with the web design and development community. We've got 59 patterns today and more on the way, and we welcome your feedback.

- Get Started
- [Browse All Patterns](#) | [About the Library](#) | [Join the Community](#)

#### BROWSE PATTERNS

##### Recently Updated

View the most recent patterns added to the library.

**Draft-pick compensation rules might bend** | MLB  
Jeff Passan February 16, 2009

**Shaq is last rising Sun**  
Adrian Wojnarowski February 16, 2009

Shaquille O'Neal's entertainment can't mask the bungled firing of Terry Porter and lingering trade talks. [Read More](#)  
[View Adrian Wojnarowski Archive](#)

##### Accordion

There are too many items to fit into a limited space without overwhelming the user.

**tom\_croucher\_y**

**rickym007**  
Idle

**Jonokane**  
Irish springlin it, yo.

**nosnaab**  
GO CAPSI

##### Availability

Provide a way for a user to display to other people (either the public, or their contacts, depending on the rules of the system) when they are available for contact and when not.

**Your photostream**  
Collections   Sets   Tags   Archives   Favorites   Popular   Profile

**Interactions09**  
- Vancouver  
10 photos | Edit

**skagga Island**  
8 photos | Edit

**365 days in polaroid**  
44 photos | Edit

**Alcatraz**  
12 photos | Edit

##### Display Collection

The user has created a collection and wants to display it to other people.

- > LAYOUT
- > NAVIGATION
- > SELECTION
- > RICH INTERACTION
- > SOCIAL

#### Yahoo Forum Discussions

##### MORE ABOUT PATTERNS

About This Library

- Getting Started
- Every Pattern
- Design Stencils
- Code for Patterns
- Related Books
- Other Libraries

Quelle: <http://developer.yahoo.com/ypatterns/>

# Breadcrumbs



**Problem summary:** The user needs to know his location in the website's hierarchical structure in order to possibly browse back to a higher level in the hierarchy.

## Usage

- > Use when the structure of the website follows a strict hierarchical structure of similar formatted content.
- > Use when the structure of the site is parted in to sections which can be divided into more subsections and so on
- > Use together with some sort of main navigation.

Quelle: <http://ui-patterns.com/patterns/Breadcrumbs>

# Steps Left

**Problem summary:** The user is about to go through the process of filling in data over several steps and is in need of guidance.

## Usage

- > Use when the user is about to go through a longer process of giving data to the system that is longer than two screens (steps).
- > Use when the steps of a process is so long that the user might get the impression that it will go on forever without the guidance of steps.
- > Do not use when there is only 1 or 2 steps in submitting data to the website.
- > Do not use when the process of filling out data is easy foreseeable.

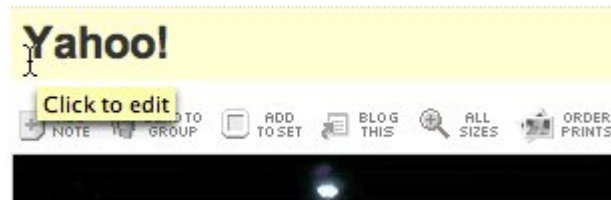
## Your Steps [\(learn more\)](#)

- 1 Choose the plan!
- 2 Login & email!
- 3 Complete your infos!
- 4 Subscription period!
- 5 Review your order!
- 6 Proceed to paypal!

From [whodo.es](http://whodo.es)

Quelle: <http://ui-patterns.com/patterns/StepsLeft>

# Tool Tip Invitation



**Problem summary:** Designer needs to cue the user about what will happen if they click the mouse on the hovered object.

## Usage

- > You want to invite the user to click or interact with the object being hovered over.
- > You want to make it clear that something will happen when the user clicks on the object being hovered over.
- > The user is interacting directly with the object (e.g., inline editing).
- > You need a textual description to make it explicit what will happen when the user interacts with the object.
- > You want to entice the user to interact with the feature.

Quelle: <http://developer.yahoo.com/ypatterns/richinteraction/invitation/tooltip.html>

# Inplace Editor

**Problem summary:** The user needs to easily and quickly edit a value on a page.

## Usage

- > Use when the user only needs to edit one value (or very few) and not many
- > Use when the value the user needs to edit is of a simple format, i.e. a text string, in a dropdown box.
- > Use when you have already authenticated the user (he is logged in) or if you do not care about his or her authenticity.
- > Use if you want the user to be able to edit a value without actually going to an administration page, but by staying on the same page.

