

Coding Design Systems

Building Software for Designers

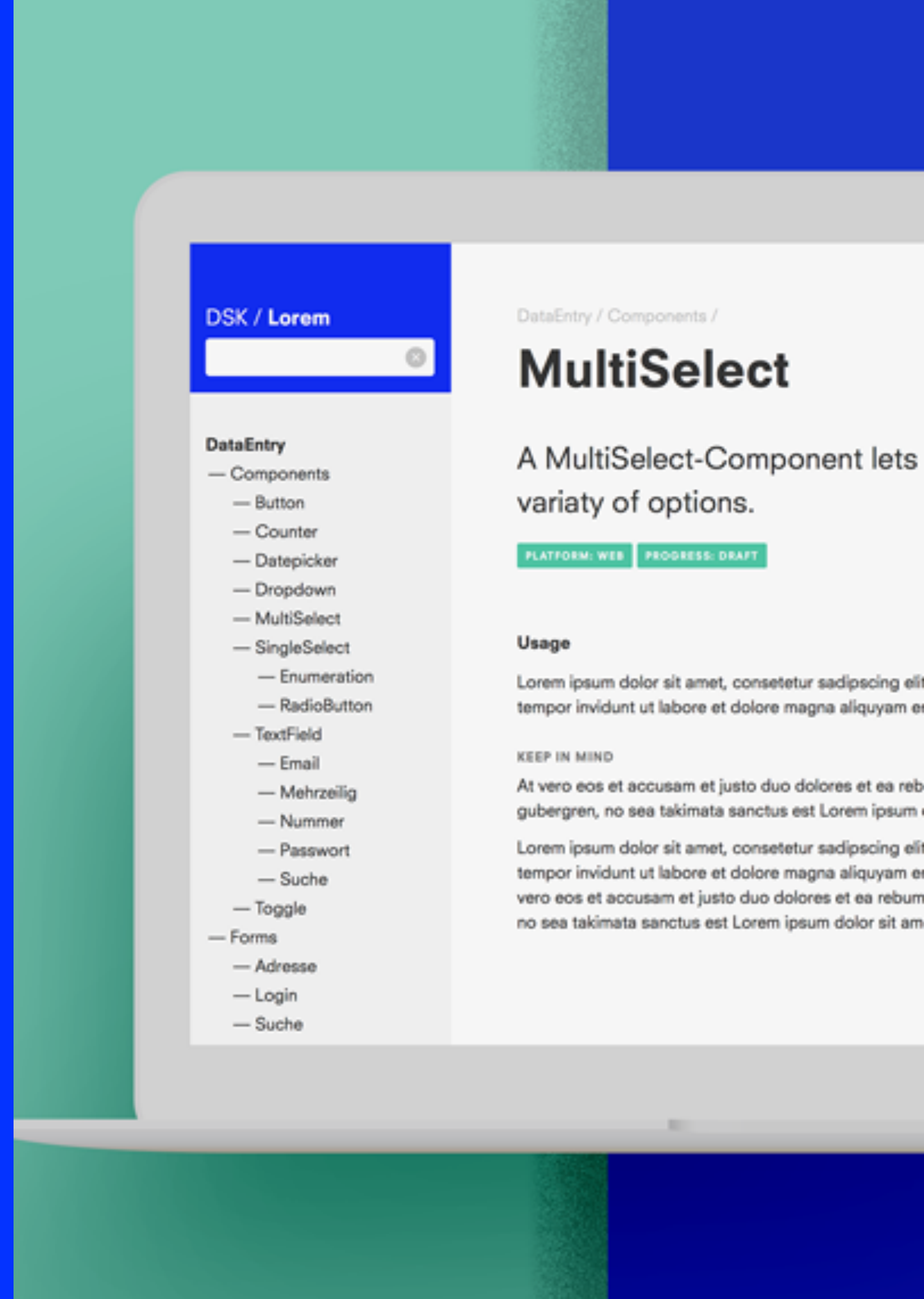


Hallo, ich bin Marius Wilms

Tech lead, Software creator und
Künstler. CTO bei Atelier Disko.

Mein Vortrag:

Warum und wie wir DSK entwickelt haben. DSK ist ein Open Source Tool, um Design Systeme zu erstellen.



Design Systems?

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Design Systems?

Viele Unternehmen nutzen
bereits Design Systeme.

