



MARIA KERN – NETZ98 GMBH

JS

MAGENTO 2 UI COMPONENTS THE JS PART

Magento 2 UI Components – The JS part



Maria Kern

Senior Frontend Architect at netz98 GmbH

www.netz98.de

 @maja_kern

CommerceHero: maria-kern

AGENDA

1

DEFINITION

4

INITIALIZATION PROCESS

2

BASIC STRUCTURE

5

REAL LIFE EXAMPLE

3

USEFUL FUNCTIONS
AND PROPERTIES

6

DEBUGGING



MAGENTO 2 UI COMPONENTS – THE JS PART

UI components definition

The UI components are:

- the **base** for many **user interface (UI) elements** (buttons, fields, tables, minicart)
- designed for simple and flexible rendering of user interfaces
- defined in the module `Magento_UI`
- used in Magento **frontend** and **backend**

BACKEND

Attribute Set Default

Product Name *
[store view]

SKU *
[global]

Price *
[global]
[Advanced Pricing](#)

Tax Class Taxable Goods
[website]

Quantity
[global]
[Advanced Inventory](#)

Filters Default View Columns

Actions 6384 records found 20 per page 1 of 320

	ID	Thumbnail	Type	SKU	Price	Quantity	Visibility	Status	Action
<input type="checkbox"/>	1		Downloadable Product	9783829781114	€11.99	10000.0000	Catalog, Search	Enabled	Edit
<input type="checkbox"/>	2		Downloadable Product	9783829799737	€7.99	10000.0000	Catalog, Search	Enabled	Edit
<input type="checkbox"/>	3		Downloadable Product	9783829782920	€2.99	10000.0000	Catalog, Search	Enabled	Edit

FRONTEND

Subtotal €23.98

Order Total €23.98

[Proceed to Checkout](#)

[Shopping Cart](#)

Search entire store here...

2 items Cart Subtotal: 23,98 €

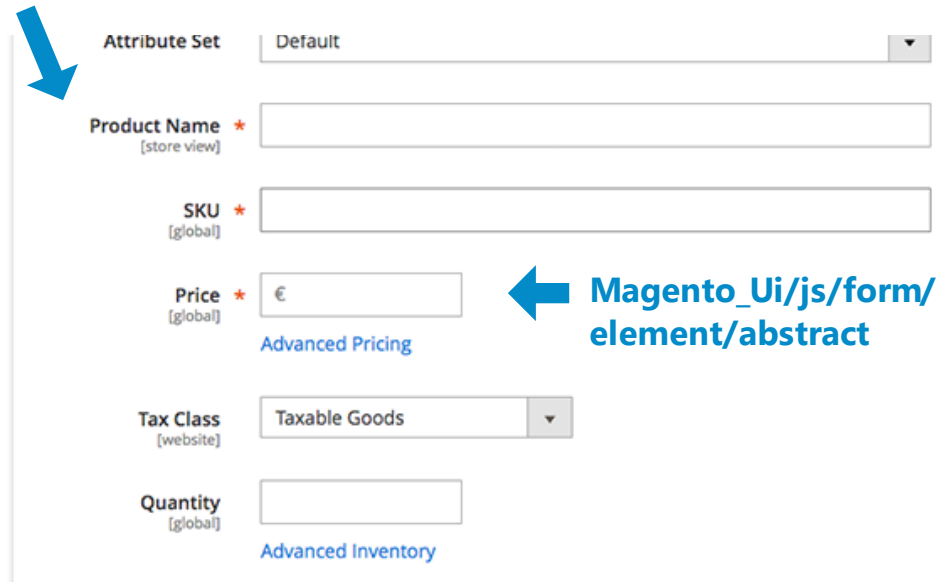
[Go to Checkout](#)

Example Product
See Details ▼
11,99 €
Qty: [Edit](#) [Delete](#)

UI COMPONENTS DEFINITION

BACKEND

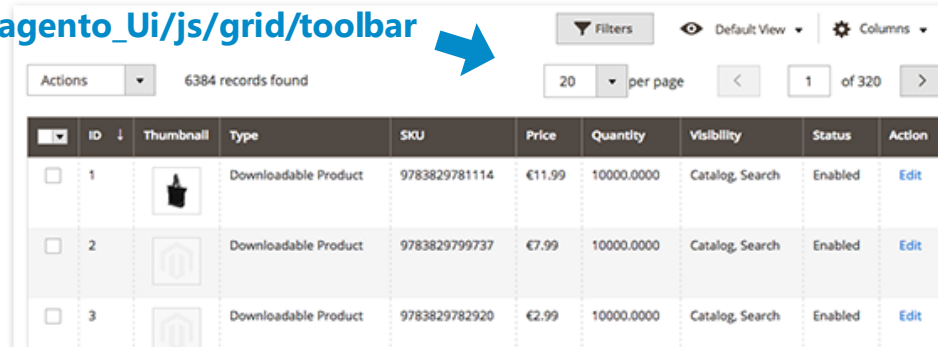
Magento_Ui/js/form/components/fieldset



A screenshot of the Magento 2 Admin Product Form. The form contains several input fields and a dropdown menu. A blue arrow points to the 'Attribute Set' dropdown, which is set to 'Default'. Another blue arrow points to the 'Price' input field, which is set to '€'. The 'Price' field has a label 'Price' and a sub-label '[global]'. Below the 'Price' field is a link 'Advanced Pricing'. The 'Quantity' field is set to '1' and has a label 'Quantity' and a sub-label '[global]'. Below the 'Quantity' field is a link 'Advanced Inventory'. The 'Tax Class' dropdown is set to 'Taxable Goods' and has a label 'Tax Class' and a sub-label '[website]'. The 'Product Name' field is labeled 'Product Name' and has a sub-label '[store view]'. The 'SKU' field is labeled 'SKU' and has a sub-label '[global]'. The 'Advanced Pricing' and 'Advanced Inventory' links are in blue text.

Magento_Ui/js/form/element/abstract

Magento_Ui/js/grid/toolbar

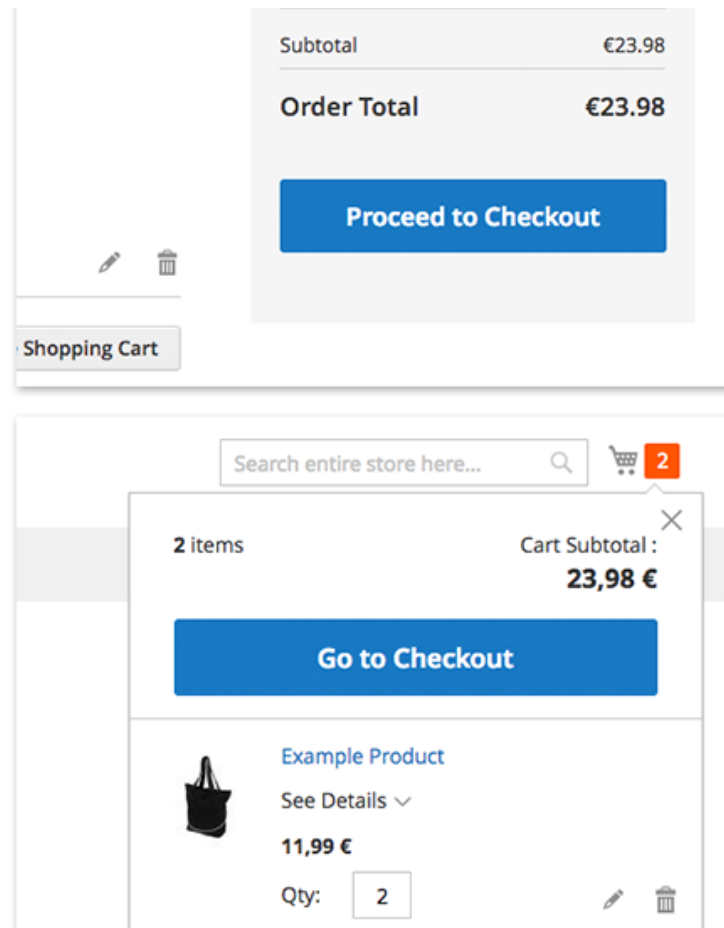


A screenshot of the Magento 2 Admin Product Grid. The grid shows a list of products with columns: Actions, ID, Thumbnail, Type, SKU, Price, Quantity, Visibility, Status, and Action. There are 6384 records found. The grid is paginated to 20 items per page, showing 1 of 320 items. The first three rows of the grid are visible, showing products with SKUs 9783829781114, 9783829799737, and 9783829782920. The 'Price' column shows values €11.99, €7.99, and €2.99. The 'Quantity' column shows values 10000.0000, 10000.0000, and 10000.0000. The 'Visibility' column shows 'Catalog, Search' for all products. The 'Status' column shows 'Enabled' for all products. The 'Action' column has an 'Edit' link for each product. The toolbar includes a 'Filters' button, a 'Default View' dropdown, a 'Columns' dropdown, and a '20 per page' selector.