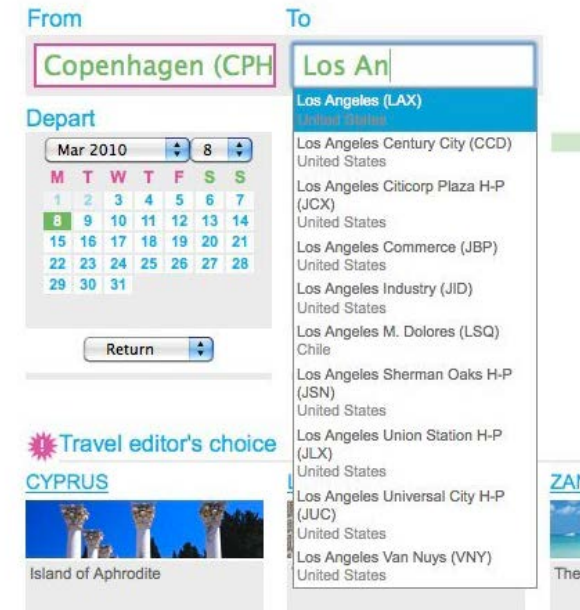


# Autocomplete

**Problem summary:** The user needs to enter information into a text box which is prone to be mis-typed, hard to remember, or ambiguous.

## Usage

- > Use to help ambiguity-issues, when an item can be entered in multiple ways
- > Use when the type of information entered can readily be matched with a specific piece of information in the system.
- > Use when autocomplete suggestions can be pulled from a set of data that is manageable in size.
- > Use when input speed is an important goal
- > Use when input accuracy is an important goal



The screenshot shows a flight booking form with the following elements:

- From:** Copenhagen (CPH)
- To:** Los Angeles (LAX) - This field is highlighted with a red box, and a dropdown menu is open showing a list of suggestions.
- Depart:** Mar 2010, 8
- Return:** (button)
- Travel editor's choice:** CYPRUS, Island of Aphrodite

The dropdown menu for 'Los Angeles' contains the following suggestions:

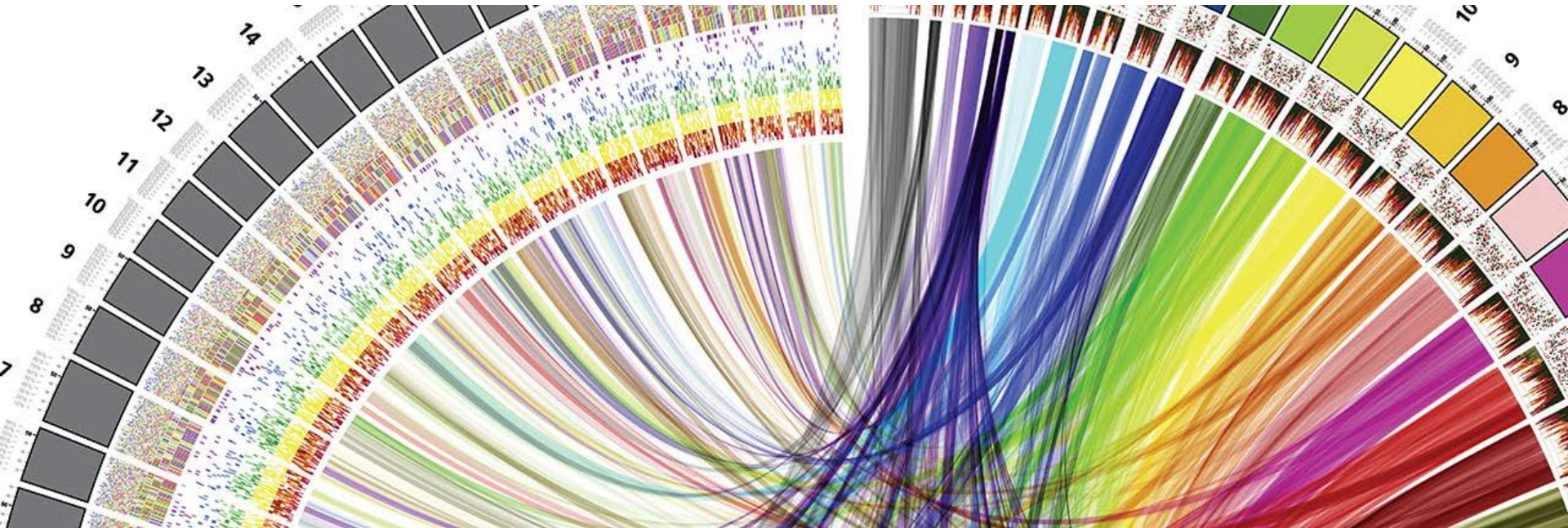
- Los Angeles (LAX) - United States
- Los Angeles Century City (CCD) - United States
- Los Angeles Citicorp Plaza H-P (JCX) - United States
- Los Angeles Commerce (JBP) - United States
- Los Angeles Industry (JID) - United States
- Los Angeles M. Dolores (LSQ) - Chile
- Los Angeles Sherman Oaks H-P (JSN) - United States
- Los Angeles Union Station H-P (JLX) - United States
- Los Angeles Universal City H-P (JUC) - United States
- Los Angeles Van Nuys (VNY) - United States