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lores et ea rebum
sum dolor sit am

IBM

IBM Design

Studios

Work

Practices

Careers

IBM Design Language



Living Language

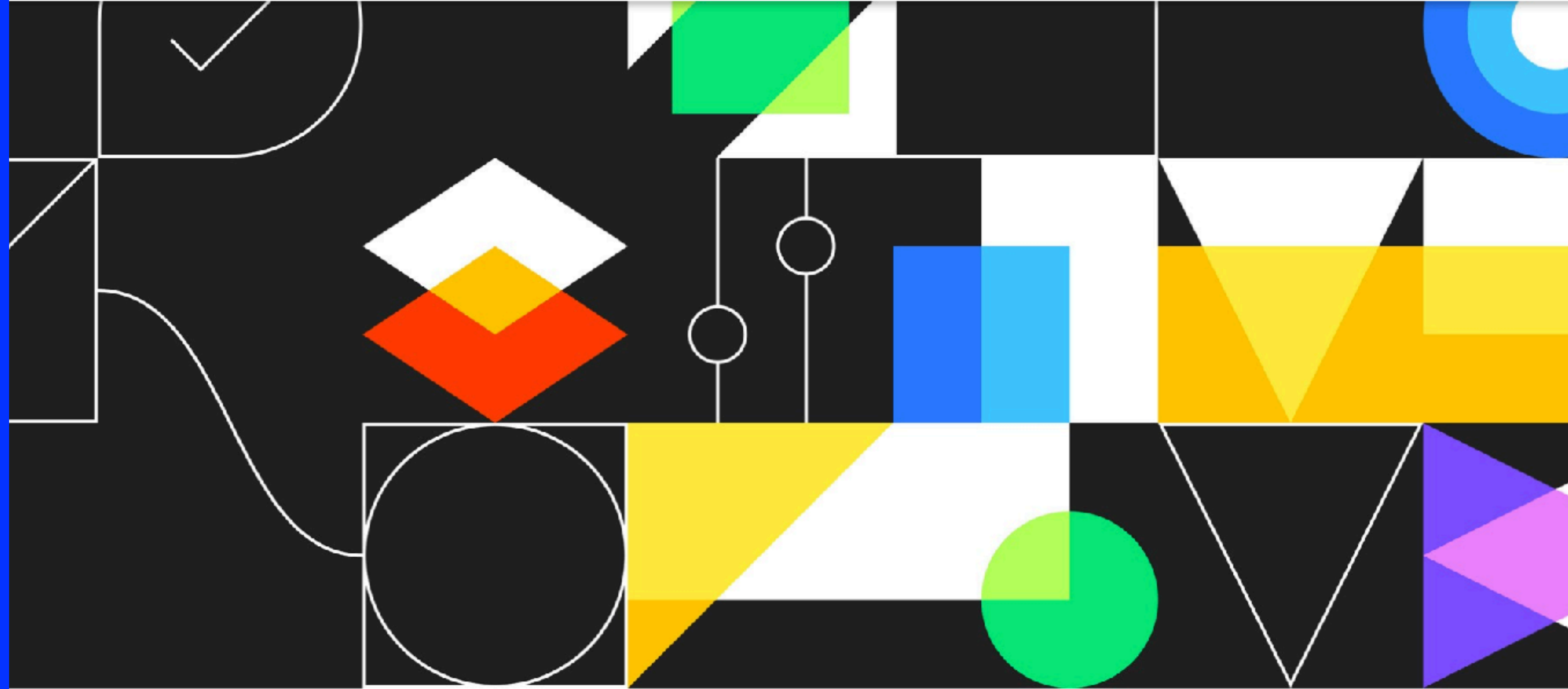
A shared vocabulary for design

ibm.com/design



Google

google.design



Design Is Never Done

Material Design's new suite of tools and guidelines—all in one place

By Nicholas Jitkoff

Design is the art of continuous problem solving—an active cycle of investigating and validating needs, crafting and developing ideas, and creating solutions. Over the course of its life, a digital

Airbnb

airbnb.design



Speaking of... Life Paths Content Strategist Amy Gurka talks seeking growth over glamour

Perspectives



Audi

[audi.com/ci](https://www.audi.com/ci)



Search

Fundamentals

Brand Appearance

Basics



Guides

User Interface

Communication Media

Corporate Branding

Corporate Sound

Motion pictures

 Audi Sport

Dealer Facility



Digital first

How do you renew a successful brand? In reality, it does so itself: a brand is always ahead of its time. So let's simply let it breathe more new perspective. In other words: let's approach it from a digital angle.