Actions	ID	Thumbnail	Type	SKU	Price	Quantity	Visibility	Status	Action
<input type="checkbox"/>	1		Downloadable Product	9783829781114	€11.99	10000.0000	Catalog, Search	Enabled	Edit
<input type="checkbox"/>	2		Downloadable Product	9783829799737	€7.99	10000.0000	Catalog, Search	Enabled	Edit
<input type="checkbox"/>	3		Downloadable Product	9783829782920	€2.99	10000.0000	Catalog, Search	Enabled	Edit

Magento_Ui/js/grid/listing

FRONTEND

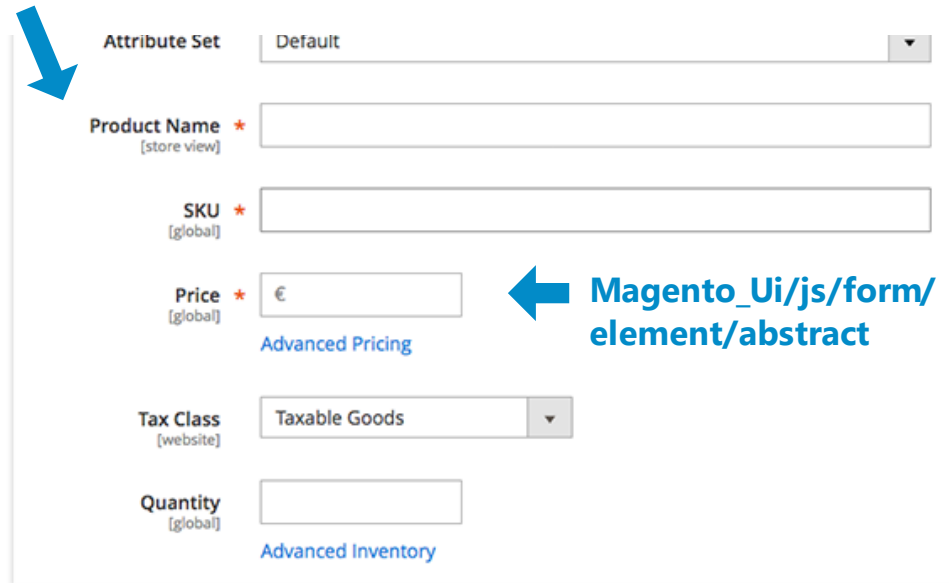


A screenshot of the Magento 2 Frontend Shopping Cart. The cart shows a subtotal of €23.98 and an order total of €23.98. A blue button 'Proceed to Checkout' is visible. Below the cart is a 'Shopping Cart' section with a search bar and a shopping cart icon with a red badge showing '2'. The cart contains 2 items. The cart subtotal is 23,98 €. A blue button 'Go to Checkout' is visible. The first item in the cart is 'Example Product' with a price of 11,99 € and a quantity of 2. The item has a 'See Details' link and a trash icon.

UI COMPONENTS DEFINITION

BACKEND

Magento_Ui/js/form/components/fieldset



Attribute Set: Default

Product Name * [store view]

SKU * [global]

Price * € [global] **Magento_Ui/js/form/element/abstract**

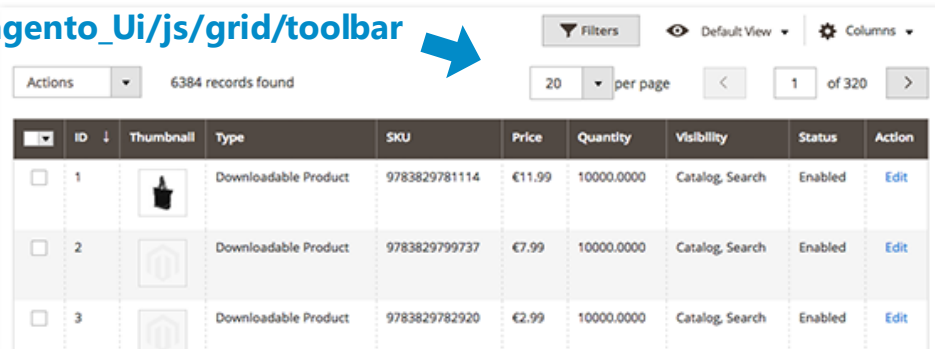
Advanced Pricing

Tax Class [website]: Taxable Goods

Quantity [global]

Advanced Inventory

Magento_Ui/js/grid/toolbar



Filters | Default View | Columns

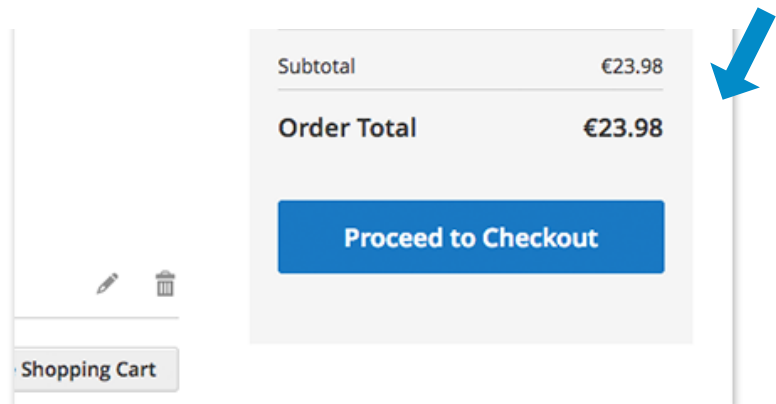
Actions | 6384 records found | 20 per page | 1 of 320

	ID	Thumbnail	Type	SKU	Price	Quantity	Visibility	Status	Action
<input type="checkbox"/>	1		Downloadable Product	9783829781114	€11.99	10000.0000	Catalog, Search	Enabled	Edit
<input type="checkbox"/>	2		Downloadable Product	9783829799737	€7.99	10000.0000	Catalog, Search	Enabled	Edit
<input type="checkbox"/>	3		Downloadable Product	9783829782920	€2.99	10000.0000	Catalog, Search	Enabled	Edit

Magento_Ui/js/grid/listing

FRONTEND

Magento_Checkout/js/view/cart/totals

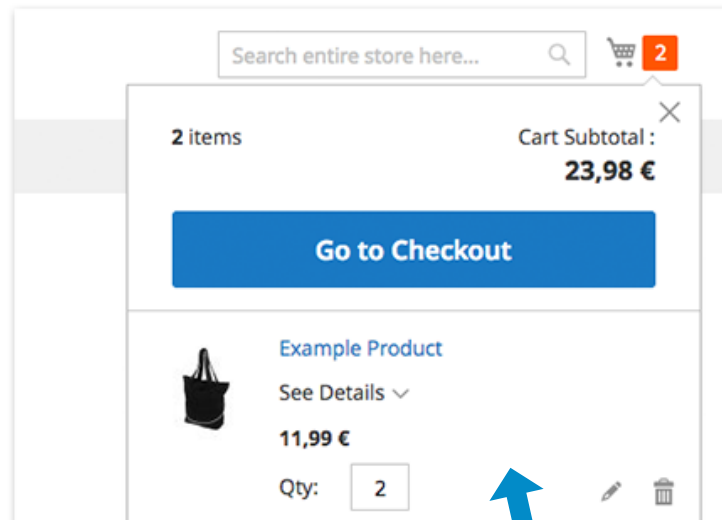


Subtotal €23.98

Order Total €23.98

Proceed to Checkout

Shopping Cart



Search entire store here...