Quelle: <http://ui-patterns.com/patterns/Autocomplete>



# Agenda

1. Begrifflichkeiten und Usability-Standards
2. User Interface Design Patterns
3. **Bootstrap Components**





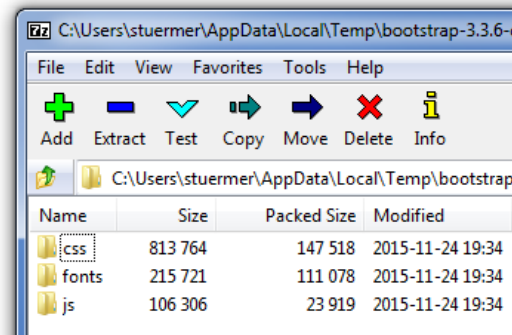
# Bootstrap einbinden

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

## Bootstrap

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

Download Bootstrap



## Documents library

D3js

Name	Date modified	Type	Size
css	20.04.2016 23:56	File folder	
fonts	20.04.2016 23:56	File folder	
js	20.04.2016 23:56	File folder	
d3	24.03.2016 13:24	File folder	
index.html	20.04.2016 23:58	Firefox HTML Document	2 KB



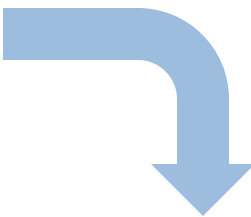
# Bootstrap einbinden

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

## Basic template

Start with this basic HTML template, or modify [these examples](#). We hope you'll customize our templates and examples, adapting them to suit your needs.

Copy the HTML below to begin working with a minimal Bootstrap document.



```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="utf-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <!-- The above 3 meta tags "must" come first in the head; any other head content must come "after" these tags -->
</head>
<body>
  <!-- Bootstrap -->
  <!-- HTML5 shim and Respond.js for IE8 support of HTML5 elements and media queries -->
  <!-- WARNING: Respond.js doesn't work if you view the page via file:// -->
  <script src="https://oss.maxcdn.com/html5shiv/3.7.2/html5shiv.min.js"></script>
  <script src="https://oss.maxcdn.com/respond/1.4.2/respond.min.js"></script>
</body>
</html>
```





































# Bootstrap Components

The image displays a variety of Bootstrap components:

- Navigation Bar:** Features a title, a 'Home' link, two generic 'Link' buttons, a 'Dropdown' menu, a search input, and another 'Link' button with a 'Dropdown' menu.
- Action Buttons:** A row of buttons with different states: 'Action' (dropdown), 'Action' (blue), 'Danger' (red), 'Warning' (orange), 'Success' (green), 'Info' (blue), and 'Inverse' (dark grey), followed by a search input.
- Buttons:** A collection of buttons in various sizes and styles: 'Large button' (blue), 'Large button' (grey), 'Left' (blue), 'Middle' (blue), 'Right' (blue), and a pagination set with '«', '1', '2', '3', '4', '5', and '»'.
- Default and Small Buttons:** 'Default button' (blue) and 'Default button' (grey), 'Small button' (blue), and 'Small button' (grey).
- Mini Buttons:** 'Mini button' (blue) and 'Mini button' (grey).
- Dropdown Menu:** A list with items 'Action', 'Another action', 'Something else here', and a 'Separated link'.
- Modal:** A 'Modal header' with a close button (x), a body with the text 'One fine body...', and a footer with 'Close' and 'Save changes' buttons.
- Footer:** A navigation bar with 'Home', 'Help', and a 'Dropdown' menu, followed by a pagination set with '«', '1', '2', '3', '4', '5', and '»'.

