

CONSULTING
enpit

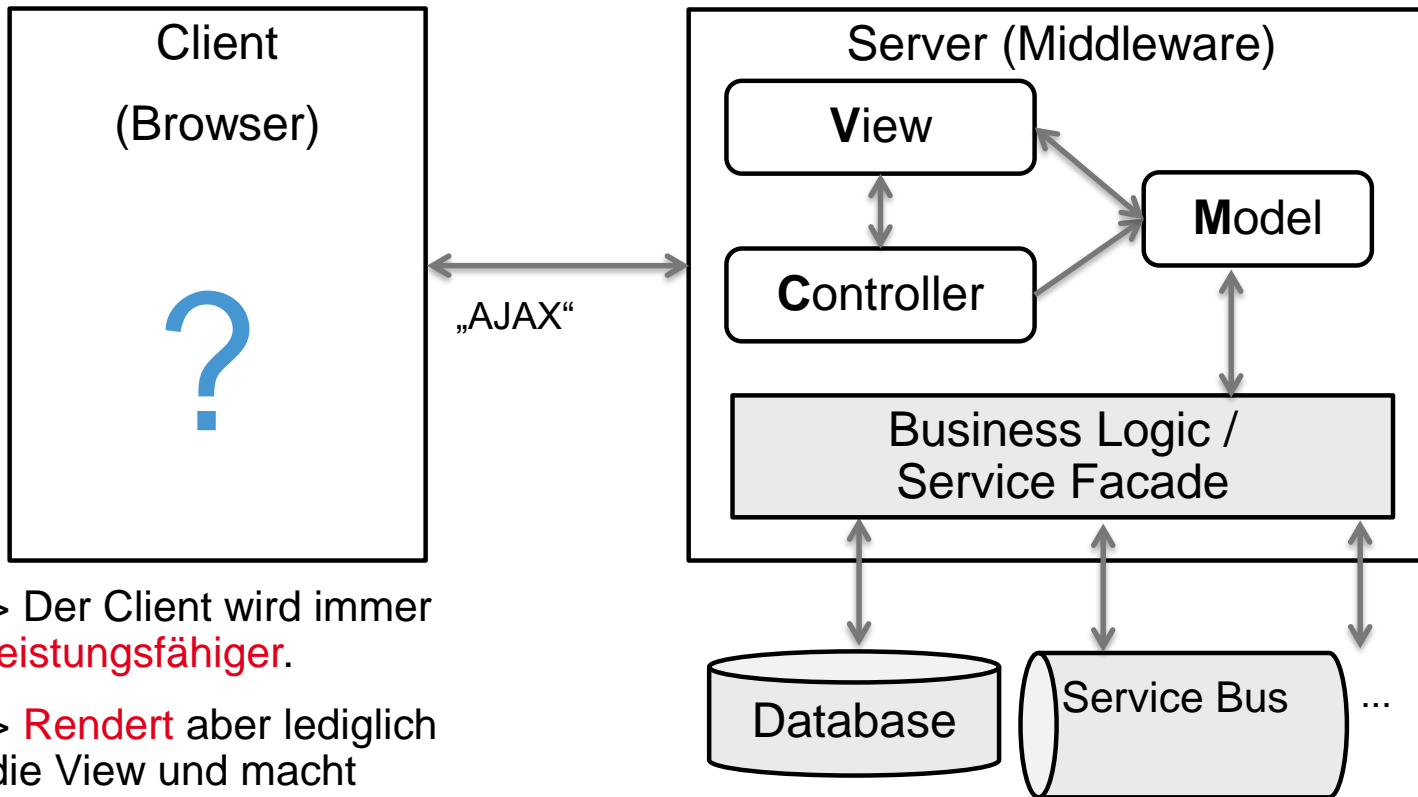
SESSION 1

EINFÜHRUNG UND GRUNDLAGEN COOKBOOK & TOOLCHAIN

AGENDA

1. Oracle JET - Motivation, Architektur, Technologien
2. Cookbook & Toolchain
3. Projekt & IDE Setup
4. Hands-On #1

„TRADITIONELLE WEB ARCHITEKTUR“



> Der Client wird immer **leistungsfähiger**.