2 items | Cart Subtotal: 23,98 €

Go to Checkout

Example Product

See Details ▾

11,99 €

Qty: 2

Magento_Checkout/js/view/minicart

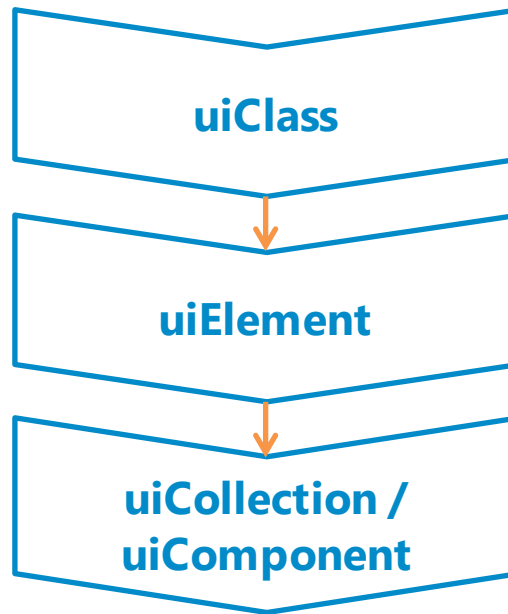


MAGENTO 2 UI COMPONENTS – THE JS PART

Basic structure of UI components

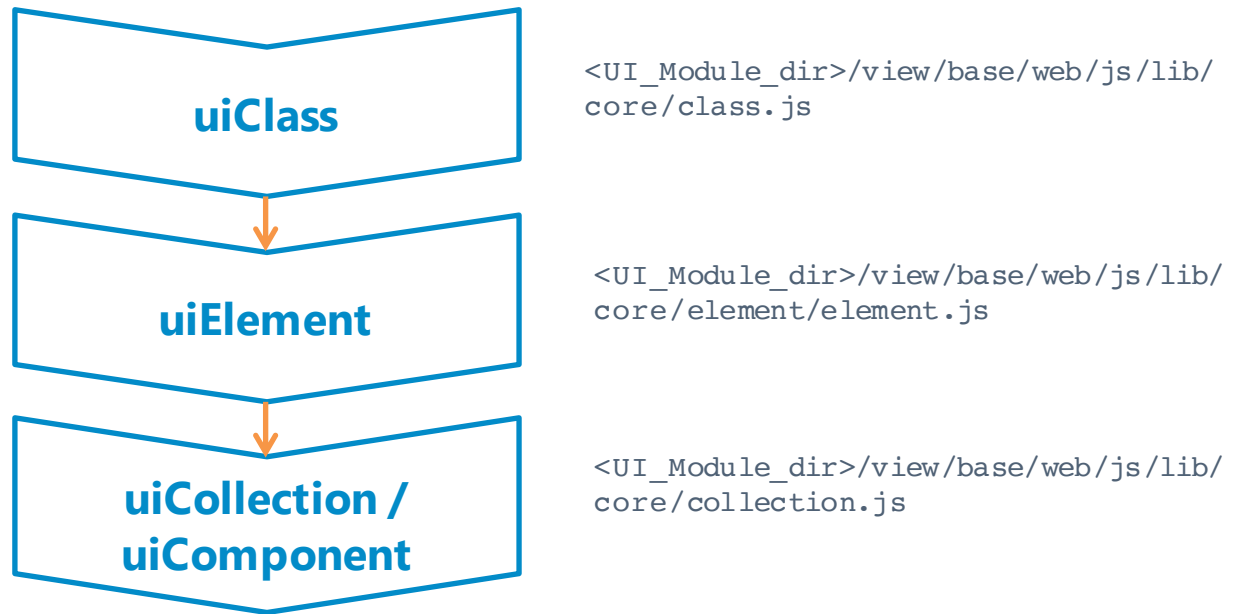
BASIC STRUCTURE OF UI COMPONENTS

JS DEPENDENCY AND INHERITANCE



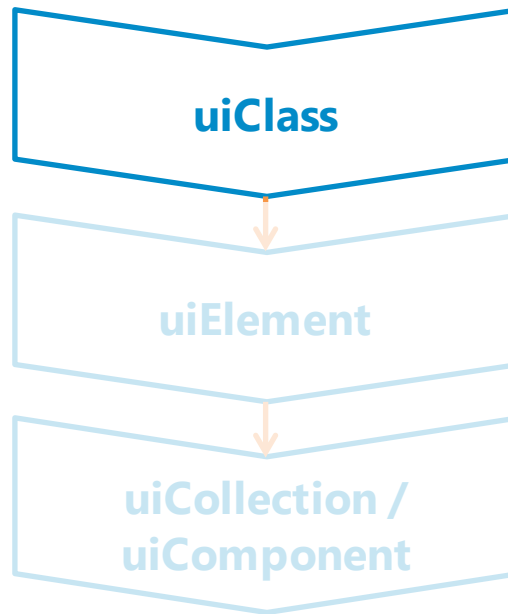
BASIC STRUCTURE OF UI COMPONENTS

JS DEPENDENCY AND INHERITANCE



BASIC STRUCTURE OF UI COMPONENTS

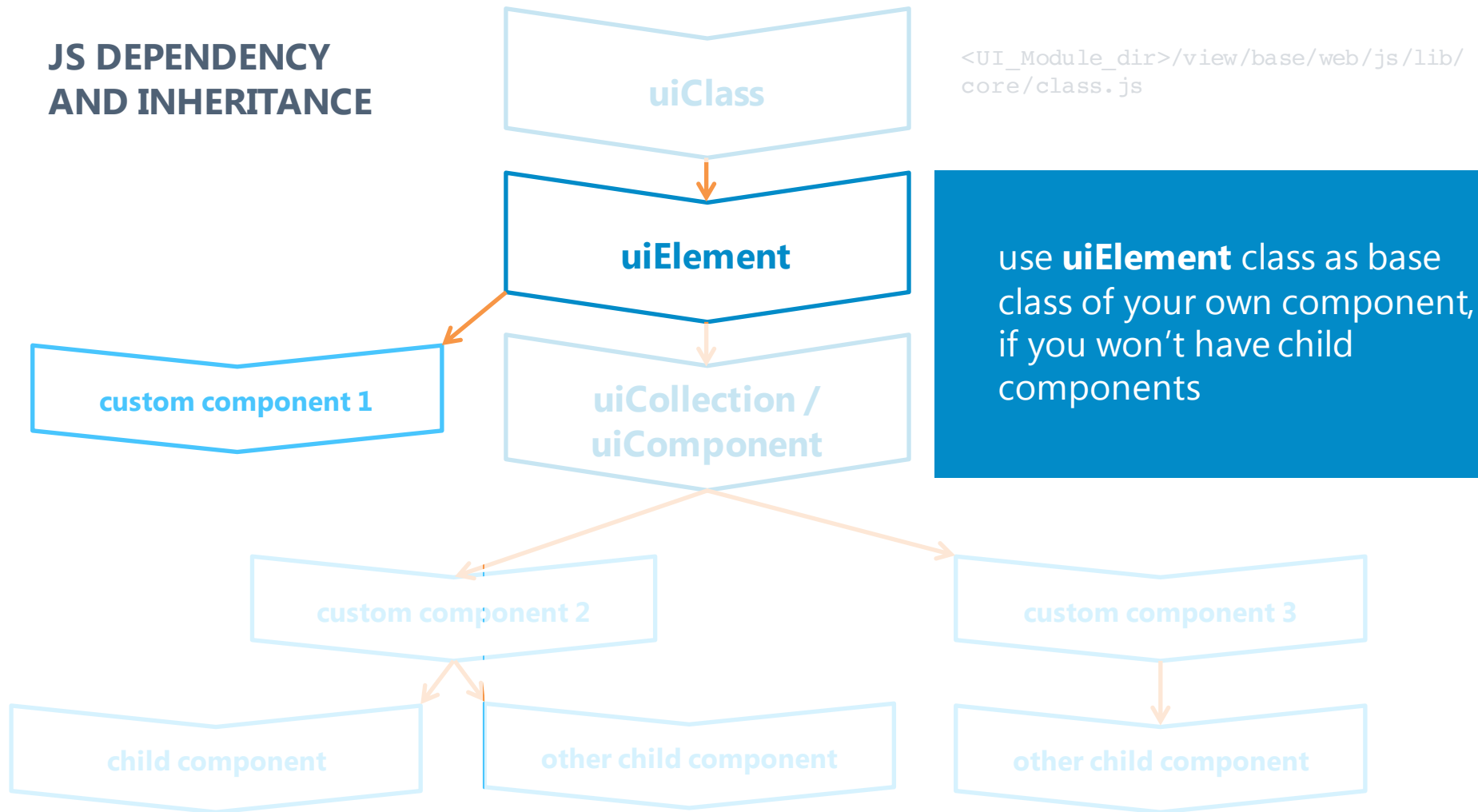
JS DEPENDENCY AND INHERITANCE



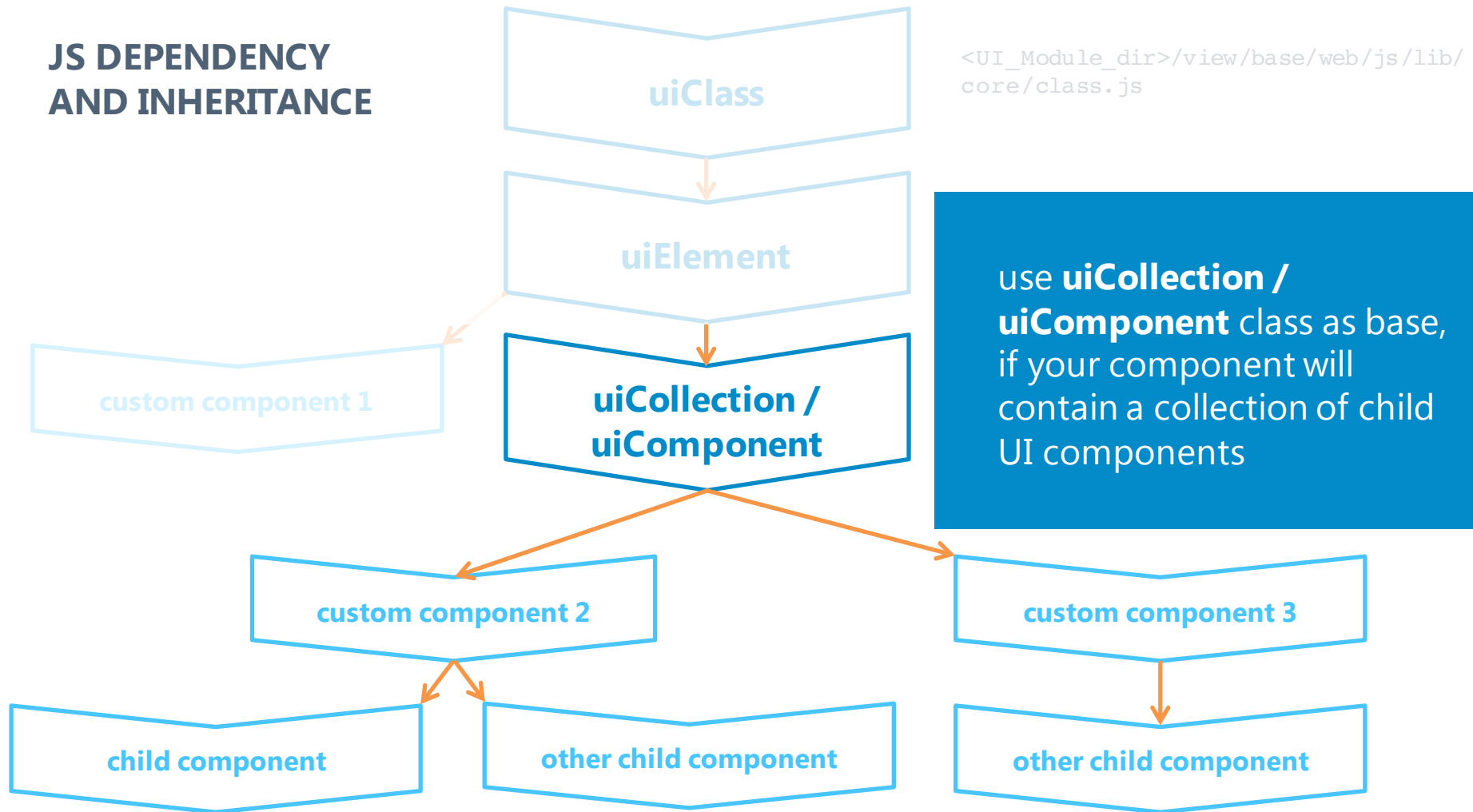
the **uiClass** is an abstract class where all components are extended from

```
<UI_Module_dir>/view/base/web/js/lib/  
core/collection.js
```

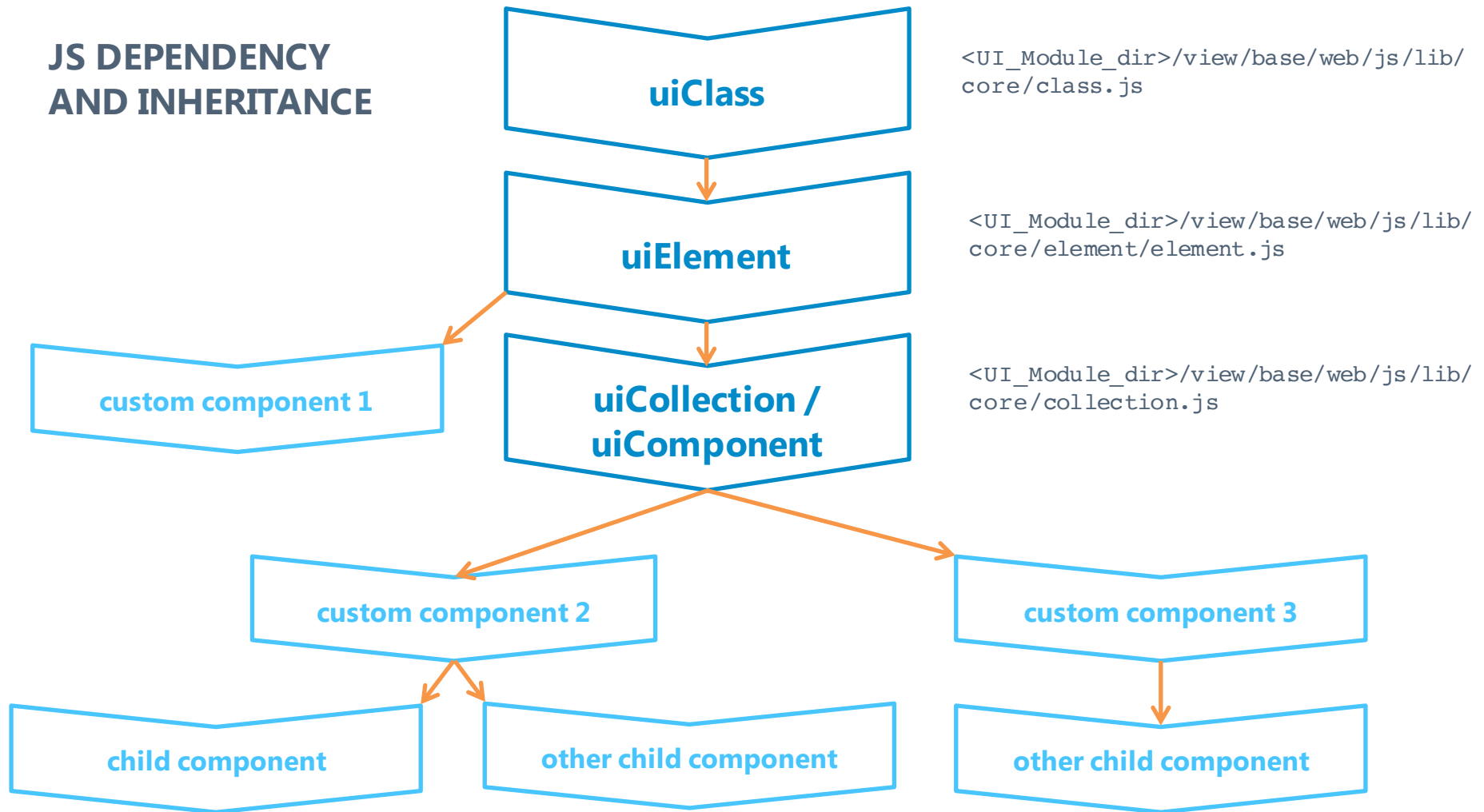
BASIC STRUCTURE OF UI COMPONENTS

JS DEPENDENCY
AND INHERITANCE

BASIC STRUCTURE OF UI COMPONENTS

JS DEPENDENCY
AND INHERITANCE

BASIC STRUCTURE OF UI COMPONENTS

JS DEPENDENCY
AND INHERITANCE



MAGENTO 2 UI COMPONENTS – THE JS PART

Useful functions and properties

EXTEND AND INITIALIZE

- `extend()` implements inheritance of UI components
- `initialize()` is called during instantiation

```
define([
    'uiComponent'
], function (Component) {
    'use strict';

    return Component.extend({

        initialize: function () {
            /* call the parent UI component method: */
            this._super();

            /* here you can add custom functionality (executed only once) */
            this.myLocalProperty = 'abc'
        },
    });
});
```

