

User Interface Composition: Introduction to layerJS



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{codemotion}
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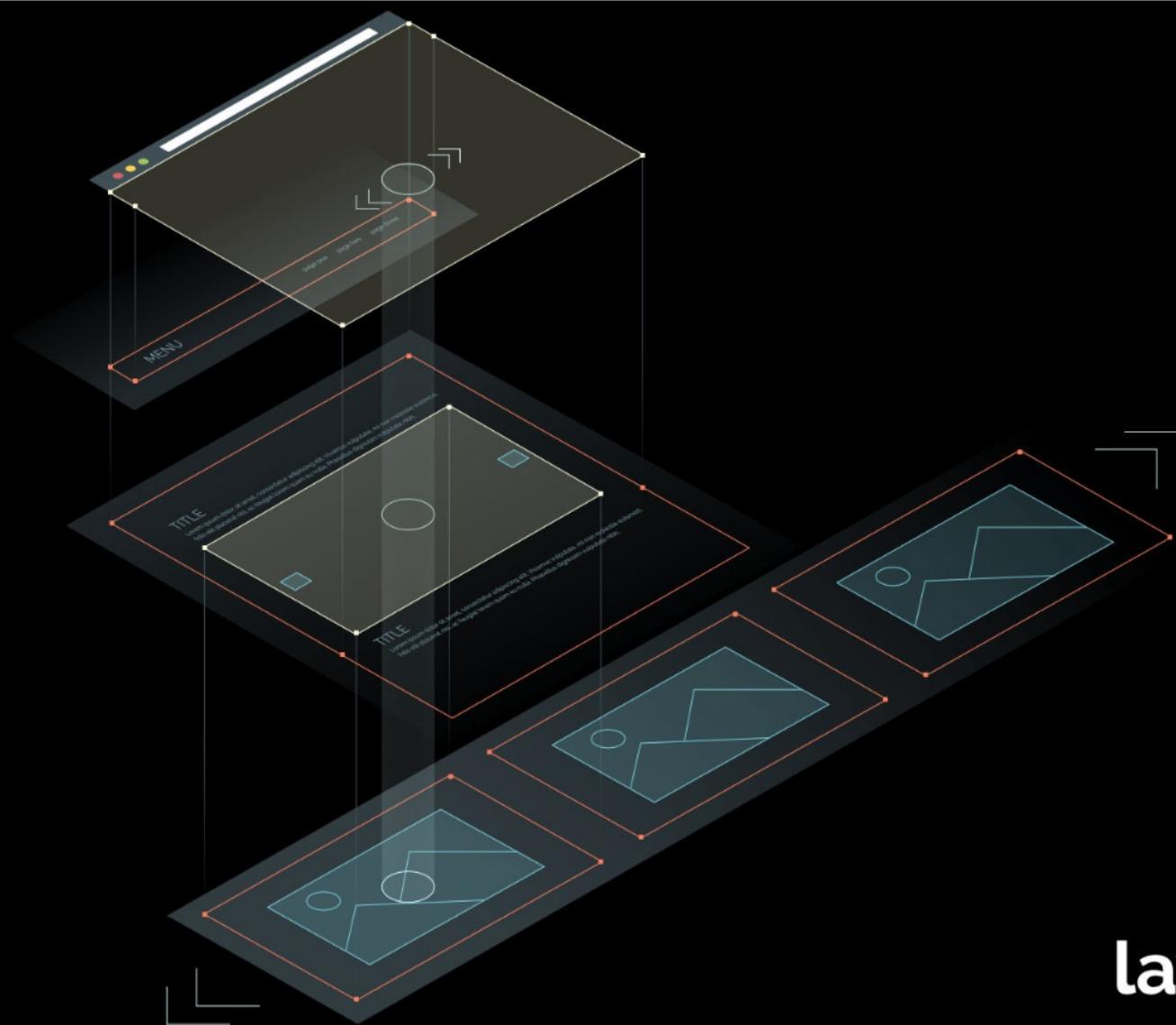
Content slider?

what about:

- floating menues
- light boxes
- parallax effects
- zooming interfaces?

