HEADLESS BROWSER EXPERIMENTS

A short journey about taking screenshots with headless browsers

Christian Bäuerlein / @fabrik42

A headless browser is a web browser without a graphical user interface.

- PhantomJS
- SlimerJS
- CasperJS
- many more!

USE CASES

- Running test suites
- Web scraping / Automation
- Taking screenshots

TAKING SCREENSHOTS

The project:

A desktop website that lets users create a custom mobile web app.

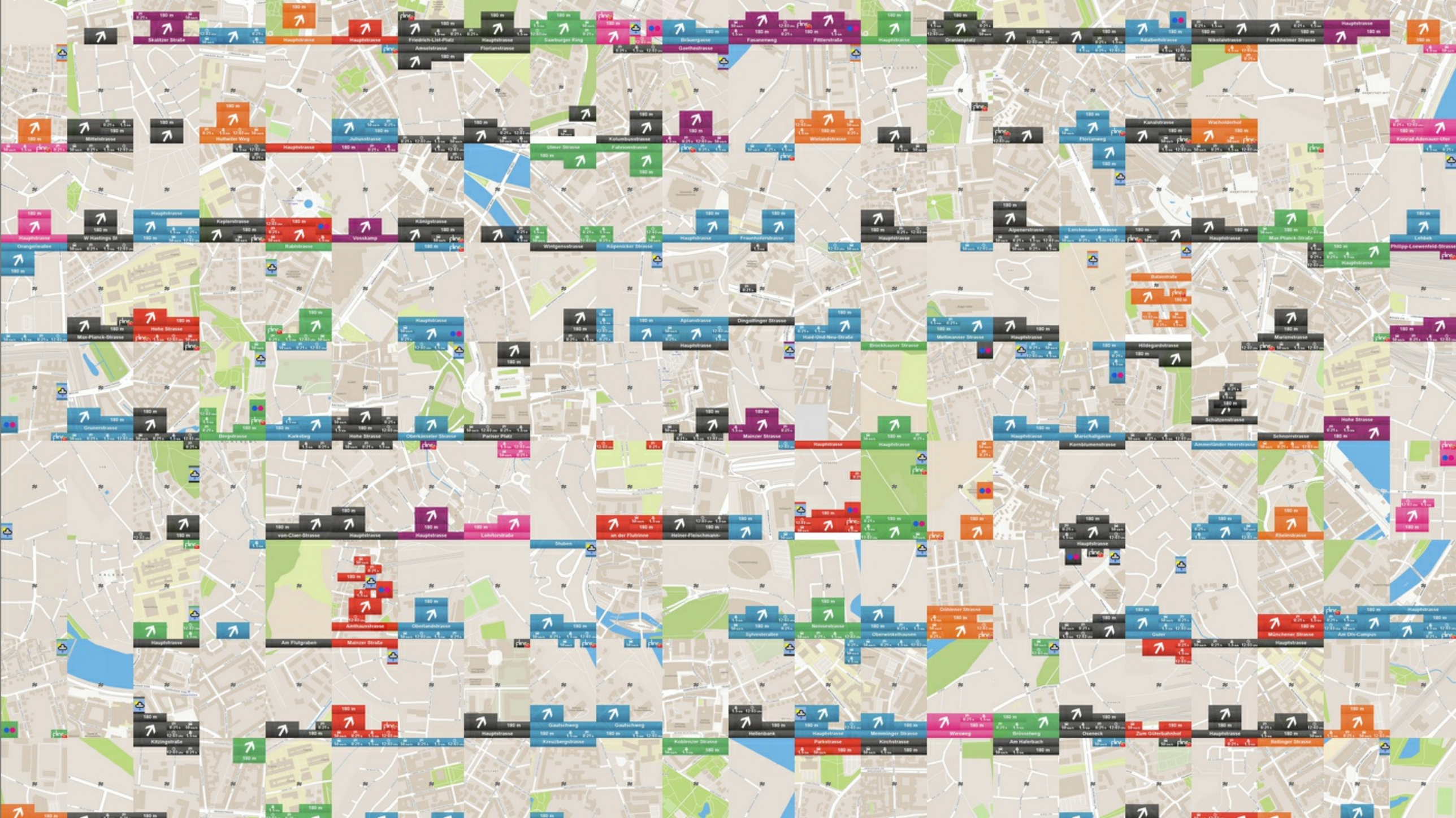
The challenges:

- How to render a list of created apps?
- How to share your creations with others?