EXTEND AND INITIALIZE

- `extend()` implements inheritance of UI components
- `initialize()` is called during instantiation

```
define([  
    'uiComponent'  
], function (Component) {  
    'use strict';
```

DEPENDENCY

```
    return Component.extend({
```

```
        initialize: function () {
```

```
            /* call the parent UI component method: */
```

```
            this._super();
```

```
            /* here you can add custom functionality (executed only once) */
```

```
            this.myLocalProperty = 'abc'
```

```
        },
```

EXTEND AND INITIALIZE

- extend() implements inheritance of UI components
- initialize() is called during instantiation

```
define([  
    'uiComponent'  
], function (Component) {  
    'use strict';
```

```
    return Component.extend({
```

INHERITANCE

```
        initialize: function () {  
            /* call the parent UI component method: */  
            this._super();  
  
            /* here you can add custom functionality (executed only once) */  
            this.myLocalProperty = 'abc'  
        },
```

EXTEND AND INITIALIZE

- extend() implements inheritance of UI components
- initialize() is called during instantiation

```
define([  
    'uiComponent'  
], function (Component) {  
    'use strict';  
  
    return Component.extend({
```

```
        initialize: function () {  
            /* call the parent UI component method: */  
            this._super();  
  
            /* here you can add custom functionality (executed only once) */  
            this.myLocalProperty = 'abc'  
        },
```

OVERWRITE / EXTEND A
METHOD

CONFIGURATION AND FIRST LEVEL PROPERTIES

```
return Component.extend({  
  
    defaults: {  
        // custom properties:  
        isVisible: true,  
        headline: '',  
        pageSize: 20,  
        selectors: {  
            mapItem: '.map_item'  
        },  
        // linking properties:  
        listens: {  
            'isVisible': 'onIsVisibleChange'  
        },  
        exports: {},  
        imports: {},  
        links: {},  
        modules: {}  
    },  
},
```

Every component has a
“defaults” object

> Declaring properties

CONFIGURATION AND FIRST LEVEL PROPERTIES

```
return Component.extend({  
  
  defaults: {  
    // custom properties:  
    isVisible: true,  
    headline: '',  
    pageSize: 20,  
    selectors: {  
      mapItem: '.map_item'  
    },  
    // linking properties:  
    listens: {  
      'isVisible': 'onIsVisibleChange'  
    },  
    exports: {},  
    imports: {},  
    links: {},  
    modules: {}  
  },  
},
```

custom properties

CONFIGURATION AND FIRST LEVEL PROPERTIES

```
return Component.extend({  
  
  defaults: {  
    // custom properties:  
    isVisible: true,  
    headline: '',  
    pageSize: 20,  
    selectors: {  
      mapItem: '.map_item'  
    },  
  
    // linking properties:  
    listens: {  
      'isVisible': 'onIsVisibleChange'  
    },  
    exports: {},  
    imports: {},  
    links: {},  
    modules: {}  
  },  
},
```

a lot of **given** properties

CONFIGURATION AND FIRST LEVEL PROPERTIES

```
return Component.extend({
```

```
  defaults: {  
    // custom properties:  
    isVisible: true,  
    headline: '',  
    pageSize: 20,  
    selectors: {  
      mapItem: '.map_item'  
    },  
    // linking properties:  
    listens: {  
      'isVisible': 'onIsVisibleChange'  
    },  
    exports: {},  
    imports: {},  
    links: {},  
    modules: {}  
  },
```

Configuration properties will be available as “**first level properties**”

`this.isVisible`

CONFIGURATION AND FIRST LEVEL PROPERTIES

A lot of **default properties** and **methods** are already set by the base classes, e.g.:

```
this.index // name of component
```

```
this.name // full name of component including parents
```

```
this.template // path to template file
```

```
this.component
```

```
this.getTemplate()
```

```
this.hasTemplate()
```

KNOCKOUT JS

```
<div class="map-widget" data-block="map-widget" data-bind="visible: isVisible">
  <div data-bind="html: headline"></div>
  <div data-bind="html: text"></div>
  <div class="map_wrapper">
    <div class="map" data-bind="bindHtml: map"></div>
    <!-- ko foreach: getRegion('layer') -->
      <!-- ko template: getTemplate() --><!-- /ko -->
    <!--/ko-->
  </div>
</div>
```

Binding data to HTML
Elements by **data-bind**
Attribute

KNOCKOUT JS

```
defaults: {  
    displayMode: 'grid',  
    tracks: {  
        displayMode: true  
    },  
    example1: '',  
    example2: '',  
    example3: '',  
    example4: ''  
},
```

Declaring observable
variables

```
initObservable: function () {  
    this._super();  
  
    // add tracked items  
    this.track('example1');  
    this.observe(true, 'example2');  
  
    // add observable items  
    this.observe([  
        'example3',  
        'example4'  
    ]);  
  
    return this;  
},
```

KNOCKOUT JS

```
defaults: {  
  displayMode: 'grid',  
  tracks: {  
    displayMode: true  
  },  
  example1: '',  
  example2: '',  
  example3: '',  
  example4: ''  
},
```

Declaring observable
variables

```
initObservable: function () {  
  this._super();  
  
  // add tracked items  
  this.track('example1');  
  this.observe(true, 'example2');  
  
  // add observable items  
  this.observe([  
    'example3',  
    'example4'  
  ]);  
  
  return this;  
},
```

HANDLING OF CHILDREN

The **uiCollection class** (mainly) provides a lot of methods for handling of child components

HANDLING OF CHILDREN

The **uiCollection class** (mainly) provides a lot of methods for handling of child components

```
initElement: function (elem) {  
    this._super();  
  
    elem.on({  
        'update': this.onChildrenUpdate,  
        'loading': this.onContentLoading  
    });  
  
    elem.customProperty = 21;  
  
    return this;  
},
```

Called for **every child** component

> Child is given as **parameter**

HANDLING OF CHILDREN

The **uiCollection class** (mainly) provides a lot of methods for handling of child components

```
initElement(child) {}  
this.elems()  
this.containers  
this.getChild('nameOfChild') // UI component  
this.hasChild('nameOfChild') // boolean  
this.insertChild('nameOfComponent')
```



Initialize...

MAGENTO 2 UI COMPONENTS – THE JS PART

Initialization process

All the configurations are **translated into json** and added to the body

```
<script type="text/x-magento-init">{"*": {"Magento_Ui/js/core/app":{<JSON_configuration>}}}</script>
```

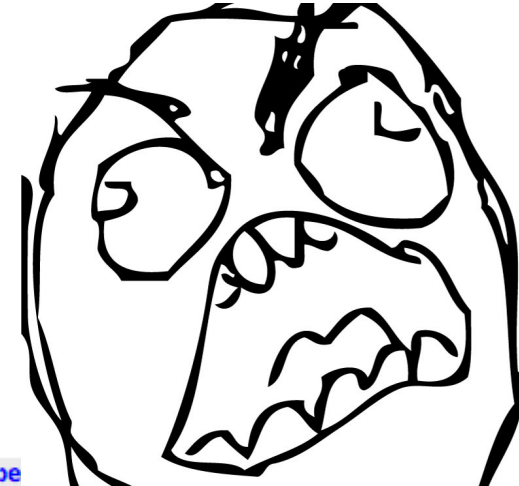
<!-- Example: -->

```
<script type="text/x-magento-init">
{
  "[data-role=compare-products-link]": {
    "Magento_Ui/js/core/app": {
      "components": {
        "compareProducts": {
          "component": "Magento_Catalog/js/view/compare-products",
          "customProperty1": "abc",
          "customProperty2": true,
          "children": {
            "childNameOfCompareProducts": {
              "component": "Magento_Catalog/js/view/subfolder/nameOfFile",
              "customProperty1": "abc",
              "displayArea": "nameOfDisplayArea"
            }
          }
        }
      }
    }
  }
}
</script>
```