> **Rendert** aber lediglich die View und macht einige **Ajax-Aufrufe**.

ENTERPRISE ANFORDERUNGEN

- Zukunftssicherheit: Stabiles, bewährtes Toolset, Standards
- Fokus auf Business / Fachlichkeit
- Barrierefreiheit & Internationalisierbarkeit
- Security
- Performance-Optimierung
- Responsive Design, Mobile Unterstützung
- Dokumentation & Support

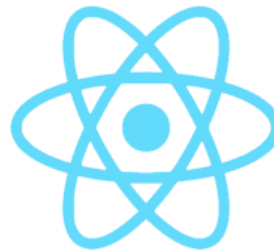
ember



Knockout.



METEOR



cucumber



ORACLE JET

JAVASCRIPT EXTENSION TOOLKIT

- Ein Toolkit, bestehend aus populären Open Source JavaScript-Bibliotheken
- Theme (CSS / SASS) implementiert „Alta UI Design“
- Zahlreiche UI-Komponenten unter Berücksichtigung von Barrierefreiheit, I18N, Skinning, Hybrid Mobile App Support

**JavaScript
Komfort**



jQuery

**Reichhaltige
UI Widgets**



jQuery UI

**Binding
MVVM**



Knockout

**Modulari-
sierung**



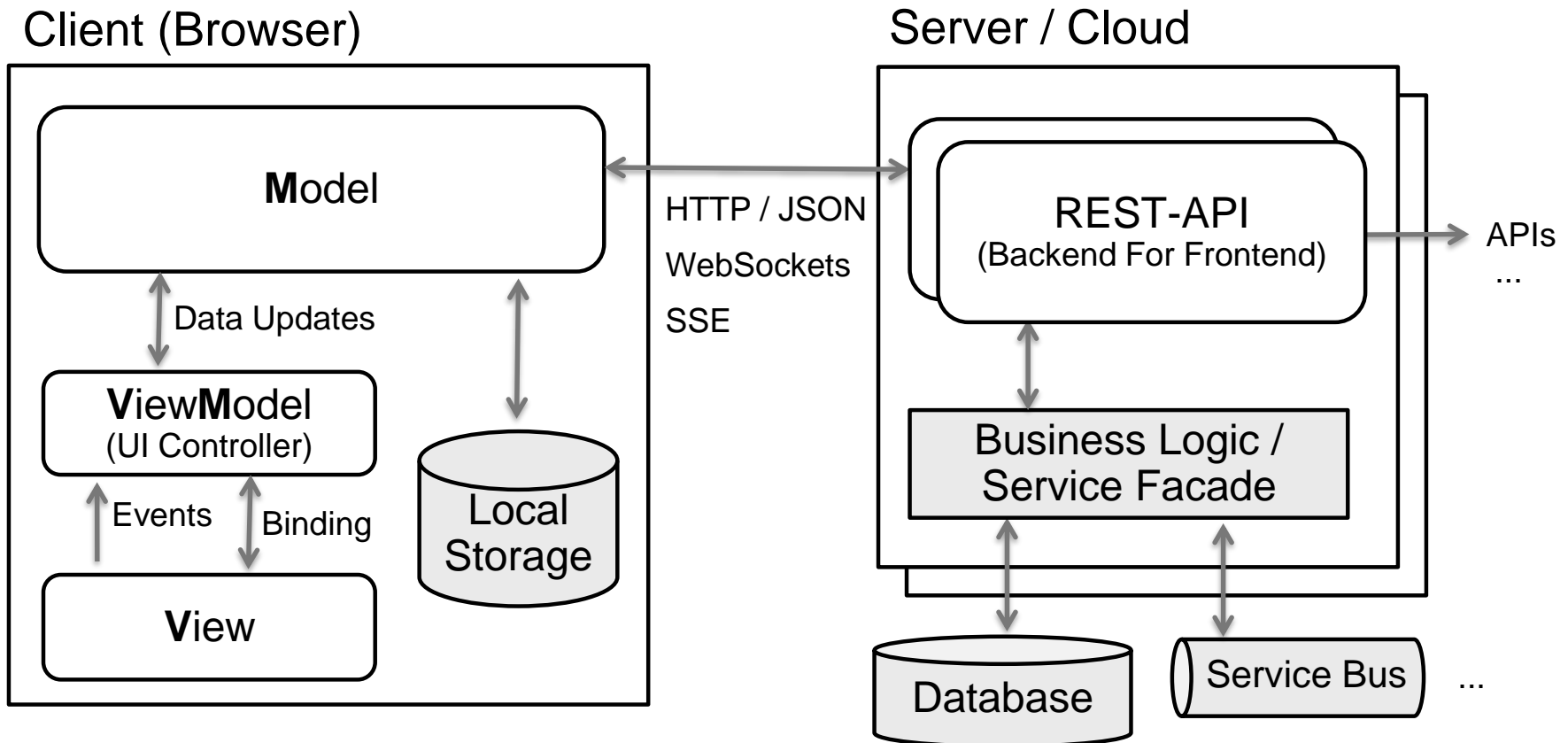
RequireJS

**Touch/Gesten
Support**

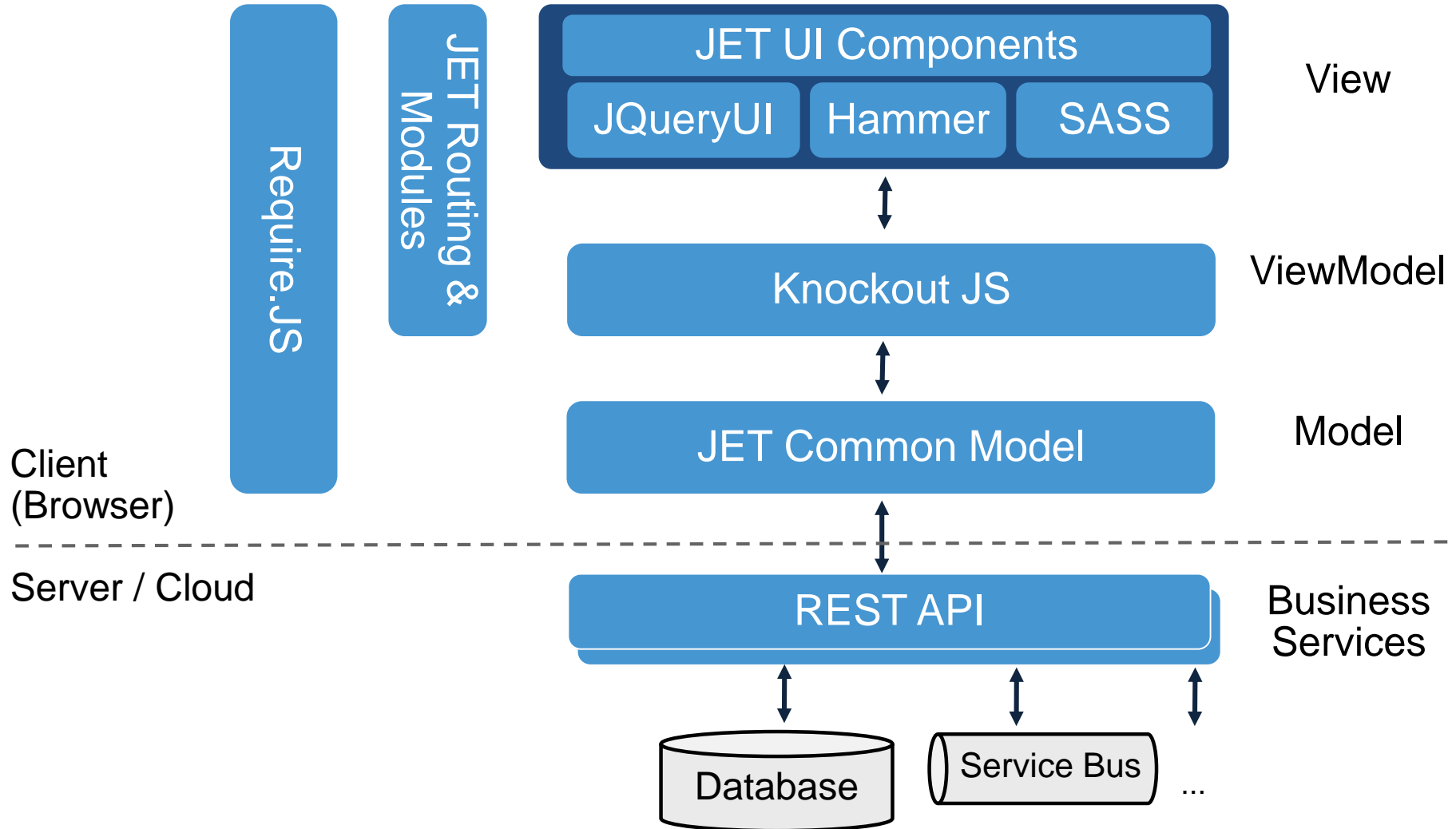