Size calculator for rings and typography

Proportion 1



Proportion 2



Proportion 3



Proportion 4



Proportion 4 (Sponsoring)

Millimeter and point

Pixel

Ring Height

42.00

mm

Font-Size

↔ 127.29

pt

Design Systems?

Was sind die Vorteile?



itself: af
d is always ahead of its time. So let's simply let it breathe more
perspective. In other words: let's approach it from a digital and

Design Systems?
Was für Inhalte finden sich?

Let's build one!

Let's build one!

Zielgruppen:

Designer & Frontend Entwickler

Let's build one!
Anforderungen:

Let's build one!
Anforderungen:

skizzieren,
sammeln,
organisieren

Let's build one!
Anforderungen:

Artikel zur Design Kultur,
Guides zur Verwendung,
Komponenten,
Sketch files (Design Kits)

Let's build one!
Anforderungen:

Enable process quickly

Let's build one!

Wunsch:

Reusable,
Ready to invest,
Longterm tool

Blank-Canvas Tool



Janvdee, CC BY-SA 3.0

Let's build one!

Annahme:

„Keine Struktur bedeutet Freiheit und führt deswegen zu kreativen Ergebnissen.“



Let's build one!

Annahme:

„Ähnliche Dinge finden
automatisch zueinander.“



Let's build one!

Aber: das hat so nicht gepasst.

Let's build one!

Nächster Versuch + Learnings

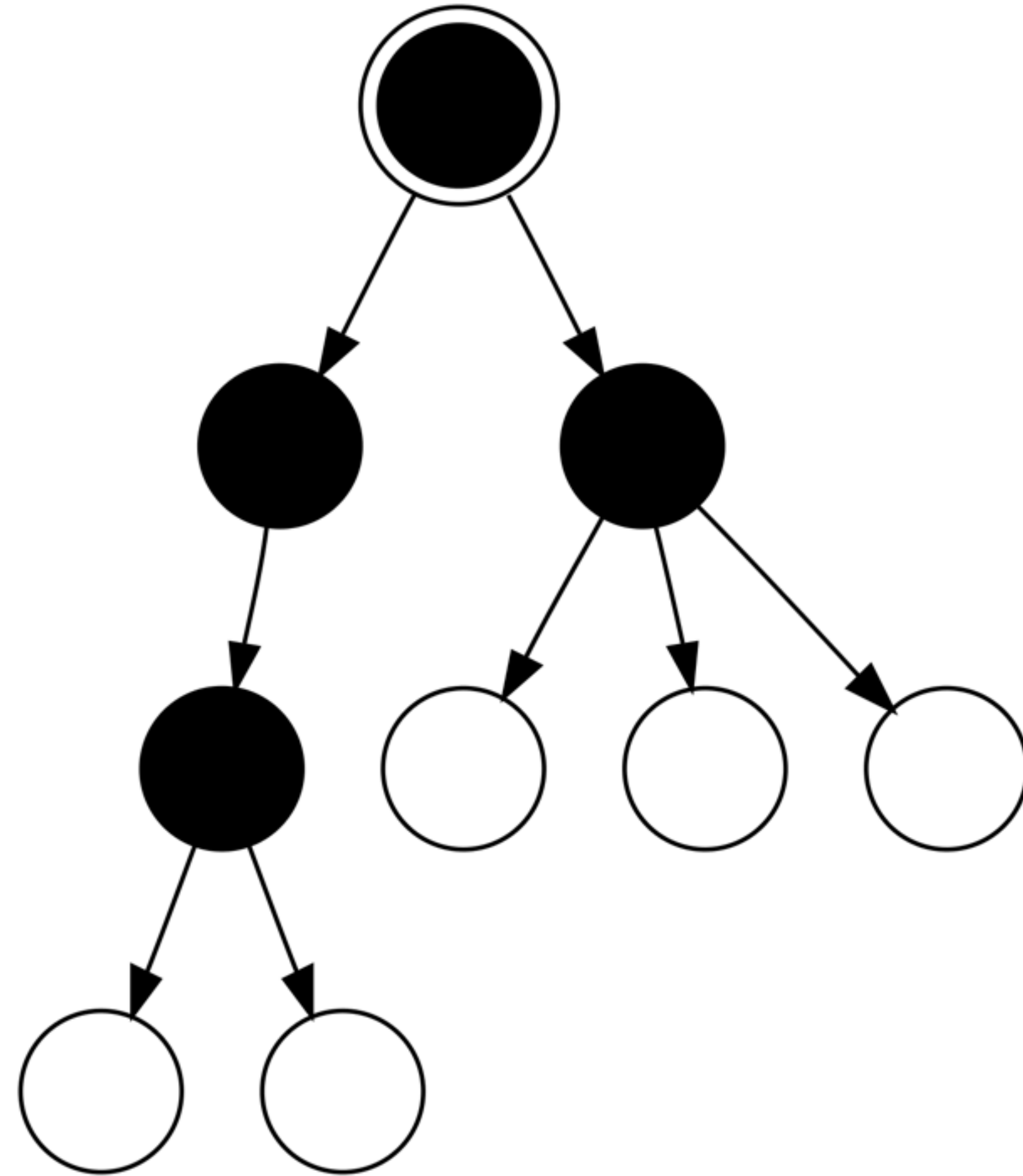
Let's build one!