**it's all about elements on
moving layers ...**

How



layerJS

Composition on layers



Code

define interactive UIs in pure HTML

```
<div lj-type="stage">
  <div lj-type="layer" lj-default-frame="frame1" lj-transition="left" lj-fit-
    to="responsive">
    <div lj-type="frame" id="frame1">
      ... content of frame 1 ...
    </div>
    <div lj-type="frame" id="frame2">
      ... content of frame 2 ...
    </div>
  </div>
</div>
```

```
<div class="nav">
  <a href="#frame1">Frame 1</a>
  <a href="#frame2">Frame 2</a>
</div>
```

Framework Overview

Geometry & Structure
HTML, CSS



State & Router
URL, API

Interaction
Links, Gestures, API
⁷

is this new?

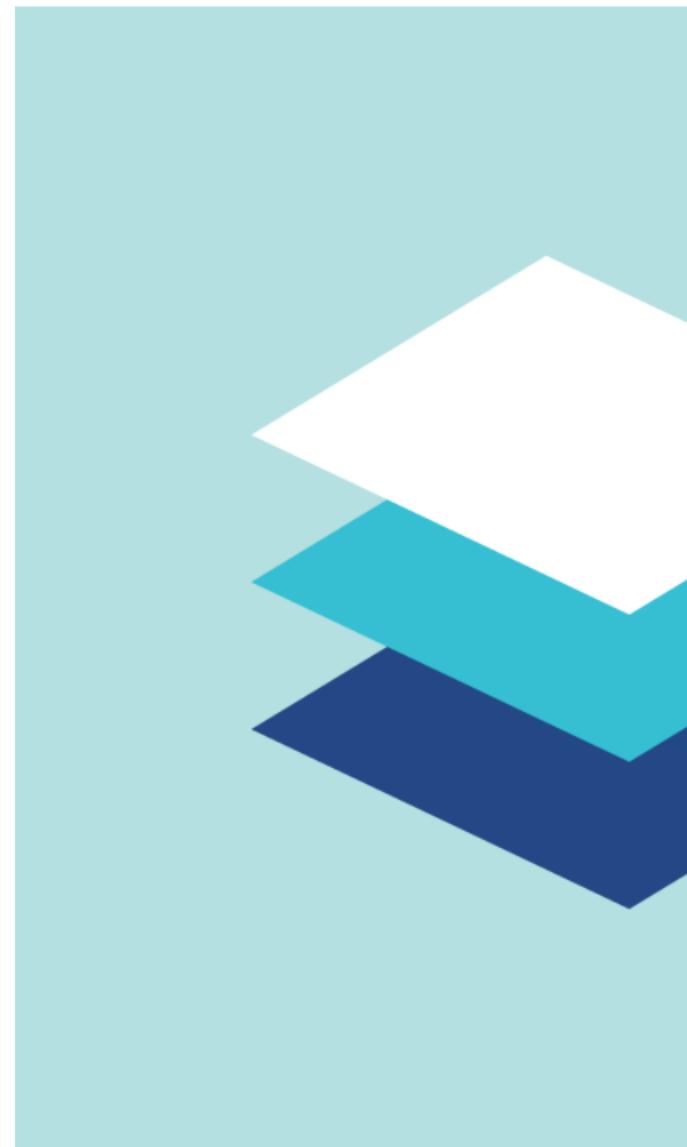
Material Design

Principles

- Material is a metaphor
- Motion provides meaning

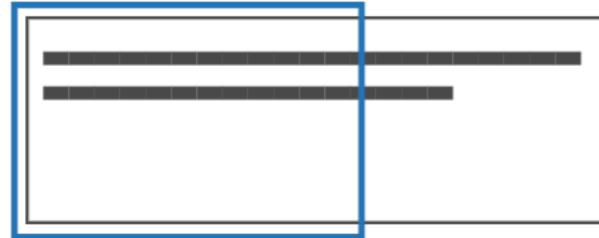
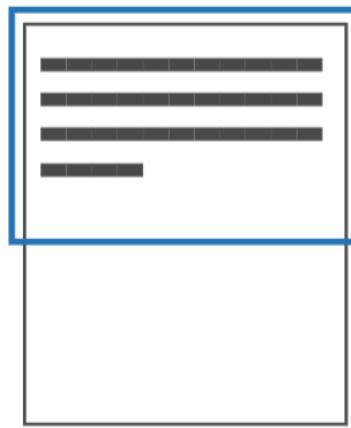
Material Properties