Hammer

MODEL VIEW – VIEWMODEL ARCHITEKTUR



ORACLE JET ARCHITEKTUR




BARRIEREFREIHEIT EINGEBAUT

gemäß WCAG 2.0 & WAI-ARIA 1.0

UI Widget

Input Date

```
<label for="format">Input Date</label>
<input id="format" data-bind="ojComponent: {component: 'ojInputDate',
    datePicker: {
    ...
    },
    value: dateValue, ...}"/>
```

Resulting HTML5-Code, augmented by WAI-ARIA attributes

```
1 <input id="inputDate" data-bind="...." type="text" placeholder="mm/dd/yyyy" ...
2   aria-describedby="7_inputHelp" aria-invalid="false" />
3 <span class="oj-inputdatetime-input-trigger">
4   <span title="Select Date" class=".. oj-enabled oj-default" />
5   <div class="oj-helper-hidden-accessible" id="7_inputHelp">
6     Press Key down or Key up for access to Calendar
7   </div>
8 </span>
```

DATA BINDING SAMPLE MIT KNOCKOUT

HTML (Knockout) UI Template

Editing employee: Steven Kin

First name:

Last name:

```
<h2>Editing employee: <span data-bind='text: fullName' /></h2>
```

```
<p>First name: <input data-bind='value: firstName' /></p>
```

```
<p>Last name: <input data-bind='value: lastName' /></p>
```

JavaScript – View Model Definition

```
1 // Define the view model
2 var Employee = function(pFirstName, pLastName) {
3     this.firstName = ko.observable(pFirstName);
4     this.lastName = ko.observable(pLastName);
5     // Tells that fullName depends on firstName and lastName,
6     // evaluates as needed
7     this.fullName = ko.computed(function() {
8         return this.firstName() + " " + this.lastName();
9     }, this);
10 };
11 // Tells Knockout to bind the "Employee" view model
12 ko.applyBindings(new Employee("Steven", "K"));
```

KNOCKOUT – MVVM PATTERN IN JAVASCRIPT EINFACH GEMACHT

- Implementiert Model-View-ViewModel Pattern
- Haupt Features
 - 2-Way Data-Binding –
HTML DOM (View) <-> JavaScript (ViewModel)
 - Dependency-Tracking
 - HTML-Templates