Quelle: <http://getbootstrap.com/components/>

# Glyphicons

 glyphicon glyphicon-download	 glyphicon glyphicon-upload	 glyphicon glyphicon-inbox	 glyphicon glyphicon-play-circle	 glyphicon glyphicon-repeat	 glyphicon glyphicon-refresh	 glyphicon glyphicon-list-alt	 glyphicon glyphicon-lock
 glyphicon glyphicon-flag	 glyphicon glyphicon-headphones	 glyphicon glyphicon-volume-off	 glyphicon glyphicon-volume-down	 glyphicon glyphicon-volume-up	 glyphicon glyphicon-qrcode	 glyphicon glyphicon-barcode	 glyphicon glyphicon-tag
 glyphicon glyphicon-tags	 glyphicon glyphicon-book	 glyphicon glyphicon-bookmark	 glyphicon glyphicon-print	 glyphicon glyphicon-camera	 glyphicon glyphicon-font	 glyphicon glyphicon-bold	 glyphicon glyphicon-italic
 glyphicon glyphicon-text-height	 glyphicon glyphicon-text-width	 glyphicon glyphicon-align-left	 glyphicon glyphicon-align-center	 glyphicon glyphicon-align-right	 glyphicon glyphicon-align-justify	 glyphicon glyphicon-list	 glyphicon glyphicon-indent-left

Quelle: <http://getbootstrap.com/components/#glyphicons>



# Dropdowns

## EXAMPLE

Dropdown ▾

Action  
Another action  
Something else here

```
<div class="dropdown">  
  <button class="btn btn-default dropdown-toggle" type="button" id="dropdownMenu1" data-toggle="dropdown"  
  aria-haspopup="true" aria-expanded="true">  
    Dropdown  
    <span class="caret"></span>  
  </button>  
  <ul class="dropdown-menu" aria-labelledby="dropdownMenu1">  
    <li><a href="#">Action</a></li>  
    <li><a href="#">Another action</a></li>  
    <li><a href="#">Something else here</a></li>  
    <li role="separator" class="divider"></li>  
    <li><a href="#">Separated link</a></li>  
  </ul>  
</div>
```

Copy

Quelle: <http://getbootstrap.com/components/#dropdowns>

# Dropdown Headers

## EXAMPLE

Dropdown ▼

Dropdown header  
Action  
Another action  
Something else here  
Dropdown header  
Separated link

```
<ul class="dropdown-menu" aria-labelledby="dropdownMenu3">  
  ...  
  <li class="dropdown-header">Dropdown header</li>  
  ...  
</ul>
```

Copy

Quelle: <http://getbootstrap.com/components/#dropdowns-headers>

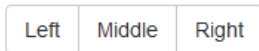


# Button groups

## Basic example

Wrap a series of buttons with `.btn` in `.btn-group`.

### EXAMPLE



```
<div class="btn-group" role="group" aria-label="...">
  <button type="button" class="btn btn-default">Left</button>
  <button type="button" class="btn btn-default">Middle</button>
  <button type="button" class="btn btn-default">Right</button>
</div>
```

[Copy](#)

## Button toolbar

Combine sets of `<div class="btn-group">` into a `<div class="btn-toolbar">` for more complex components.

### EXAMPLE



```
<div class="btn-toolbar" role="toolbar" aria-label="...">
  <div class="btn-group" role="group" aria-label="...">...</div>
  <div class="btn-group" role="group" aria-label="...">...</div>
  <div class="btn-group" role="group" aria-label="...">...</div>
</div>
```

[Copy](#)

Quelle: <http://getbootstrap.com/components/#btn-groups>

# Button dropdowns

## Single button dropdowns

Turn a button into a dropdown toggle with some basic markup changes.