- solid
- varying shapes
- 2D - actually 3D with a fixed small thickness
- stacked (can overlay each other)
- can move
- can appear/disappear
- can be transformed



Fitting

Fitting defines how the active Frame fits into the Stage. This is important if Stage and Frame do not have the same dimension or even not the same aspect ratio. Clipping or scrolling may occur.



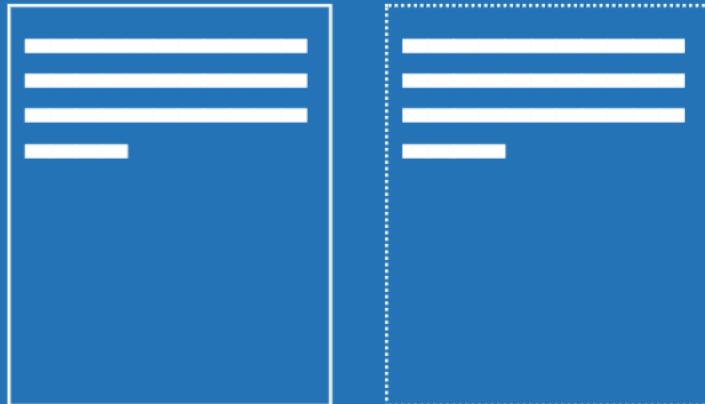
Fitting modes

- width
- height
- cover
- contain
- responsive
- responsive-width
- responsive-height
- elastic
- elastic-width
- elastic-height
- fixed

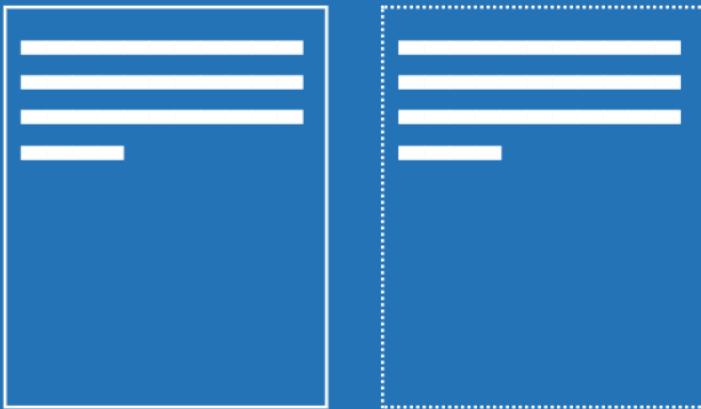
Layouts

Layouts define how Frames are positioned relative to each other in a Layer.