INITIALIZATION PROCESS

```

referenceBlock name="checkout.root">
  <arguments>
    <argument name="jsLayout" xsi:type="array">
      <item name="components" xsi:type="array">
        <item name="checkout" xsi:type="array">
          <item name="children" xsi:type="array">
            <item name="steps" xsi:type="array">
              <item name="children" xsi:type="array">
                <item name="billing-step" xsi:type="array">
                  <item name="children" xsi:type="array">
                    <item name="payment" xsi:type="array">
                      <item name="children" xsi:type="array">
                        <item name="payments-list" xsi:type="array">
                          <item name="children" xsi:type="array">
                            <item name="before-place-order" xsi:type="array">
                              <item name="children" xsi:type="array">
                                <item name="agreements" xsi:type="array">
                                  <item name="component" xsi:type="string">Magento_CheckoutAgreements/js/view/checko
                                  <item name="sortOrder" xsi:type="string">100</item>
                                  <item name="displayArea" xsi:type="string">before-place-order</item>
                                  <item name="dataScope" xsi:type="string">checkoutAgreements</item>
                                  <item name="provider" xsi:type="string">checkoutProvider</item>
                                </item>
                              </item>
                            </item>
                          </item>
                        </item>
                      </item>
                    </item>
                  </item>
                </item>
              </item>
            </item>
          </item>
        </item>
      </item>
    </argument>
    <argument name="additional-payment-validators" xsi:type="array">
      <item name="children" xsi:type="array">
        <item name="agreements-validator" xsi:type="array">
          <item name="component" xsi:type="string">Magento_CheckoutAgreements/js/view/agreement-vali
        </item>
      </item>
    </argument>
  </arguments>
</referenceBlock>
  
```



All the configurations are **translated into json** and added to the body

```
<script type="text/x-magento-init">{"*": {"Magento_Ui/js/core/app": {<JSON_configuration>}}}</script>
```

```
<!-- Example: -->
<script type="text/x-magento-init">
{
  "[data-role=compare-products-link]": {
    "Magento_Ui/js/core/app": {
      "components": {
        "compareProducts": {
          "component": "Magento_Catalog/js/view/compare-products",
          "customProperty1": "abc",
          "customProperty2": true,
          "children": {
            "childNameOfCompareProducts": {
              "component": "Magento_Catalog/js/view/subfolder/nameOfFile",
              "customProperty1": "abc",
              "displayArea": "nameOfDisplayArea"
            }
          }
        }
      }
    }
  }
}
</script>
```

All the configurations are **translated into json** and added to the body

```
<script type="text/x-magento-init">{"*": {"Magento_Ui/js/core/app":{<JSON_configuration>}}}</script>
```

<!-- Example: -->

```
<script type="text/x-magento-init">
{
  "[data-role=compare-products-link]": {
    "Magento_Ui/js/core/app": {
      "components": {
        "compareProducts": {
          "component": "Magento_Catalog/js/view/compare-products",
          "customProperty1": "abc",
          "customProperty2": true,
          "children": {
            "childNameOfCompareProducts": {
              "component": "Magento_Catalog/js/view/subfolder/nameOfFile",
              "customProperty1": "abc",
              "displayArea": "nameOfDisplayArea"
            }
          }
        }
      }
    }
  }
}
</script>
```

INITIALIZATION PROCESS

- The app calls `Magento_Ui/js/core/renderer/layout` and passes the UI component's configuration into the layout

The screenshot shows a code editor with the `app.js` file open. The code defines a function that takes `types` and `layout` as arguments and returns another function. The returned function calls `layout(data.components, undefined, true, merge)` on line 14, which is where a breakpoint is set. The right sidebar shows the local scope, with the `data` object highlighted. The `data` object contains a `components` property, which is an object containing a `compareProducts` property. The `compareProducts` object has a `component` property with the value `"Magento_Catalog/js/view/compare-products"`.

```
1 /**
2  * Copyright © 2013–2017 Magento, Inc. All rights reserved.
3  * See COPYING.txt for license details.
4  */
5 define([
6     './renderer/types',
7     './renderer/layout',
8     '../lib/knockout/bootstrap'
9 ], function (types, layout) {
10     'use strict';
11
12     return function (data, merge) { data = Object {components
13         types.set(data.types);
14         layout(data.components, undefined, true, merge);
15     };
16 });
17
```

Paused on breakpoint

Local

- data: Object
 - components: Object
 - compareProducts: Object
 - component: "Magento_Catalog/js/view/compare-products"

INITIALIZATION PROCESS

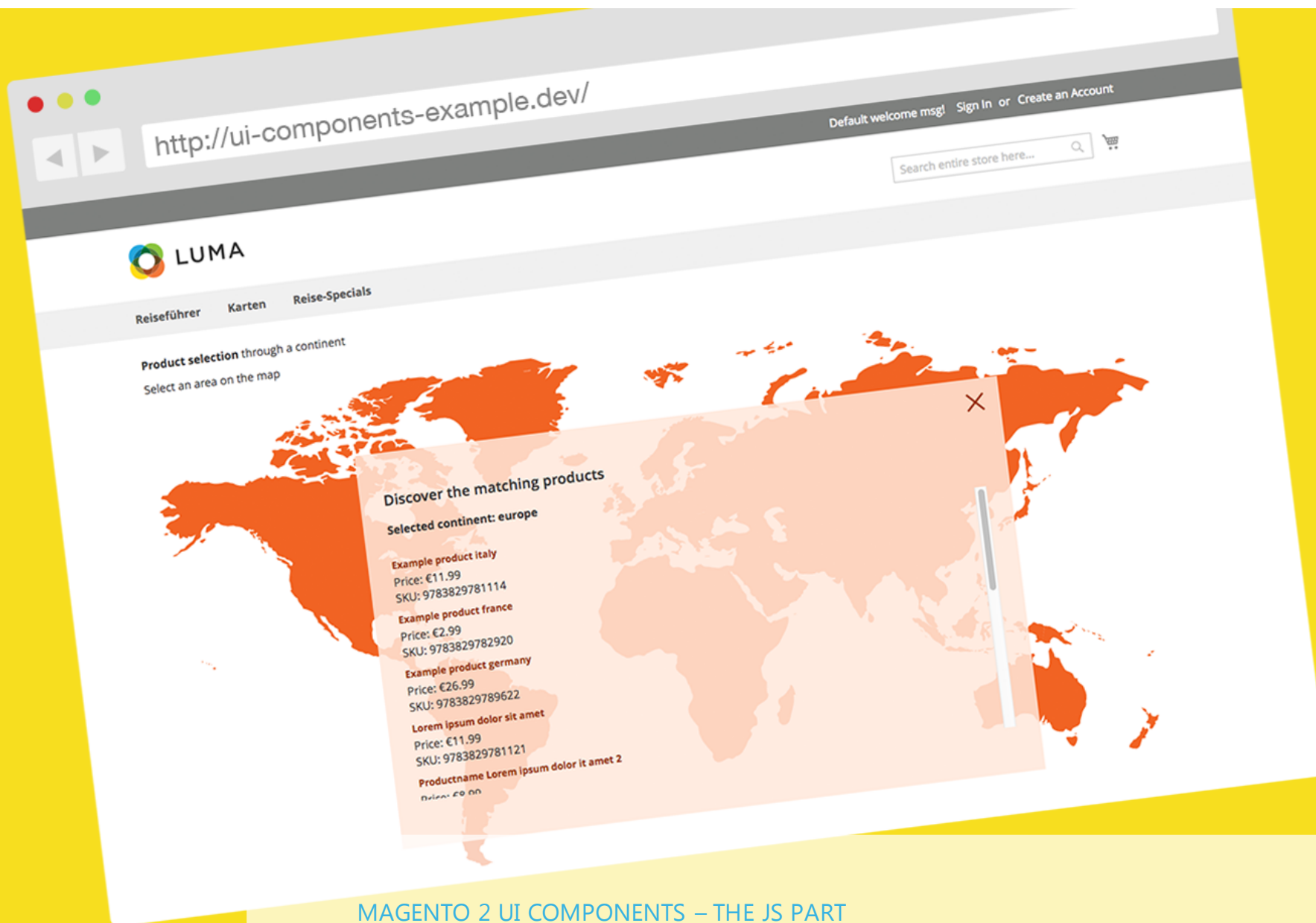
- layout.js creates instances of UI components and its child components

The screenshot shows a code editor with the `layout.js` file open. The code is as follows:

```
57  
58     require([source], function (constr) {  
59         loaded.resolve(node, constr);  
60     });  
61  
62     return loaded.promise();  
63 }  
64  
65 function initComponents(node, Constr) {  
66     var component = new Constr(_.omit(node, 'children'));  
67  
68     registry.set(node.name, component);  
69 }  
70  
71 function run(nodes, parent, cached, merge) {  
72     if (_.isBoolean(merge) && merge) {  
73         layout.merge(nodes);  
74  
75         return false;  
76     }  
77  
78     if (cached) {  
79         cachedConfig[_.keys(nodes)[0]] = JSON.parse(JSON.string  
80     }  
81 }
```

The debugger is paused at line 68. The local scope shows the following variables:

- `Constr`: function ()
- `component`: UiClass
 - `compareProducts`: function observable()
 - `component`: "Magento_Catalog/js/view/compare-products"
 - `containers`: Array(0)
 - `dataScope`: ""
 - `elems`: function observable()
 - `exports`: Object
 - `extendProvider`: true
 - `hasUnique`: undefined
 - `ignoreTmpls`: Object
 - `imports`: Object
 - `index`: "compareProducts"

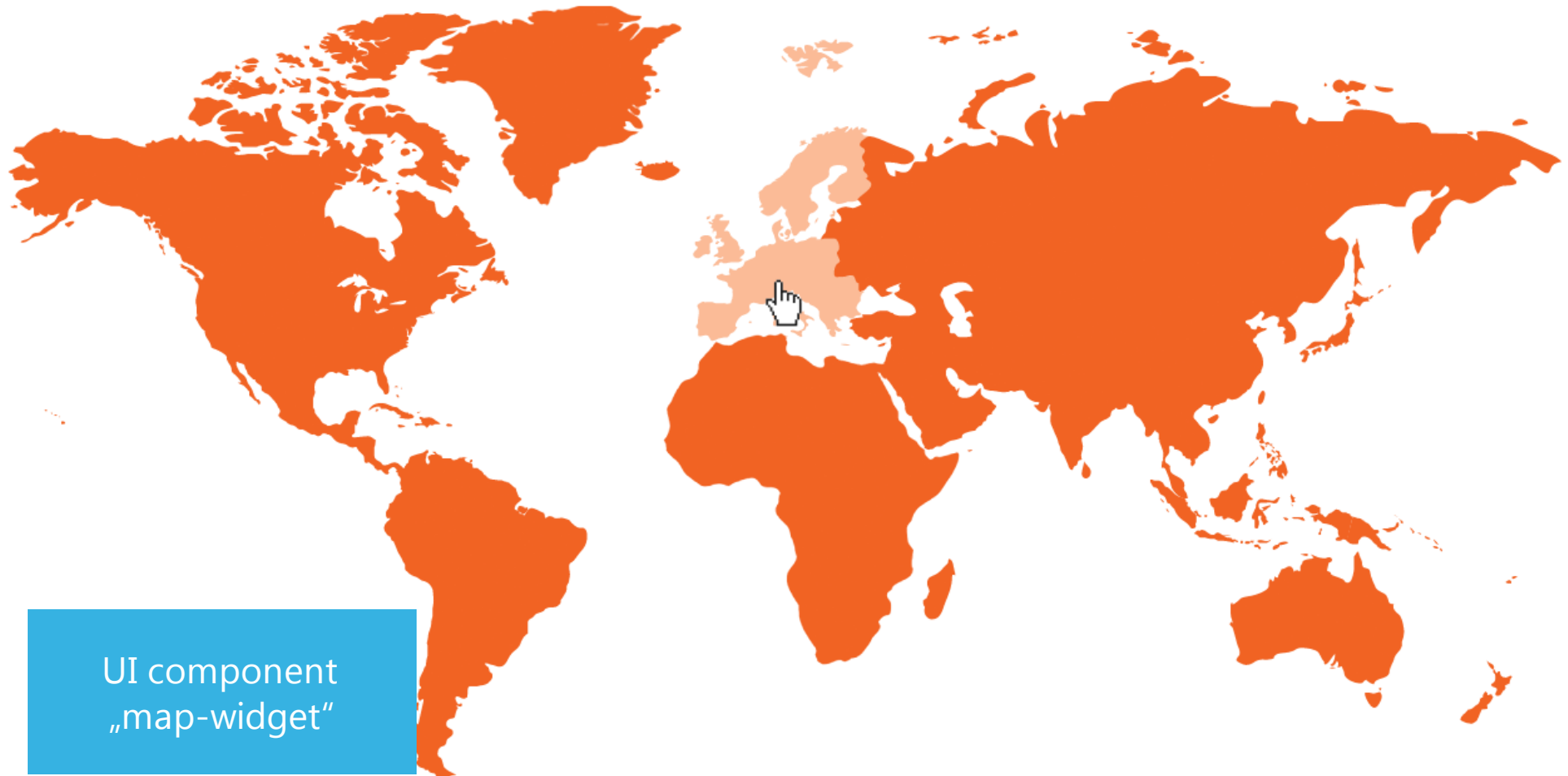


MAGENTO 2 UI COMPONENTS – THE JS PART

Real life example

Product selection through a continent

Select an area on the map



UI component
„map-widget“

Product selection through a continent

Select an area on the map



Product selection through a continent

Select an area on the map



child UI component
„productlist”

productlist could be used in other components as well

The image shows a code editor with a file explorer on the left and a code editor on the right. The file explorer shows the following structure:

- MapWidget
 - Block
 - doc
 - etc
 - i18n
 - view
 - frontend
 - layout
 - templates
 - widget
 - map-widget.phtml
 - web
 - js
 - view
 - map-widget.js
 - productlist.js
 - template
 - maps
 - utils
 - map-widget.html
 - productlist.html
 - requirejs-config.js
 - composer.json
 - registration.php

Two blue arrows point from text boxes to the file explorer. One arrow points to the `map-widget.phtml` file with the text "Initialization". The other arrow points to the `map-widget.js` and `productlist.js` files with the text "UI Components JS and Template files".

The code editor shows the content of `map-widget.html`:

```
1 <!--
2 /**
3  * @copyright Copyright (c) 2017 netz98 GmbH (http://www.netz98.de)
4  *
5  * @see PROJECT_LICENSE.txt
6  */
7 -->
8 <div class="map-widget" data-block="map-widget" data-bind="visible: isVisible">
9     <div data-bind="html: headline"></div>
10    <div data-bind="html: text"></div>
11    <div class="map_wrapper">
12        <div class="map" data-bind="bindHtml: map"></div>
13        <!-- ko foreach: getRegion('layer') -->
14            <!-- ko template: getTemplate() --><!-- /ko -->
15        <!--/ko-->
16    </div>
17 </div>
18
```

REAL LIFE EXAMPLE

```

<div data-bind="scope: '<?php echo $block->getComponentName() ?>'" class="map-widget">
  <!-- ko template: getTemplate() --><!-- /ko -->
</div>
<script type="text/x-magento-init">
{
  "*": {
    "Magento_Ui/js/core/app":
      <?php if($hasJsLayout): ?>
        <?php /* @escapeNotVerified */ echo $block->getJsLayout();?>
      <?php else: ?>
        {
          "components": {
            "<?php echo $block->stripTags($block->getComponentName()) ?>": {
              "component": "N98_MapWidget/js/view/map-widget",
              "headline": "<?php echo $block->getData( key: 'headline' ); ?>",
              "text": "<?php echo $block->getData( key: 'text' ); ?>",
              "selectionLevel": "<?php echo $block->getData( key: 'selectionLevel' ); ?>",
              "mapUrl": "<?php echo $block->getMapUrl(); ?>",
              "isVisible": true,
              "children": {
                "productlist": {
                  "component": "N98_MapWidget/js/view/productlist",
                  "headline": "<h3><?php echo __('Discover the matching products') ?></h3>",
                  "productCount": "<?php echo $block->getData( key: 'productCount' ); ?>",
                  "isModal": true,
                  "displayArea": "layer"
                }
              }
            }
          }
        }
      <?php endif; ?>
  }
}
</script>