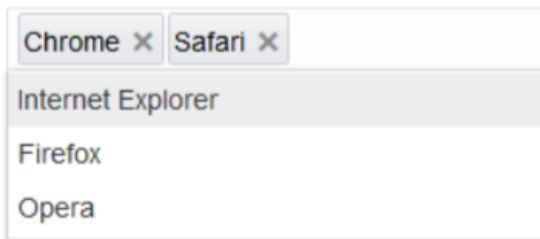
ORACLE JET BESTICHT DURCH RIESIGE UI KOMPONENTEN BIBLIOTHEK

Switch

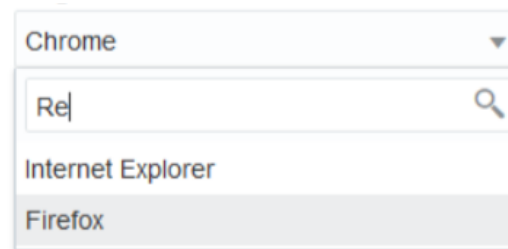


inkl. Touch-Gesten
Unterstützung

Combobox Multi-Select

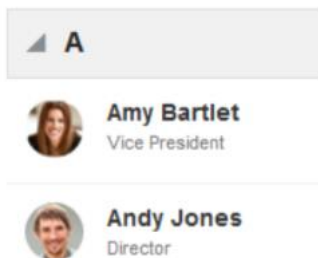


Combobox With search box

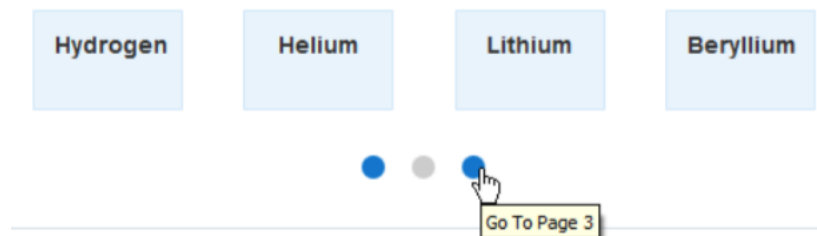


Auswahl einiger
UI-Komponenten

List View



Filmstrip



DATA COLLECTIONS

Id	Name	Room
556	Sales	201
10	Admin	300
50	HR	125

Table

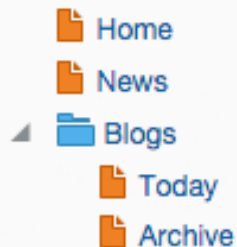
Id	Name	Room
556	Sales	201
10	Admin	300
50	HR	125