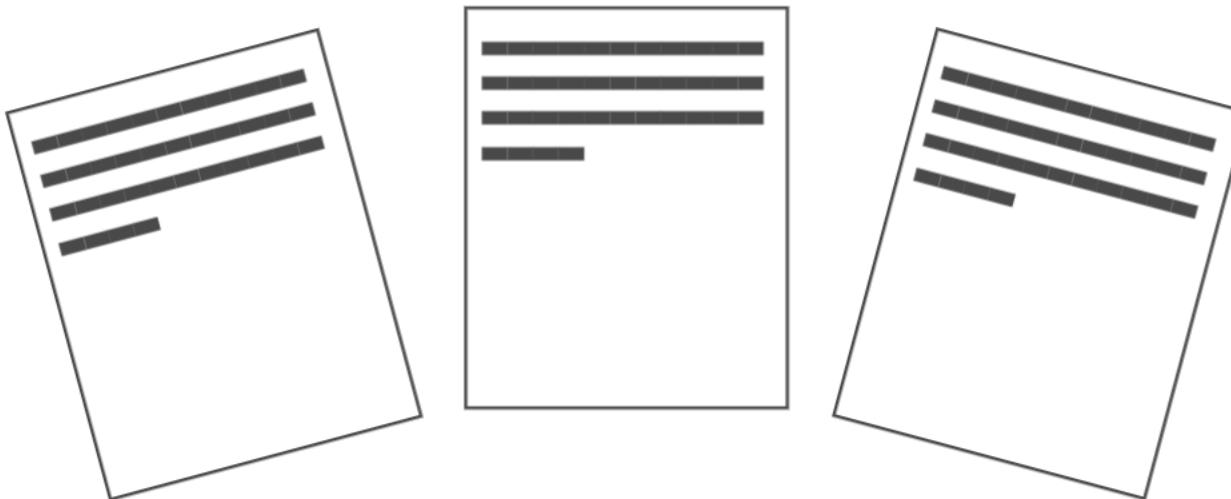
Slide layout



Canvas layout



Canvas layout



Transitions

Transitions define how the exchange of the active Frame is animated. They depend on the layout.

Slide layout transitions

- left
- right
- up
- down
- fade
- blur
- slideOver
- zoom
- ... extensible

Canvas layout transitions

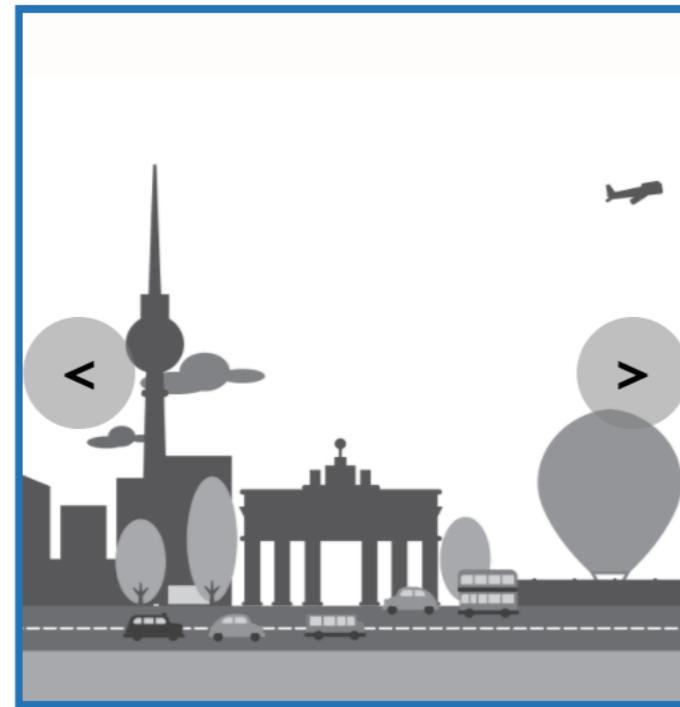
- canvas
- fade (only for appearance /disappearance)

Examples

Slider

Simplest slide layout example.

```
<div lj-type="stage">
  <div lj-type="layer" id="slider" lj-default-
frame="frame1" lj-fit-to="cover">
    <div lj-type="frame" id="frame1"
neighbors.r="frame2">
      ... content of frame 1 ...
    </div>
    <div lj-type="frame" id="frame2">
      ... content of frame 2 ...
    </div>
  </div>
<a href="#slider.!prev">previous</a>
<a href="#slider.!next">next</a>
```