Gesucht wurde jetzt:

- einordnende Struktur
- Ähnliches zusammenfassen
- etwas Unmittelbares

Let's build one!
Unsere Antworten:

Bäume als primäre Struktur



List

A List-component displays items in an ordered or unordered list.

PROGRESS/DRAFT

RELEASE/0.6

Markdown

Visual Design

The following visual design has been agreed upon by our team:

![[bullet list]](List.png)

Usage Rules

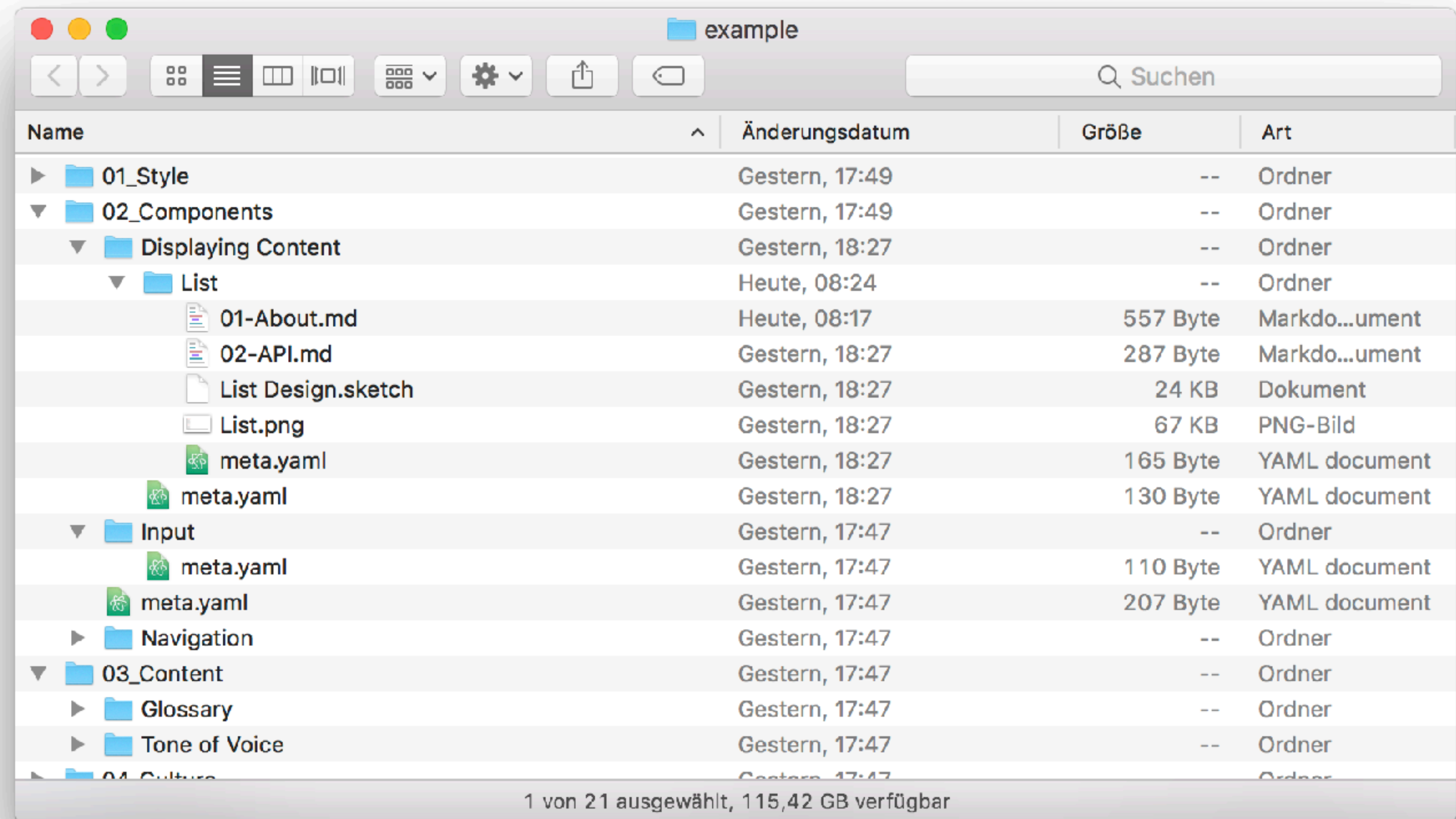
We use lists when we have to convey large amounts of information, but still keep them structured. As they can easily grow very large, we try to keep the number of items in our interfaces down to a minimum.