EXAMPLE

Default ▾

Primary ▾

Success ▾

Info ▾

Warning ▾

Danger ▾

Action

Another action

Something else here

Separated link

```
<!-- Single button dropdown -->
<div class="btn-group">
  <button type="button" class="btn btn-default dropdown-toggle" data-toggle="dropdown" data-baspopup="true">Default ▾</button>
  <ul class="dropdown-menu">
    <li><a href="#">Action</a></li>
    <li><a href="#">Another action</a></li>
    <li><a href="#">Something else here</a></li>
    <li role="separator" class="divider"></li>
    <li><a href="#">Separated link</a></li>
  </ul>
</div>
```

Copy

Quelle: <http://getbootstrap.com/components/#btn-dropdowns>

# Input groups

## EXAMPLE

@

@example.com

\$

.00

**Your vanity URL**

https://example.com/users/

```
<div class="input-group">
  <span class="input-group-addon" id="basic-addon1">@</span>
  <input type="text" class="form-control" placeholder="Username" aria-describedby="basic-addon1">
</div>

<div class="input-group">
  <input type="text" class="form-control" placeholder="Recipient's username" aria-describedby="basic-addon2">
  <span class="input-group-addon" id="basic-addon2">@example.com</span>
</div>
```

[Copy](#)

Quelle: <http://getbootstrap.com/components/#input-groups>

# Navigation

## Tabs

Note the `.nav-tabs` class requires the `.nav` base class.

### EXAMPLE

Home Profile Messages

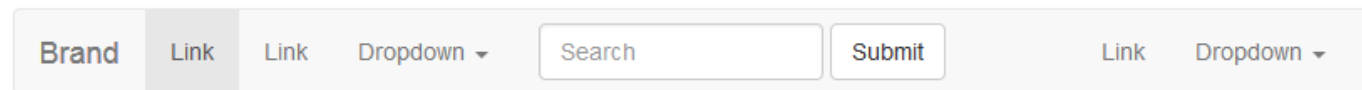
```
<ul class="nav nav-tabs">
  <li role="presentation" class="active"><a href="#">Home</a></li>
  <li role="presentation"><a href="#">Profile</a></li>
  <li role="presentation"><a href="#">Messages</a></li>
</ul>
```

Copy

Quelle: <http://getbootstrap.com/components/#nav>

# Navbar

## EXAMPLE



```
<nav class="navbar navbar-default">
  <div class="container-fluid">
    <!-- Brand and toggle get grouped for better mobile display -->
    <div class="navbar-header">
      <button type="button" class="navbar-toggle collapsed" data-toggle="collapse" data-target="#bs-example-
navbar-collapse-1" aria-expanded="false">
        <span class="sr-only">Toggle navigation</span>
        <span class="icon-bar"></span>
        <span class="icon-bar"></span>
        <span class="icon-bar"></span>
      </button>
      <a class="navbar-brand" href="#">Brand</a>
    </div>

    <!-- Collect the nav links, forms, and other content for toggling -->
    <div class="collapse navbar-collapse" id="bs-example-navbar-collapse-1">
      <ul class="nav navbar-nav">
        <li class="active"><a href="#">Link <span class="sr-only">(current)</span></a></li>
        <li><a href="#">Link</a></li>
        <li class="dropdown">
          <a href="#" class="dropdown-toggle" data-toggle="dropdown" role="button" aria-haspopup="true">
```

Copy

Quelle: <http://getbootstrap.com/components/#navbar-default>

# Breadcrumbs

Indicate the current page's location within a navigational hierarchy.

Separators are automatically added in CSS through `:before` and `content`.

## EXAMPLE

Home

Home / Library

Home / Library / Data

```
<ol class="breadcrumb">
  <li><a href="#">Home</a></li>
  <li><a href="#">Library</a></li>
  <li class="active">Data</li>
</ol>
```

Copy

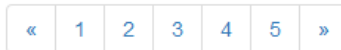
Quelle: <http://getbootstrap.com/components/#breadcrumbs>

# Pagination

## Default pagination

Simple pagination inspired by Rdio, great for apps and search results. The large block is hard to miss, easily scalable, and provides large click areas.

### EXAMPLE



```
<nav>
  <ul class="pagination">
    <li>
      <a href="#" aria-label="Previous">
        <span aria-hidden="true">&laquo;</span>
      </a>
    </li>
    <li><a href="#">1</a></li>
    <li><a href="#">2</a></li>
    <li><a href="#">3</a></li>
    <li><a href="#">4</a></li>
    <li><a href="#">5</a></li>
    <li>
      <a href="#" aria-label="Next">
        <span aria-hidden="true">&raquo;</span>
      </a>
    </li>
  </ul>
</nav>
```

[Copy](#)

Quelle: <http://getbootstrap.com/components/#pagination>



# Labels

## Available variations

Add any of the below mentioned modifier classes to change the appearance of a label.