HTML IS NOT SHAREABLE

- URLs are easy to share.
- Textual content is easy to share.
- Visual representations in HTML are **not** easy to share.
- But images are :)

SCREENSHOTS!


Skalitzer Straße
Hauptstrasse
Friedrich-List-Platz
Amselstrasse
Florianstrasse
Saarburger Ring
Brauergasse
Goethestrasse
Fasanenweg
Pittlerstraße
Oranienplatz
Adalbertstrasse
Nikolaistrasse
Forchheimer Strasse
Mittelstrasse
Hutweiler Weg
Juliusstrasse
Kolumbusstrasse
Wielandstrasse
Kanalstrasse
Wacholderhof
Konrad-Adenauer-Ufer
Stmer Strasse
Fabrionstrasse
Orangerieallee
W Hastings St
Keplerstrasse
Rabistrasse
Vosskamp
Königstrasse
Wintgensstrasse
Köpenicker Strasse
Fraunhoferstrasse
Alpenerstrasse
Leichenauer Strasse
Max-Planck-Straße
Lehbek
Philipp-Loewenfeld-Strasse
Balanstraße
Max-Planck-Strasse
Hohe Strasse
Apianstrasse
Dingolfinger Strasse
Haid-Und-Neu-Straße
Brockhauser Strasse
Mellmanner Strasse
Hildegardstrasse
Marienstrasse
Grunerstrasse
Bergstrasse
Karksteg
Oberkasseler Strasse
Pariser Platz
Mainzer Strasse
Marschallgasse
Kornblumenstrasse
Schützenstrasse
Ammerländer Heerstrasse
Schnorrstrasse
von-Claer-Strasse
Lohrforstraße
an der Flutrinne
Heiner-Fleischmann-
Stuben
Rheinstrasse
Amthausstrasse
Oberlandstrasse
Am Flutgraben
Mainzer Straße
Sylvesteralee
Neissestrasse
Oberwinkelhausen
Döhlener Strasse
Guter
Münchener Strasse
Am Dis-Campus
Kitzingstraße
Gaufschweg
Kreuzbergstrasse
Koblenzer Strasse
Hellenbank
Parkstrasse
Memminger Strasse
Kirchstrasse
Wiesweg
Brösselweg
Am Haferbach
Oseneck
Zum Güterbahnhof
Rellinger Strasse

instantnavi @instantnavi 7 Sep

Hey! Did you know, if you post a link of your navi, people can expand and preview it within the tweet? Example:
instantnavi.com/navigations/fl…

Hide photo Reply Retweet Favorite

flinc HQ by instantnavi

instantnavi lets you create your own, fancy browser based navigation system

instantnavi @instantnavi · Following

1
RETWEET

5:58 PM - 7 Sep 12 · Details Flag media

PHANTOMJS 1.X

Good

Just one binary

Not So Good

Project was somehow stalled

Bad

No web font support :(

PHANTOMJS 2.0!

Including web font support! *yay*

Let's try again...

PROBLEM

Present your work on a web page
to somebody who can't access it right now.

RESPONSIVE MOCKUPS

github.com/fabrik42/responsive_mockups

RESPONSIVE MOCKUPS

Takes screenshots of a webpage in different resolutions and automatically applies it to mockup templates.

Mitfahrgelegenheit - Die fli
flinc AG [DE] https://flinc.org/home
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REQUIREMENTS

- Easy to install.
- No dependencies, if possible.
- Nice templates to start right away.