```

Parent
component

Child
component

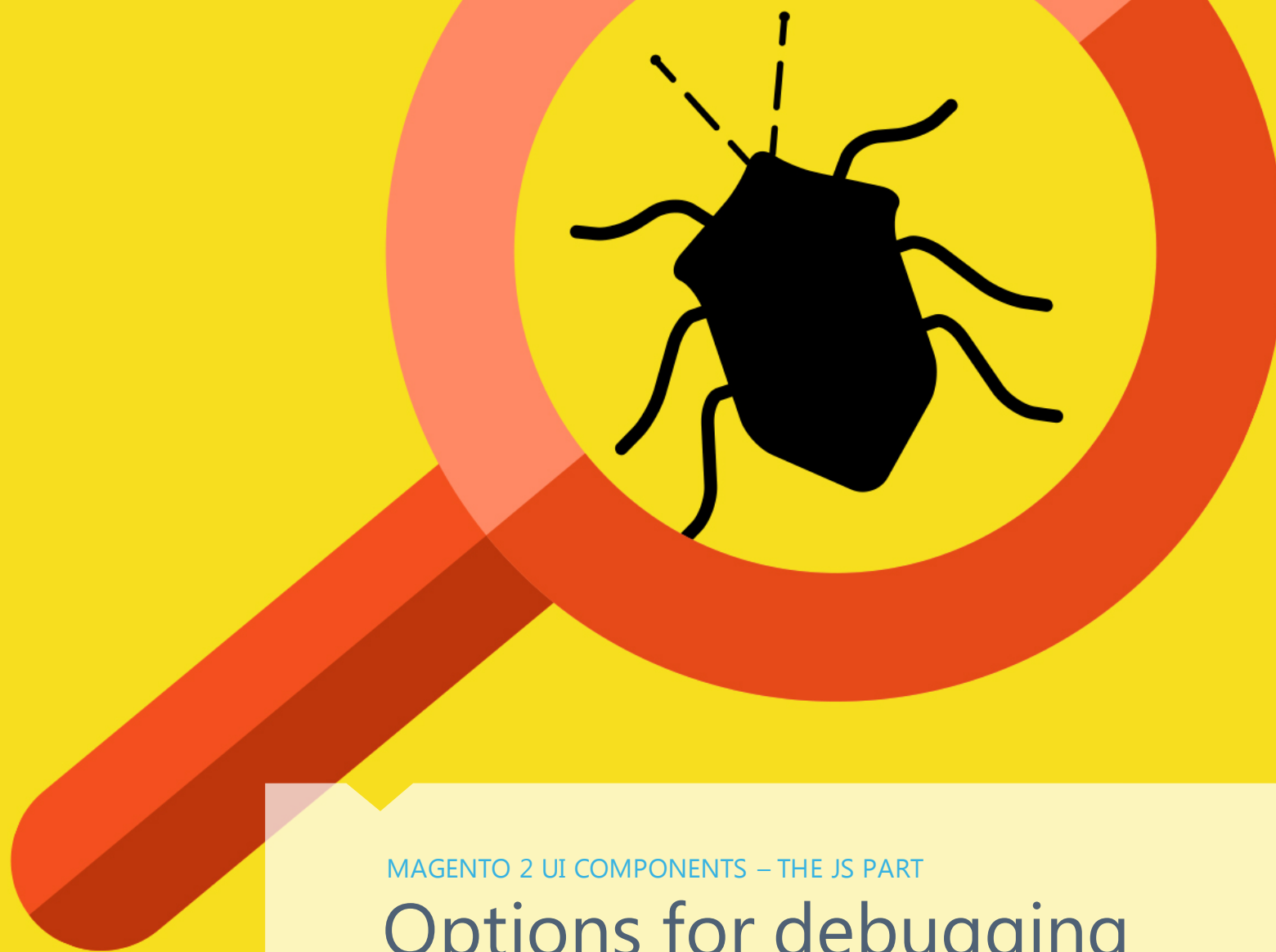
Product selection through a continent

Select an area on the map



Parent extends
uiCollection
class

```
initElement(child) {}  
this.getChild('productlist')
```

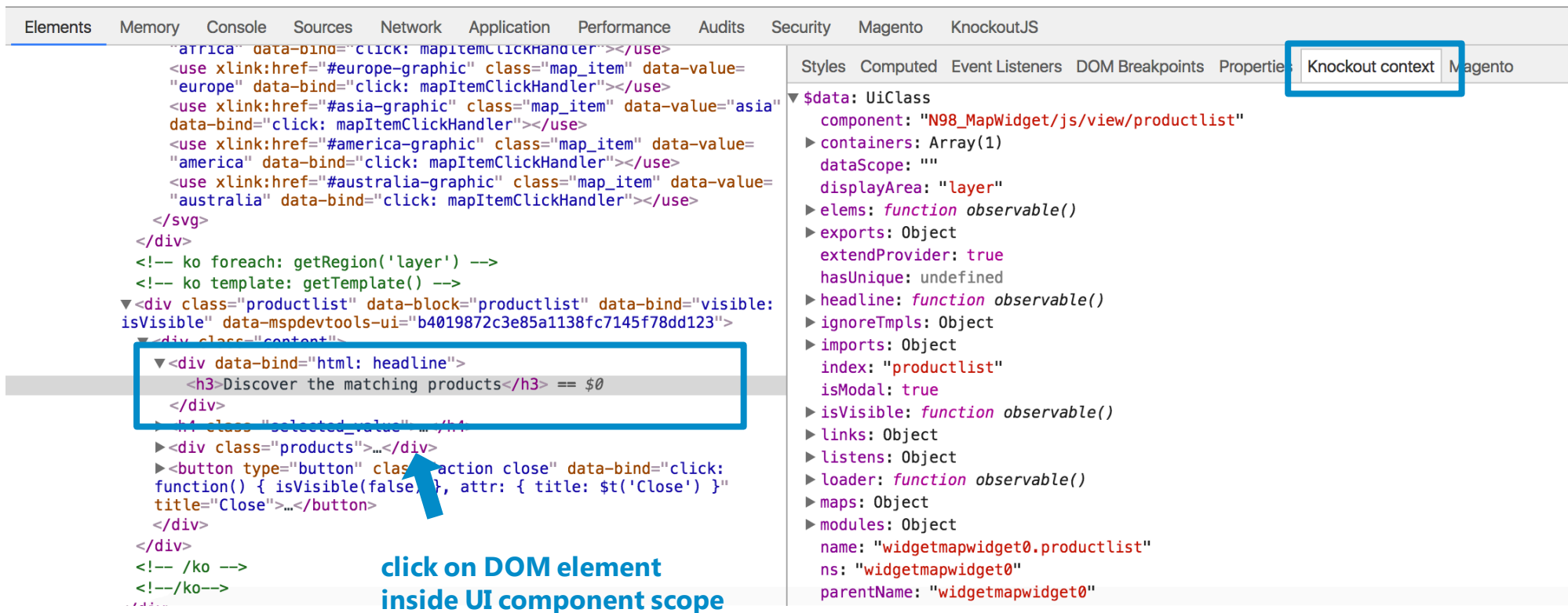


MAGENTO 2 UI COMPONENTS – THE JS PART

Options for debugging

OPTIONS FOR DEBUGGING

Chrome Knockoutjs Context Debugger



The screenshot displays the Chrome DevTools interface with the KnockoutJS Context Debugger active. The left pane shows the DOM tree, and the right pane shows the Knockout context for the selected element.

DOM Tree (Left Pane):

```

<div data-bind="html: headline">
  <h3>Discover the matching products</h3> == $0
</div>
  <div class="selected_value">...</div>
  <div class="products">...</div>
  <button type="button" class="action close" data-bind="click: function() { isVisible(false); }, attr: { title: $('Close') }" title="Close">...</button>
</div>
<!-- /ko -->
<!--/ko-->
  
```

Knockout Context (Right Pane):

```

$context: UiClass
  component: "N98_MapWidget/js/view/productlist"
  containers: Array(1)
  dataScope: ""
  displayArea: "layer"
  elems: function observable()
  exports: Object
  extendProvider: true
  hasUnique: undefined
  headline: function observable()
  ignoreTmpls: Object
  imports: Object
  index: "productlist"
  isModal: true
  isVisible: function observable()
  links: Object
  listens: Object
  loader: function observable()
  maps: Object
  modules: Object
  name: "widgetmapwidget0.productlist"
  ns: "widgetmapwidget0"
  parentName: "widgetmapwidget0"
  
```

Annotation: A blue box highlights the selected DOM element in the left pane, and a blue arrow points to it with the text: **click on DOM element inside UI component scope**.

Magento DevTools by MageSpecialist, with Chrome extension

Magento DevTools by MageSpecialist

General Design Observers Blocks UI Profiler Plugins Queries

Search:

↓↑	Component	↑↓
		Magento_Checkout/minicart/content
		Magento_Customer/authentication-popup
		N98_MapWidget/map-widget
▼ Object		
<code>component: "N98_MapWidget/map-widget"</code>		
<code>template: "N98_MapWidget/template/map-widget.html"</code>		
<code>type: "uiComponent"</code>		
		ui/collection

list of all initialized UI components on the actual page with link to inspect the DOM element

PERSONAL PROS & CONS

UI COMPONENTS – THE JS PART

Advantages

- easy teamwork – standardized programming
- common procedures and requirements have already been implemented
- configuring without inline scripting!

Disadvantages

- it takes time to get familiar with
- sometimes it feels to be restricted in frontend development

THANK YOU!



<http://XXXXXXXXXXXXX/>

Slides

References:
<http://devdocs.magento.com/>