Data Grid

Amy Bartlet
Vice President

Andy Jones
Director

List View



Tree

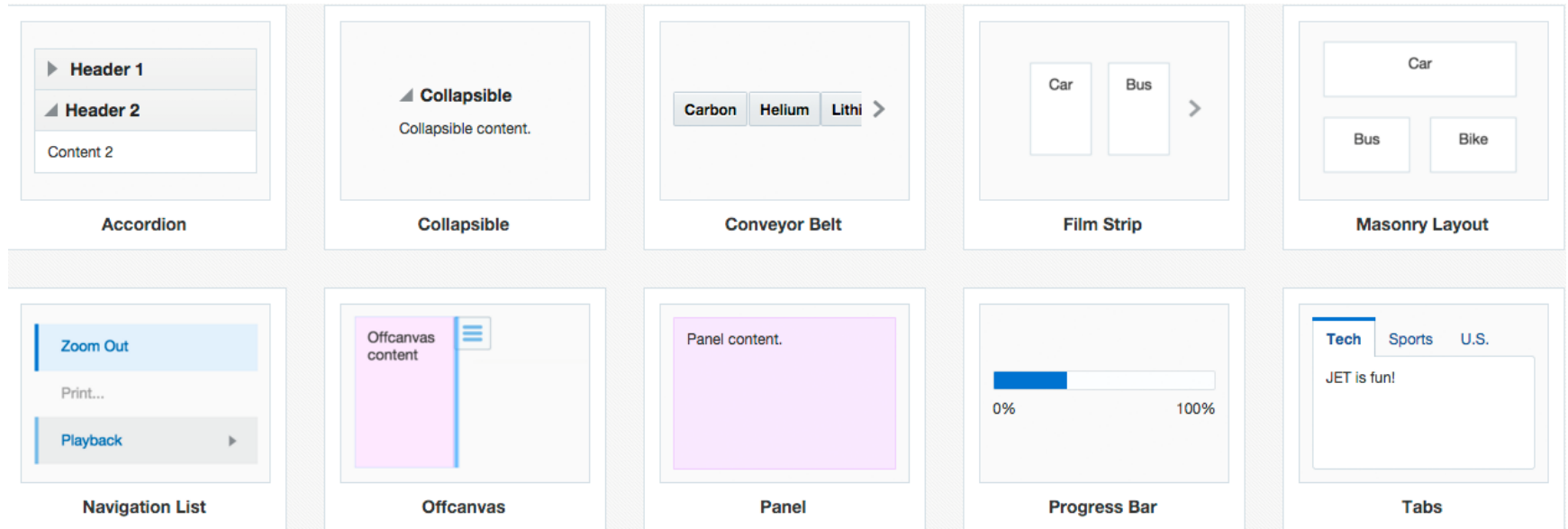
Task Name	Resource
▲ T1	Amy
▶ T1-1	Amy
▶ T1-2	Larry

Row Expander

Page 1 of 5

Paging Control

LAYOUT & NAVIGATION



GRIDS & RESPONSIVE PATTERNS



DATA VISUALIZATION



Diagram



Legend



NBox



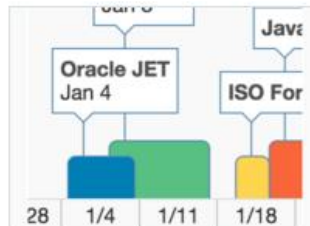
Sunburst



Tag Cloud



Thematic Map



Timeline



Treemap

AGENDA

Oracle JET - Motivation, Architektur, Technologien

Cookbook & Toolchain

Projekt & IDE Setup

Hands-On #1

ORACLE JET - COOKBOOK

Code-Vorlagen
Apply Changes
Mobile Preview

Collections

Data Grid

Id	Name	Room
556	Sales	201
10	Admin	300
50	HR	125

Indexer

A

Amy Bartlet
Vice President

Andy Jones
Director

B

List View

Amy Bartlet
Vice President

Andy Jones
Director

Swipe To Reveal (Tou...

Amy Bartlet
Vice President

One Two Three

Table

Id	Name	Room
556	Sales	201
10	Admin	300
50	HR	125

Tree

Home

New


Blog

Visualizations > Diagram > Basic

Panning: none auto Zooming: none auto

COOKBOOK – BEISPIEL SLIDER

ojSlider component



Raw Value: 100
Value: 100

SliderRawValue

```
1
2 require(['ojs/ojcore', 'knockout', 'jquery', 'ojs/ojknockout'],
3 function(oj, ko, $)
4 {
5     function SliderModel()
6     {
7         var self = this;
8         self.max = ko.observable(200);
9         self.min = ko.observable(0);
10        self.value = ko.observable(100);
11        self.rawValue = ko.observable();
12        self.step = ko.observable(10);
13    }
14    var sliderModel = new SliderModel();
15    $(document).ready(
16        function()
17        {
18            ko.applyBindings(sliderModel, document.getElementById('s
19        container'));
20        });
21    });
22
```