EASY INSTALLATION

```
brew install phantomjs

git clone [responsive_mockups] && cd responsive_mockups

phantomjs example.js
```

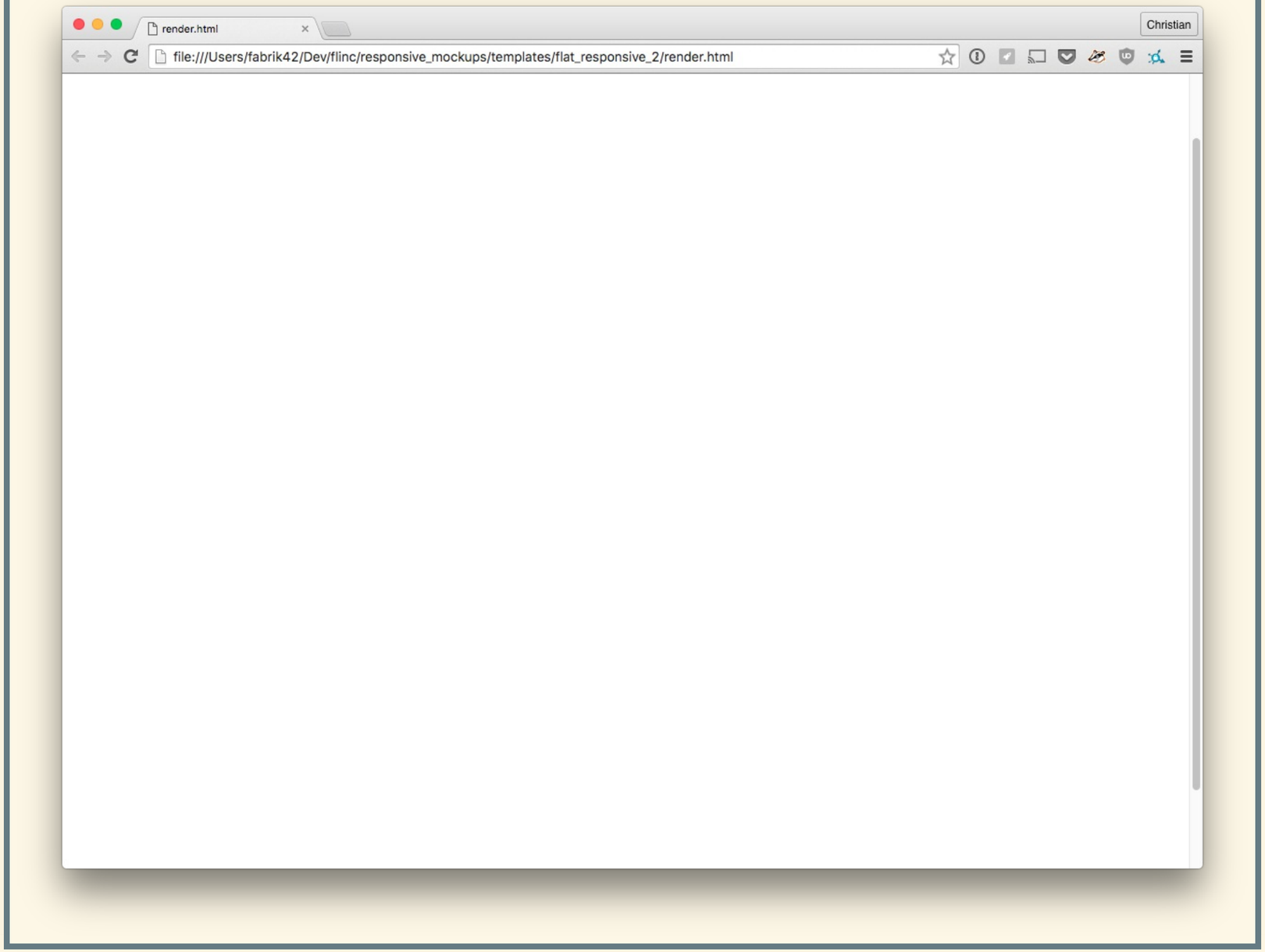
EXAMPLE.JS