Not to be confused with ...

When both lists and `[[tables]](/Components/Displaying Content/Table)` display content in an orderly fashion, lists are to be used for listed data, while tables must only be used for tabular data. Duh.

~

Dateisystem als Interface



Let's build one!

Unsere Antworten:

- Lokal ausgeführte Web App
- JavaScript Frontend
- Go Backend
- 1 static binary
- Deployed to Dropbox

```
> make dist/dsk-darwin-amd64
```


Let's build one!

Design System Kit (DSK)

```
go build -race -ldflags "-X main.Version=head-e015759"
./dsk example
```

DSK

```
Version head-e015759
```

```
Starting message broker...
```

```
Detecting tree root...
```

```
Tree root found: /Users/mariuswilms/Code/ad/infra/boxes/de
sko/dsk/example
```

```
Begin watching tree for changes...
```

```
Opening tree...
```

```
Synced tree with 12 total node/s in 8.875341ms
```

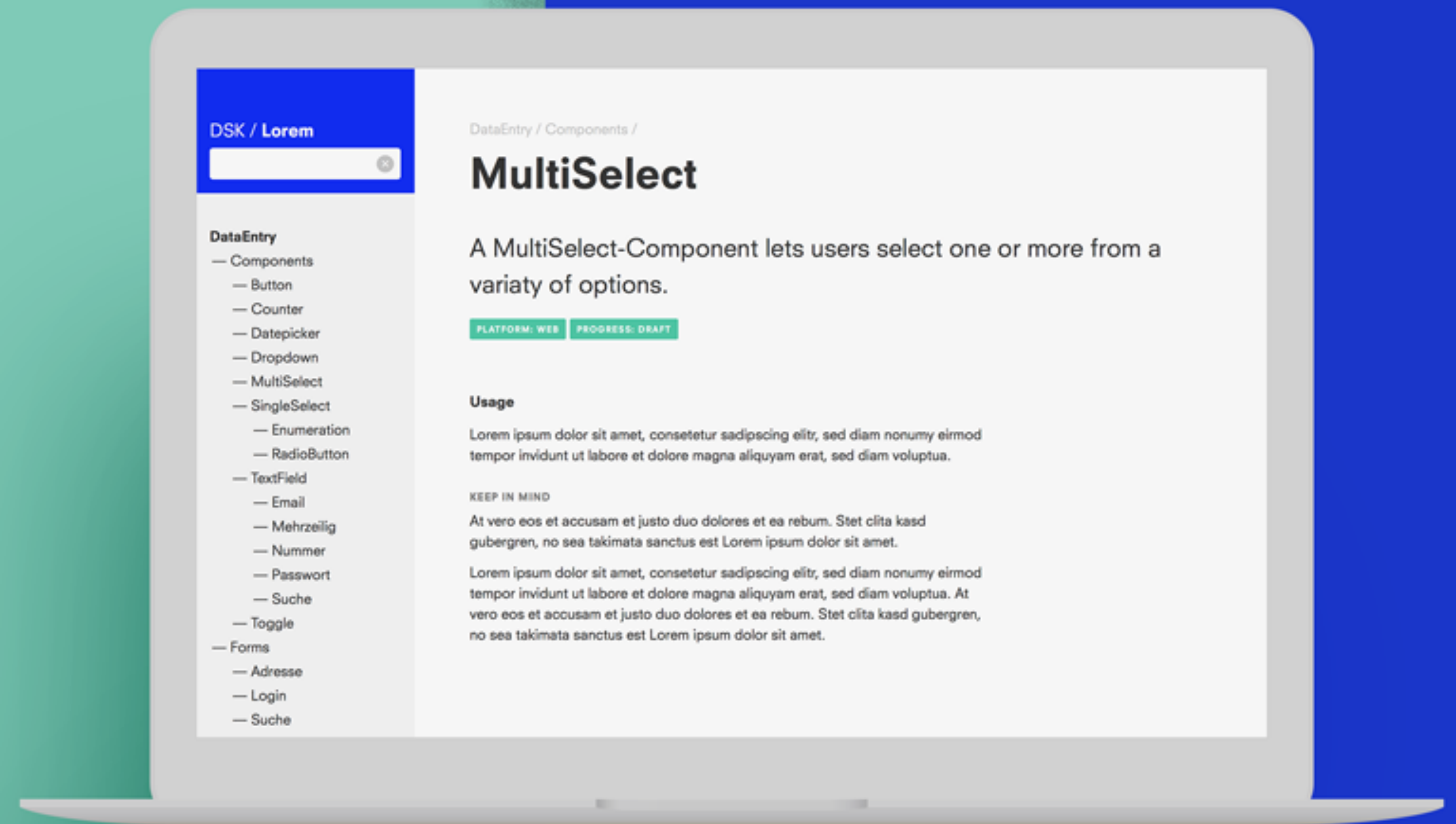
```
Mounting APIv1...
```

```
Mounting frontend...
```

```
Starting web interface on 127.0.0.1:8080....
```