SliderRawValue

```
1 <div id="slider-container">
2   <label id="slider-label" for="slider-id">
3     ojSlider component </label>
4   <input id="slider-id"
5     data-bind="ojComponent: {
6       component: 'ojSlider',
7       max:max,
8       min:min,
9       step:step,
10      value:value,
11      rawValue:rawValue
12    }"/>
13
14   <br>
15   <span> Raw Value: </span>
16   <span id="rawValue" data-bind="text: rawValue">
17 </span>
18   <br>
19   <span> Value: </span>
20   <span id="value" data-bind="text: value"></span>
21 </div>
```

COOKBOOK- / CODEZENTRIERT

Cookbook für eine UI Komponente

ojSlider component



HTML5 UI Template

```
<input id="slider-id"
  data-bind="ojComponent: { component: 'ojSlider', max:max, min:min, step:step,
                           value:currentValue}"/>
<span> Current Value: </span><span id="curr-value" data-bind="text: currentValue">
</span>
```

JavaScript (Model, Event-Handling)

```
require(['ojs/ojcore', 'knockout', 'jquery', 'ojs/ojknockout', 'ojs/ojslider'],
function(oj, ko, $)
{
  function SliderModel()
  {
    var self = this;
    self.max = ko.observable(200);
    self.min = ko.observable(0);
    self.currentValue = ko.observable(100);
    self.step = ko.observable(10);
  }
  ...
});
```

BASIS TOOLS FÜR ORACLE JET ENTWICKLUNG

- **Node.JS (npm), Git**
- `npm -g install yo bower grunt-cli`
- `npm -g install generator-oraclejet`

BUILD-TOOLCHAIN

```
$ yo oracljet  
--template ...
```

npm install

bower install

grunt bowercopy

grunt build (build:release)

grunt serve (serve:release)

BUILD HYBRID MOBILE APPS

```
$ npm -g install cordova
```

```
$ yo oraclejet:hybrid --platforms=ios, .
```