Menu

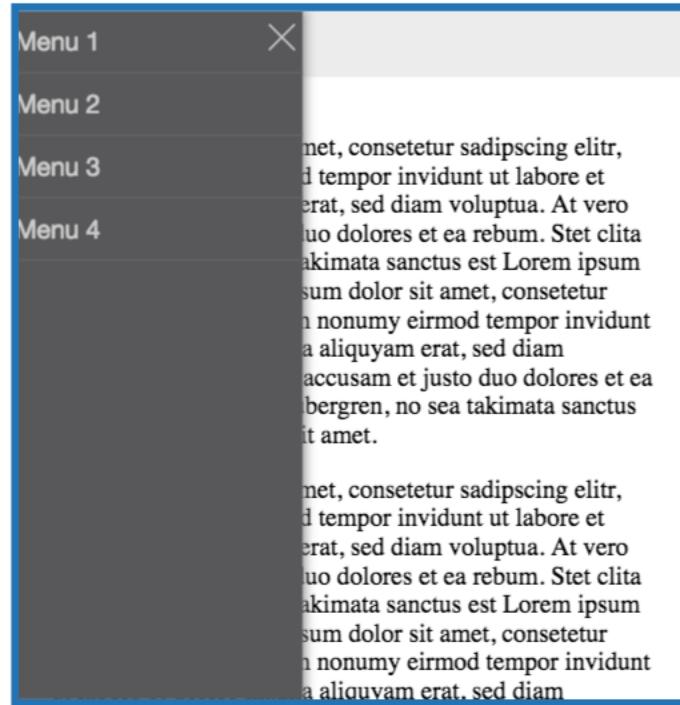
Uses two layers to put menu on top.

≡ Menu

Lore ipsum dolor sit amet, consetetur sadipscing elitr,
sed diam nonumy eirmod tempor invidunt ut labore et

Menu

Uses two layers to put menu on top.
Also uses slide layout.



```
<div lj-type="stage">
  <div lj-type="layer" lj-default-frame="frame1">
    <div lj-type="frame" id="frame1" lj-fit-to="responsive-width">
      ... page content ...
    </div>
  </div>
  <div lj-type="layer" id="menulayer">
    <div lj-type="frame" id="menu-closed" lj-transition="fade" lj-fit-to="responsive-width">
      <a href="#menu-open">Menu</a>
    </div>
    <div lj-type="frame" id="menu-open" lj-transition="slideOverRight" lj-fit-to="responsive-height">
      <a href="#menu-closed">close</a>
      <ul class="nav-list">
        ... menu items ...
      </ul>
    </div>
  </div>
</div>
```

Canvas

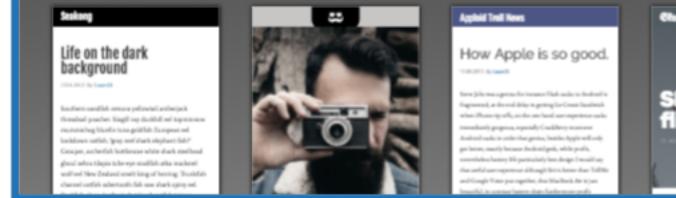
This example uses canvas layout to place minified pages on a "canvas". Clicks will zoom into those pages.

The canvas layout works with a large frame that contains all the content and a small frame that only contains a single scaled down sub page. This leads to a zoom effect when switching between these frames.

Arbitrage Ipsum Momentum

Beware of the Little White Rabbit

Click on one of the content frames below to get the details. Swipe to switch between them. Use the menu icon in the frames to get back to the main menu.



```
<div lj-type="stage">
  <div lj-type="layer" lj-layout="canvas">
    <div lj-type="frame" lj-name="zoomout" lj-fit-to="fixed">
      ... Headline and intro ...
    </div>
    <div lj-type="frame" lj-name="zoomin" lj-fit-to="fixed" lj-scale="0.25">
      <div lj-type="stage">
        <div lj-type="layer" lj-layout="canvas">
          <div lj-type="frame" lj-name="frame1" lj-fit-to="responsive">
            ... content frame 1 ...
          </div>
          <div lj-type="frame" lj-name="frame2" lj-fit-to="responsive">
            ... content frame 2 ...
          </div>
        ...
      </div>
    </div>
  </div>
</div>
```



visit [layerJS.org](https://layerjs.org)

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