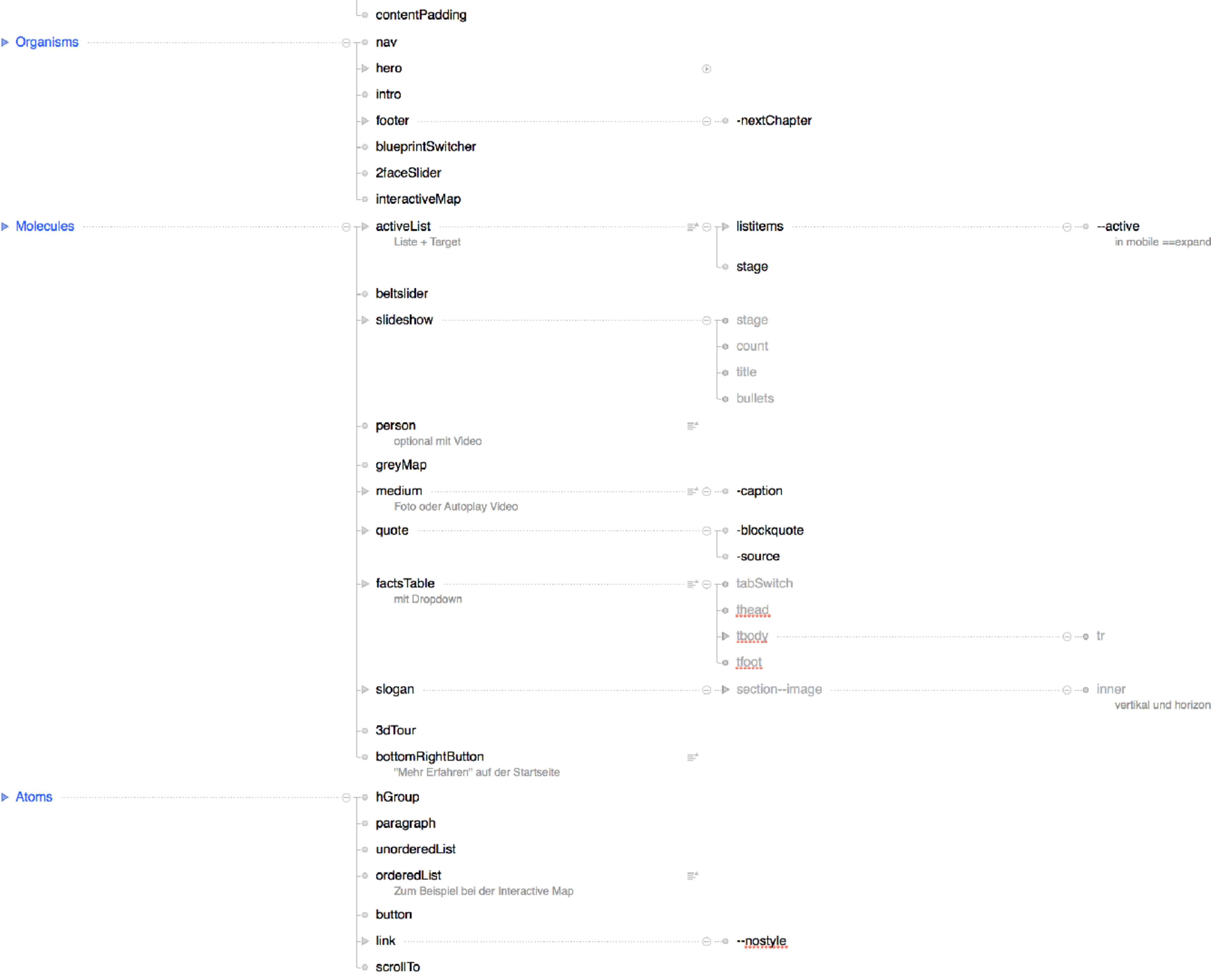
```
Please visit: http://127.0.0.1:8080
```

```
Hit Ctrl+C to quit
```