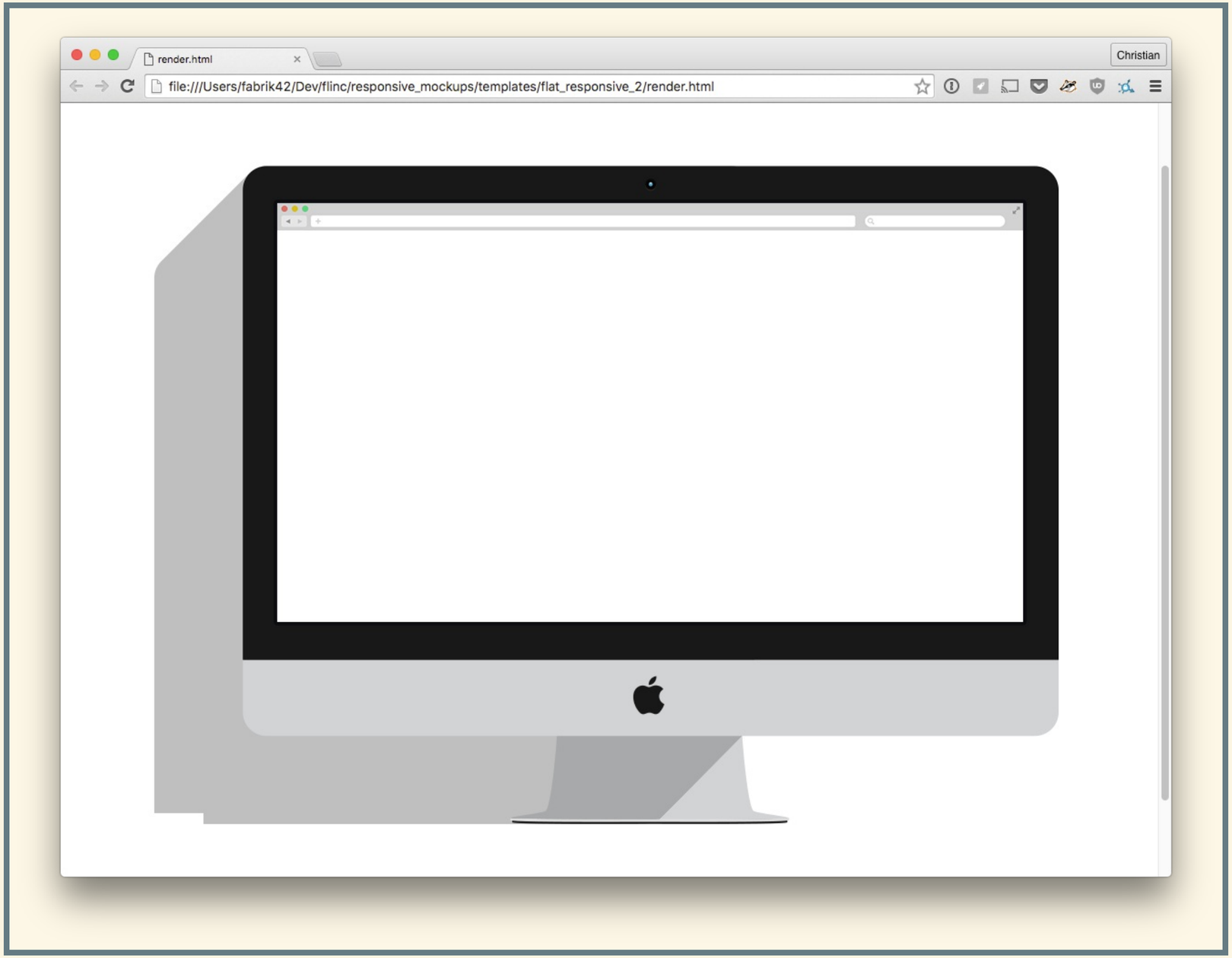
```
var mockup = require('./index');

mockup.create({
  url:      'https://flinc.org/home',
  template: 'flat_responsive_2',
  output:   'my_mockup.png'
});
```