### EXAMPLE

Default Primary Success Info Warning Danger

```
<span class="label label-default">Default</span>  
<span class="label label-primary">Primary</span>  
<span class="label label-success">Success</span>  
<span class="label label-info">Info</span>  
<span class="label label-warning">Warning</span>  
<span class="label label-danger">Danger</span>
```

Copy

Quelle: <http://getbootstrap.com/components/#labels>

# Badges

## Adapts to active nav states

Built-in styles are included for placing badges in active states in pill navigations.

### EXAMPLE



```
<ul class="nav nav-pills" role="tablist">
  <li role="presentation" class="active"><a href="#">Home <span class="badge">42</span></a></li>
  <li role="presentation"><a href="#">Profile</a></li>
  <li role="presentation"><a href="#">Messages <span class="badge">3</span></a></li>
</ul>
```

[Copy](#)

Quelle: <http://getbootstrap.com/components/#badges>

# Jumbotron

## EXAMPLE

# Hello, world!

This is a simple hero unit, a simple jumbotron-style component for calling extra attention to featured content or information.

Learn more

```
<div class="jumbotron">  
  <h1>Hello, world!</h1>  
  <p>...</p>  
  <p><a class="btn btn-primary btn-lg" href="#" role="button">Learn more</a></p>  
</div>
```

Copy

Quelle: <http://getbootstrap.com/components/#jumbotron>

# Page header

A simple shell for an `h1` to appropriately space out and segment sections of content on a page. It can utilize the `h1`'s default `small` element, as well as most other components (with additional styles).

## EXAMPLE

Example page header Subtext for header

```
<div class="page-header">  
  <h1>Example page header <small>Subtext for header</small></h1>  
</div>
```

[Copy](#)

Quelle: <http://getbootstrap.com/components/#pagination>

# Thumbnails

## Default example

By default, Bootstrap's thumbnails are designed to showcase linked images with minimal required markup.

### EXAMPLE



```
<div class="row">
  <div class="col-xs-6 col-md-3">
    <a href="#" class="thumbnail">
      
    </a>
  </div>
  ...
</div>
```

Copy

Quelle: <http://getbootstrap.com/components/#thumbnails-default>

# Alerts

## 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.

```
<div class="alert alert-success" role="alert">...</div>
<div class="alert alert-info" role="alert">...</div>
<div class="alert alert-warning" role="alert">...</div>
<div class="alert alert-danger" role="alert">...</div>
```

Copy

Quelle: <http://getbootstrap.com/components/#alerts>

# Progress bars

## With label

Remove the `<span>` with `.sr-only` class from within the progress bar to show a visible percentage.

### EXAMPLE



```
<div class="progress">
  <div class="progress-bar" role="progressbar" aria-valuenow="60" aria-valuemin="0" aria-valuemax="100"
  style="width: 60%;">
    60%
  </div>
</div>
```

[Copy](#)

Quelle: <http://getbootstrap.com/components/#progress>





# Media object

EXAMPLE

64x64

**Media heading**  
Cras sit amet nibh libero, in gravida nulla. Nulla vel metus scelerisque ante sollicitudin commodo. Cras purus odio, vestibulum in vulputate at, tempus viverra turpis. Fusce condimentum nunc ac nisi vulputate fringilla. Donec lacinia congue felis in faucibus.

64x64

**Media heading**  
Cras sit amet nibh libero, in gravida nulla. Nulla vel metus scelerisque ante sollicitudin commodo. Cras purus odio, vestibulum in vulputate at, tempus viverra turpis. Fusce condimentum nunc ac nisi vulputate fringilla. Donec lacinia congue felis in faucibus.

64x64

**Nested media heading**  
Cras sit amet nibh libero, in gravida nulla. Nulla vel metus scelerisque ante sollicitudin commodo. Cras purus odio, vestibulum in vulputate at, tempus viverra turpis. Fusce condimentum nunc ac nisi vulputate fringilla. Donec lacinia congue felis in faucibus.

**Media heading**  
Cras sit amet nibh libero, in gravida nulla. Nulla vel metus scelerisque ante sollicitudin commodo. Cras purus odio, vestibulum in vulputate at, tempus viverra turpis.

64x64

64x64

**Media heading**  
Cras sit amet nibh libero, in gravida nulla. Nulla vel metus scelerisque ante sollicitudin commodo. Cras purus odio, vestibulum in vulputate at, tempus viverra turpis.