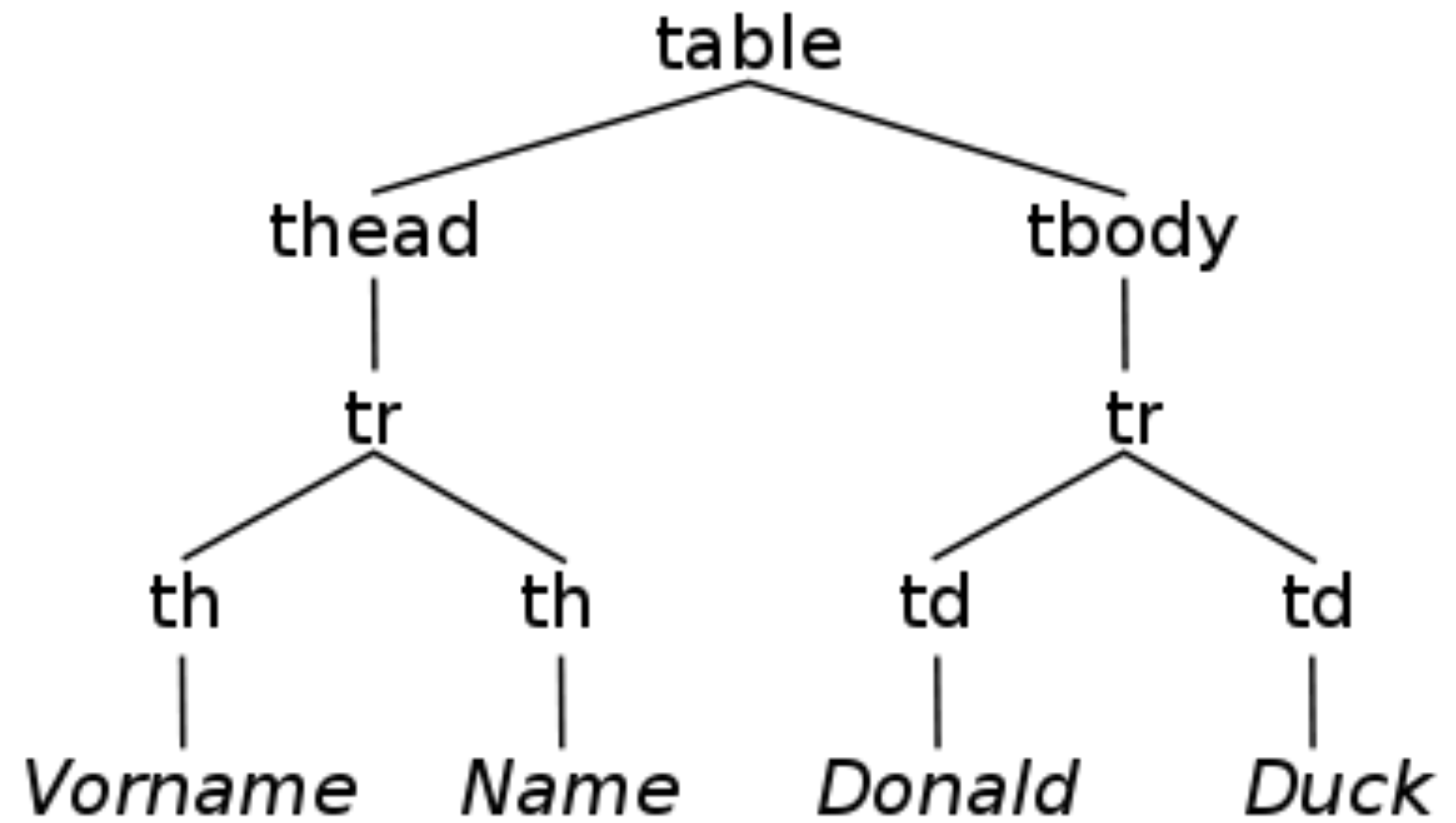


Let's build one!
Warum Trees?

The Japanese Tree Outliner App



DOM



Frontend Tree Navigation

```
list = list.concat(this.flatten(child));
});
return list;
}

// Returns a new non-sparse tree instance selecting only given
// nodes, their parents and all their children.
//
// Filters out any not selected nodes. Descends into branches first,
// then works its way back up the tree filtering out any nodes, that
// are not selected. For selection conditions see check().
//
// Selecting a leaf node, selects all parents. But not the siblings.
//
//           a*
//
//           b*
//
//       c!   d   e
//
// Selecting a node, always selects all its children.
//
//           a*
//
//           b!
//
//       c*   d*   e*
//
filteredBy(selectedURLs = []) {
  let tree = new Tree(JSON.parse(JSON.stringify(this.root))); // deep clone

  if (selectedURLs) {
    let check = n => selectedURLs.includes(n.url) || n.children.some(check);

    let select = (n) => {
      if (selectedURLs.includes(n.url)) {
        return true;
      }
    }

    n.children = n.children.filter(select);
    return n.children.some(check);
  };
  tree.root.children = tree.root.children.filter(select);
}
```

Design System als Tree definieren

The Design Definitions Tree

The *design definitions tree* (DDT for short), is a tree of directories and subdirectories. Each of these directories stands for a *design aspect* in the hierarchy of your design system, these might be actual components, when you are documenting the user interface, or chapters of your company's guide into its design culture.

Each directory may hold several files to document these design aspects: a configuration file, to add meta data or supporting *assets* that can be downloaded through the frontend.

```
example
├── AUTHORS.txt          <- authors database, see "Authors" below
├── DataEntry