HOW IT WORKS

1. User provides URL and template name.
2. PhantomJS generates screenshots based on different viewports.
3. PhantomJS assembles mockup image using a local HTML file and <canvas>.


render.html
Christian
file:///Users/fabrik42/Dev/flinc/responsive_mockups/templates/flat_responsive_2/render.html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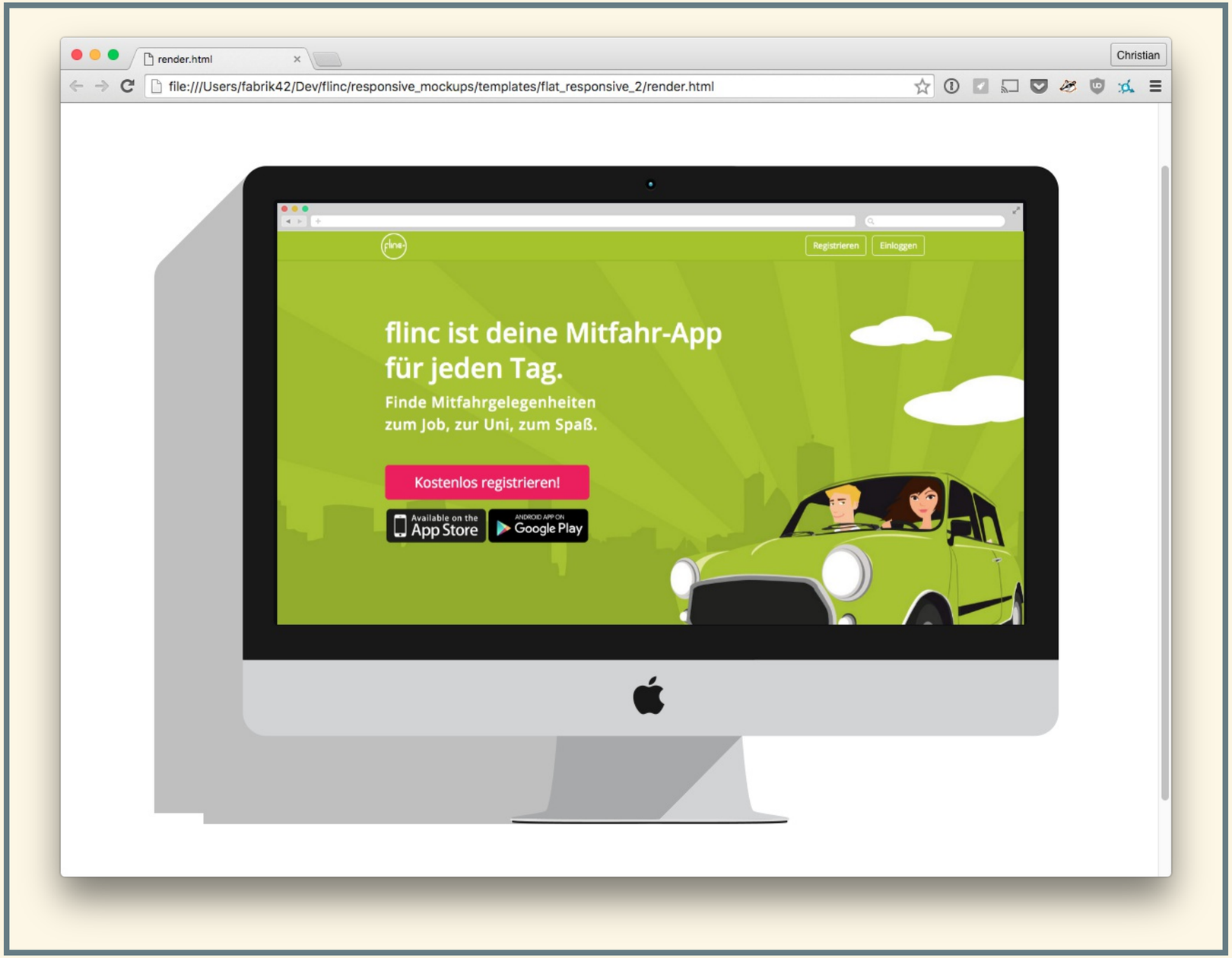
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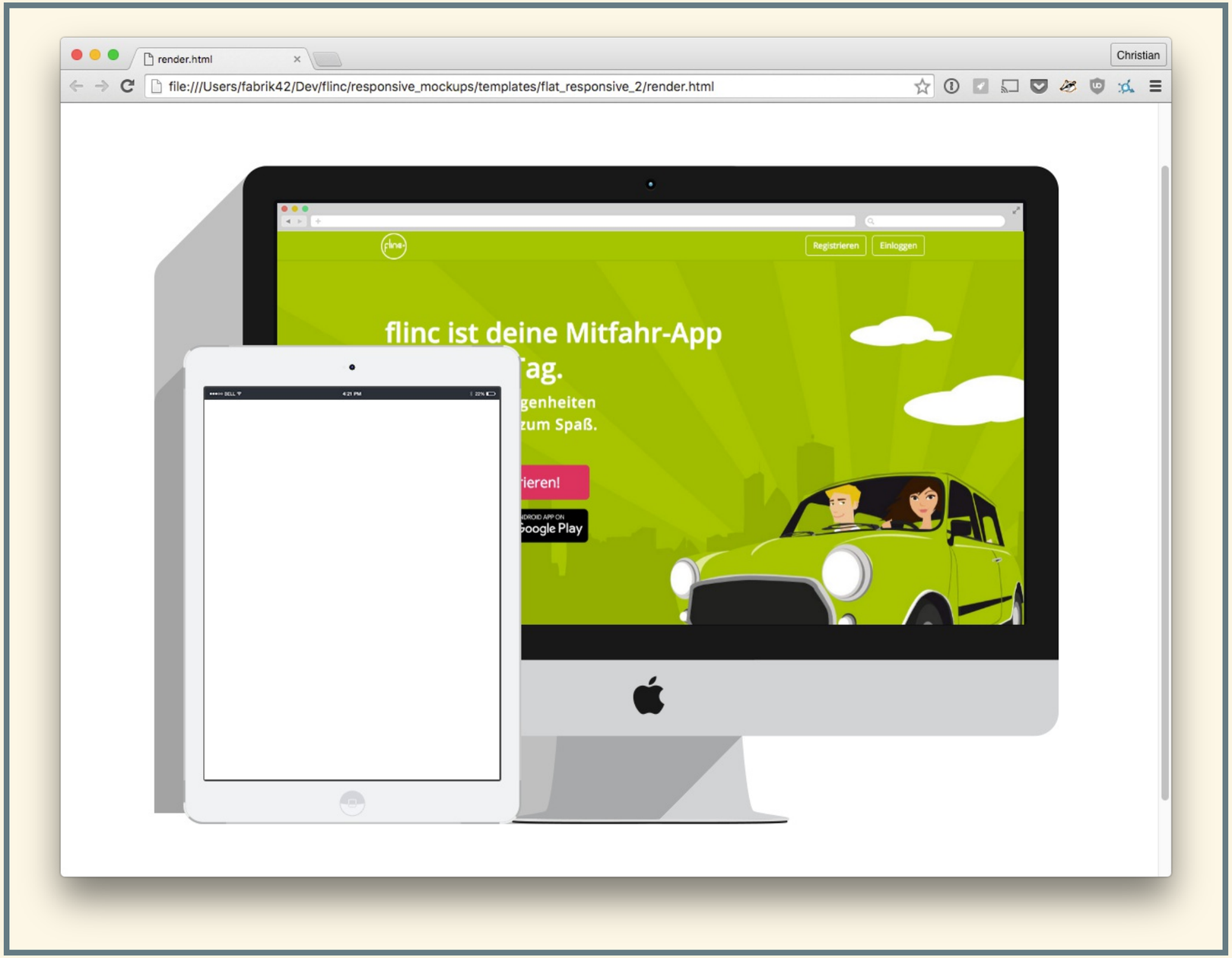
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