AGENDA

Oracle JET - Motivation, Architektur, Technologien

Cookbook & Toolchain

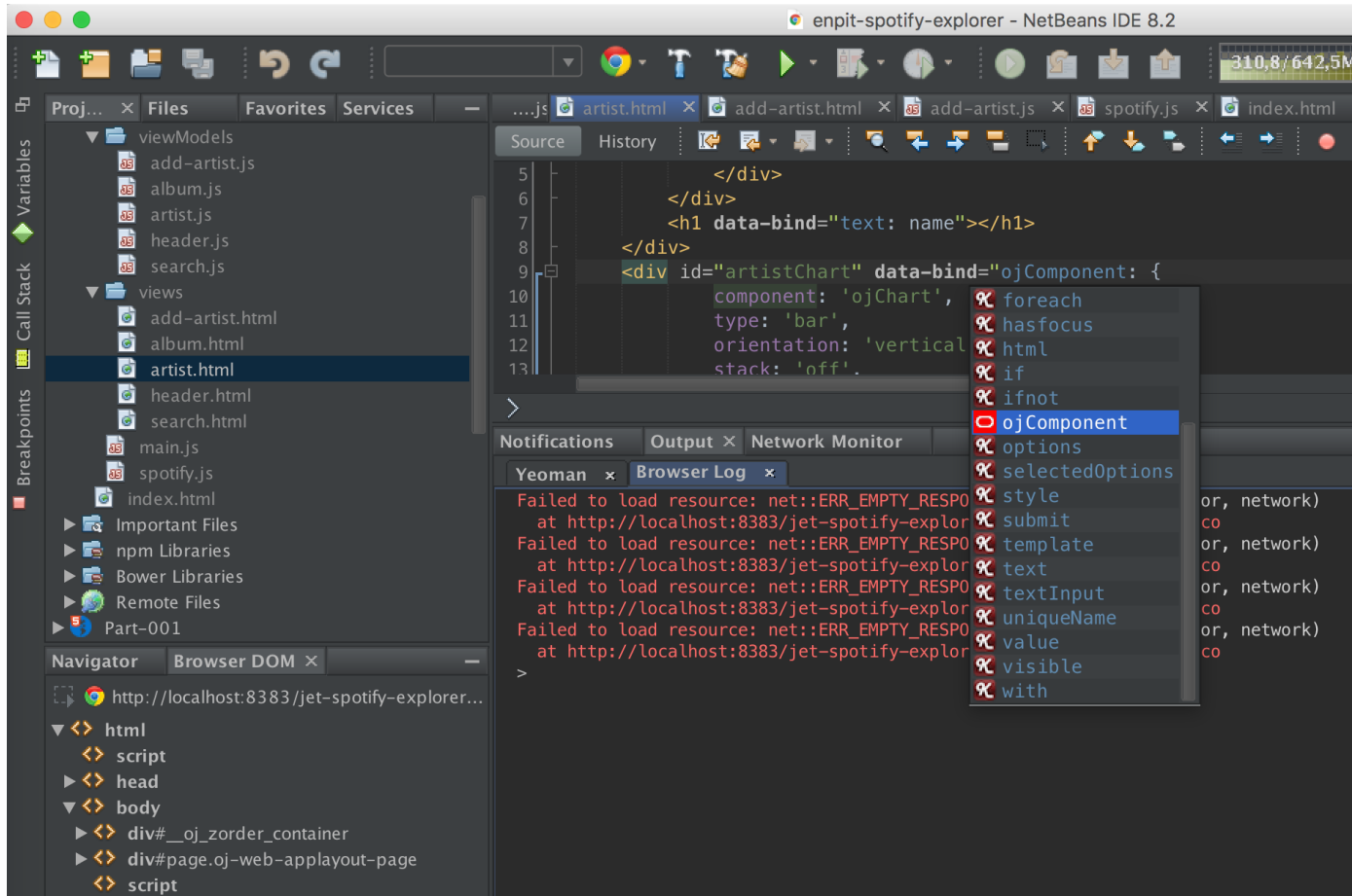
Projekt & IDE Setup

Hands-On #1

ENTWICKLUNGSUMGEBUNG EN (IDE) FÜR ORACLE JET

- Netbeans 8.2
 - Oracle JET Plugin by Default
 - Netbeans Connector! -> Debugging made easy
- Visual Studio Code / Atom / WebStorm:
sehr gute JavaScript / TypeScript Editoren und
IDEs (jedoch keine explizite JET Unterstützung)

NETBEANS



NETBEANS

ORACLE JET OPEN SOURCE PLUGINS

- [YoOracleJET](#) (by Geertjan)

„Without needing to know the Cordova command-line settings, you can generate the skeleton applications you would get via "yo oraclejet:hybrid", for Android and iOS, for each of the templates ("blank", "basic", "navbar", and "navdrawer")."

- [Smart Tools 4 JET](#) (by Geertjan)

„Provides several small tools for quickly putting together JET applications, e.g., new HTML snippets, new JavaScript templates, and new file wizards for creating JET modules."

AGENDA

Oracle JET - Motivation, Architektur, Technologien

Cookbook & Toolchain

Projekt & IDE Setup

Hands-On #1



Hands On #1

HELLO WORLD – DATA BINDING, GETTING STARTED

HANDS-ON #1

README.MD

- [exercises/1_hello-world](#)
- README öffnen ([Browser](#))
 - Enthält allg. Aufgabentexte

```
$ cd exercises/1_hello-world  
$ grunt serve
```

// TODO Kommentare im Code mit Hinweisen zur genaueren Umsetzung

Aufgaben

Schreibe eine Anwendung in der der Browser in einem darunterliegenden HTML-Element ein [Cookbook](#) in der "Forms" Kategorie zu

Die Aufgabe gliedert sich in drei Teile:

1. Deklariere in `src/index.html` ein Observable gebunden sind
2. Deklariere ein Knockout Observable
3. Starte die Anwendung
 - in NetBeans: Klick auf den grünen Start-Button
 - per Terminal: `grunt serve`

HABEN SIE NOCH FRAGEN?

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