│   ├── Button          <- "Button" design aspect
│   │   └── ...
│   └── TextField       <- "TextField" design aspect
│       ├── Password    <- nested "Password" design aspect
│       │   └── readme.md
│       ├── api.md       <- document
│       ├── exploration.sketch <- asset
│       ├── meta.yml     <- meta data file
│       ├── explain.md   <- document
│       └── unmask.svg    <- asset
```

Note: Directories beginning with an underscore (`_`), `x-` and `x_` or a dot (`.`) are ignored.

Documenting Design Aspects

Aspects are documented by adding [Markdown](#) formatted documentation files to their directory. A `readme.md` file, may describe an aspect or give clues how to use a certain component. You can split documentation over several files when you like to. We usually use `api.md` , `explain.md` or `comments.md` .

Note: `readme.md` is in no ways treated specially by dsk, but is usually displayed by GitHub as the primary document in the web interface.

Let's build one!

DSK 1.0:

- Hosted Version
- Bring your own Frontend
- API v1 Freeze
- „Live“ Updates

sk, but is usually displayed by GitHub as the primary document in the

or Markdown, these are supported too. For this use `html` instead

Demo time!

Let's build one!

Was wirklich gut geklappt hat:

- Trees, Trees, Trees
- Minimalismus
- Dropbox deployments
- Filesystem als Interface
- Coding mit Designern

Merci.

Atelier Disko

Design System Kit

Data Entry

— Data Entry

- Components
- Counter
- DatePicker
- MultiSelect
- SingleSelect
- Enumeration
- RadioButton
- TextField
- Email
- Number
- Password

Displaying Data

- Badge
- Carousel
- ExpandableSection
- Hyperlink
- List

Data Entry

- Components
- Counter
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Displaying Data

- Badge
- Carousel
- ExpandableSection
- Hyperlink
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Merci.

github.com/atelierdisko/dsk

@nperson

atelierdisko.de