64x64

Quelle: <http://getbootstrap.com/components/#media>

# List group

## Badges

Add the badges component to any list group item and it will automatically be positioned on the right.

### EXAMPLE

Cras justo odio

14

Dapibus ac facilisis in

2

Morbi leo risus

1

```
<ul class="list-group">  
  <li class="list-group-item">  
    <span class="badge">14</span>  
    Cras justo odio  
  </li>  
</ul>
```

Copy

Quelle: <http://getbootstrap.com/components/#list-group>

# Panels

## Contextual alternatives

Like other components, easily make a panel more meaningful to a particular context by adding any of the contextual state classes.

### EXAMPLE

Panel title

Panel content

Panel title

Panel content

Panel title

Panel content

Panel title

Panel content

Panel title

Panel content

Quelle: <http://getbootstrap.com/components/#panels>



# Panels

## With tables

Add any non-bordered `.table` within a panel for a seamless design. If there is a `.panel-body`, we add an extra border to the top of the table for separation.

EXAMPLE

Panel heading

Some default panel content here. Nulla vitae elit libero, a pharetra augue. Aenean lacinia bibendum nulla sed consectetur. Aenean eu leo quam. Pellentesque ornare sem lacinia quam venenatis vestibulum. Nullam id dolor id nibh ultricies vehicula ut id elit.

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

```
<div class="panel panel-default">
  <!-- Default panel contents -->
  <div class="panel-heading">Panel heading</div>
  <div class="panel-body">
    <p>...</p>
  </div>

  <!-- Table -->
  <table class="table">
    ...
  </table>
</div>
```

Copy

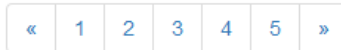
Quelle: <http://getbootstrap.com/components/#panels>

# Pagination

## Default pagination

Simple pagination inspired by Rdio, great for apps and search results. The large block is hard to miss, easily scalable, and provides large click areas.

### EXAMPLE



```
<nav>
  <ul class="pagination">
    <li>
      <a href="#" aria-label="Previous">
        <span aria-hidden="true">&laquo;</span>
      </a>
    </li>
    <li><a href="#">1</a></li>
    <li><a href="#">2</a></li>
    <li><a href="#">3</a></li>
    <li><a href="#">4</a></li>
    <li><a href="#">5</a></li>
    <li>
      <a href="#" aria-label="Next">
        <span aria-hidden="true">&raquo;</span>
      </a>
    </li>
  </ul>
</nav>
```

[Copy](#)

Quelle: <http://getbootstrap.com/components/#pagination>

# Responsive embed

Allow browsers to determine video or slideshow dimensions based on the width of their containing block by creating an intrinsic ratio that will properly scale on any device.

Rules are directly applied to `<iframe>`, `<embed>`, `<video>`, and `<object>` elements; optionally use an explicit descendant class `.embed-responsive-item` when you want to match the styling for other attributes.

**Pro-Tip!** You don't need to include `frameborder="0"` in your `<iframe>` s as we override that for you.

## EXAMPLE



Quelle: <http://getbootstrap.com/components/#responsive-embed>

# Wells

## Default well

Use the well as a simple effect on an element to give it an inset effect.

### EXAMPLE

Look, I'm in a well!

```
<div class="well">...</div>
```

Copy

Quelle: <http://getbootstrap.com/components/#wells>





# Weitere UI Elemente mit Bootstrap

> <http://getbootstrap.com/javascript/>

BootstrapGetting startedCSSComponentsJavaScriptCustomizeThemes

## JavaScript

Bring Bootstrap's components to life with over a dozen custom jQuery plugins. Easily include them all, or one by one.

### Overview

#### Individual or compiled

Plugins can be included individually (using Bootstrap's individual `*.js` files), or all at once (using `bootstrap.js` or the minified `bootstrap.min.js`).

##### Using the compiled JavaScript

Both `bootstrap.js` and `bootstrap.min.js` contain all plugins in a single file. Include only one.

##### Plugin dependencies

Some plugins and CSS components depend on other plugins. If you include plugins individually, make sure to check for these dependencies in the docs. Also note that all plugins depend on jQuery (this means jQuery must be included **before** the plugin files). Consult our `bower.json` to see which versions of jQuery are supported.

OverviewTransitionsModalDropdownScrollspyTabTooltipPopoverAlertButtonCollapseCarouselAffix

Back to topPreview theme