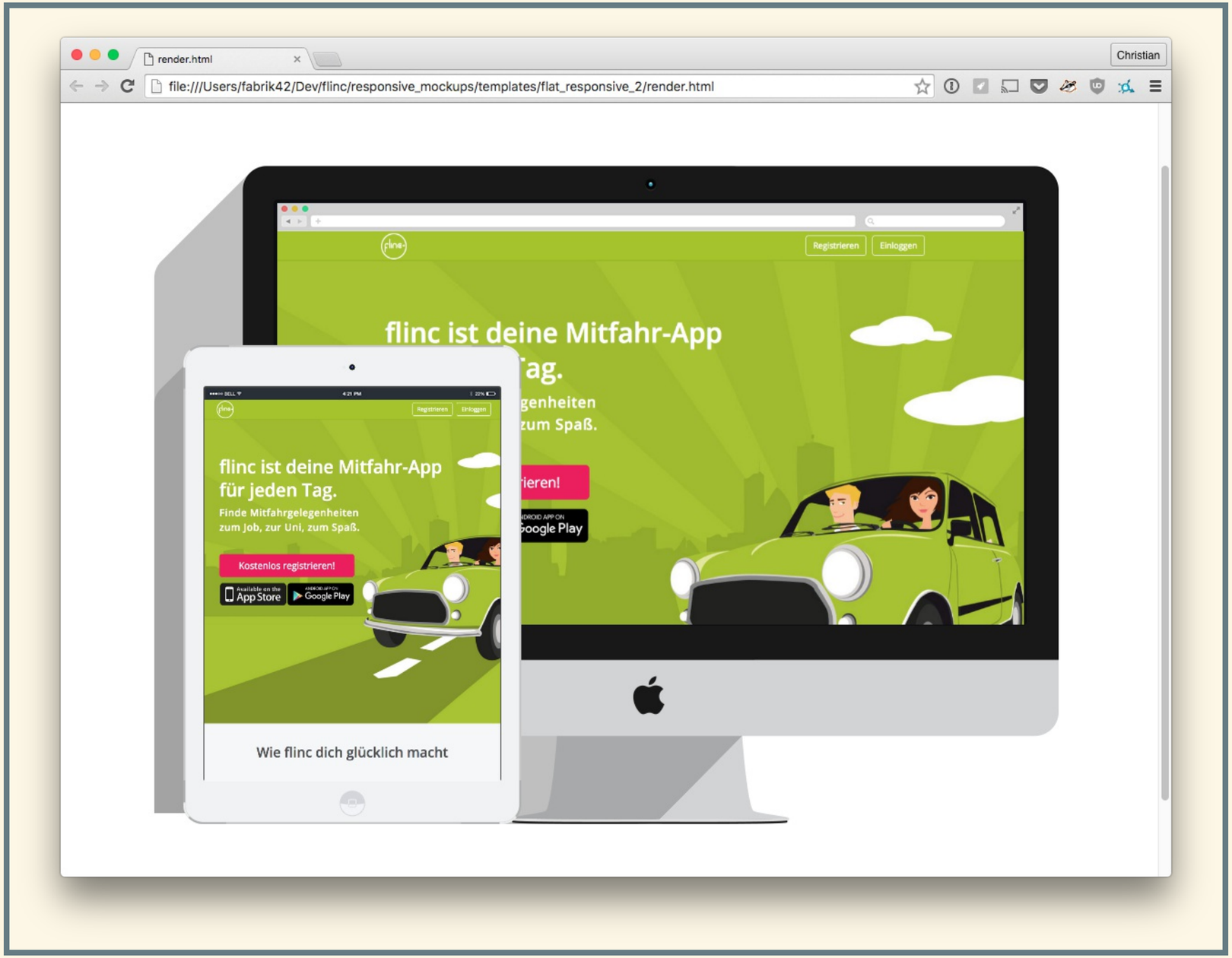
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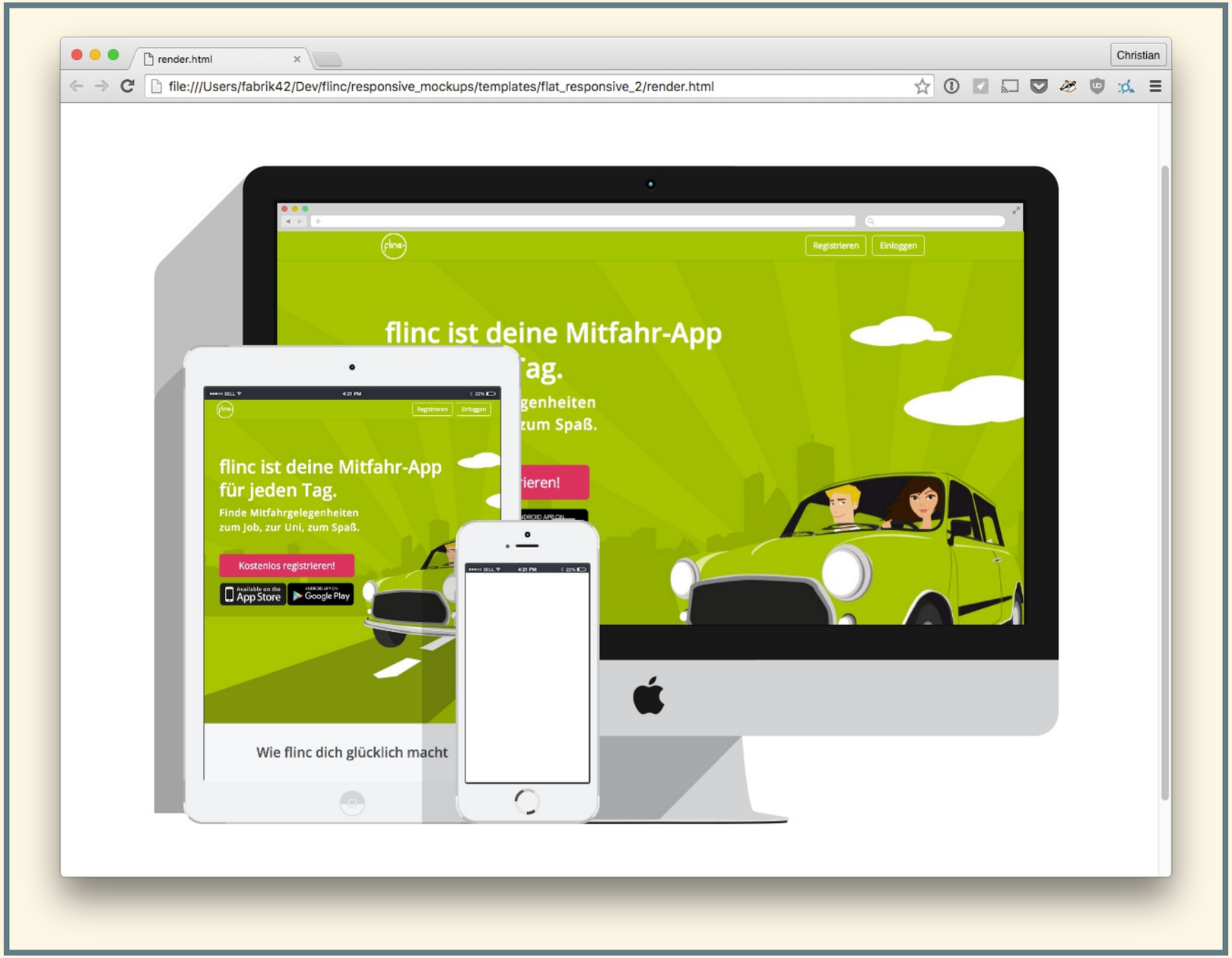
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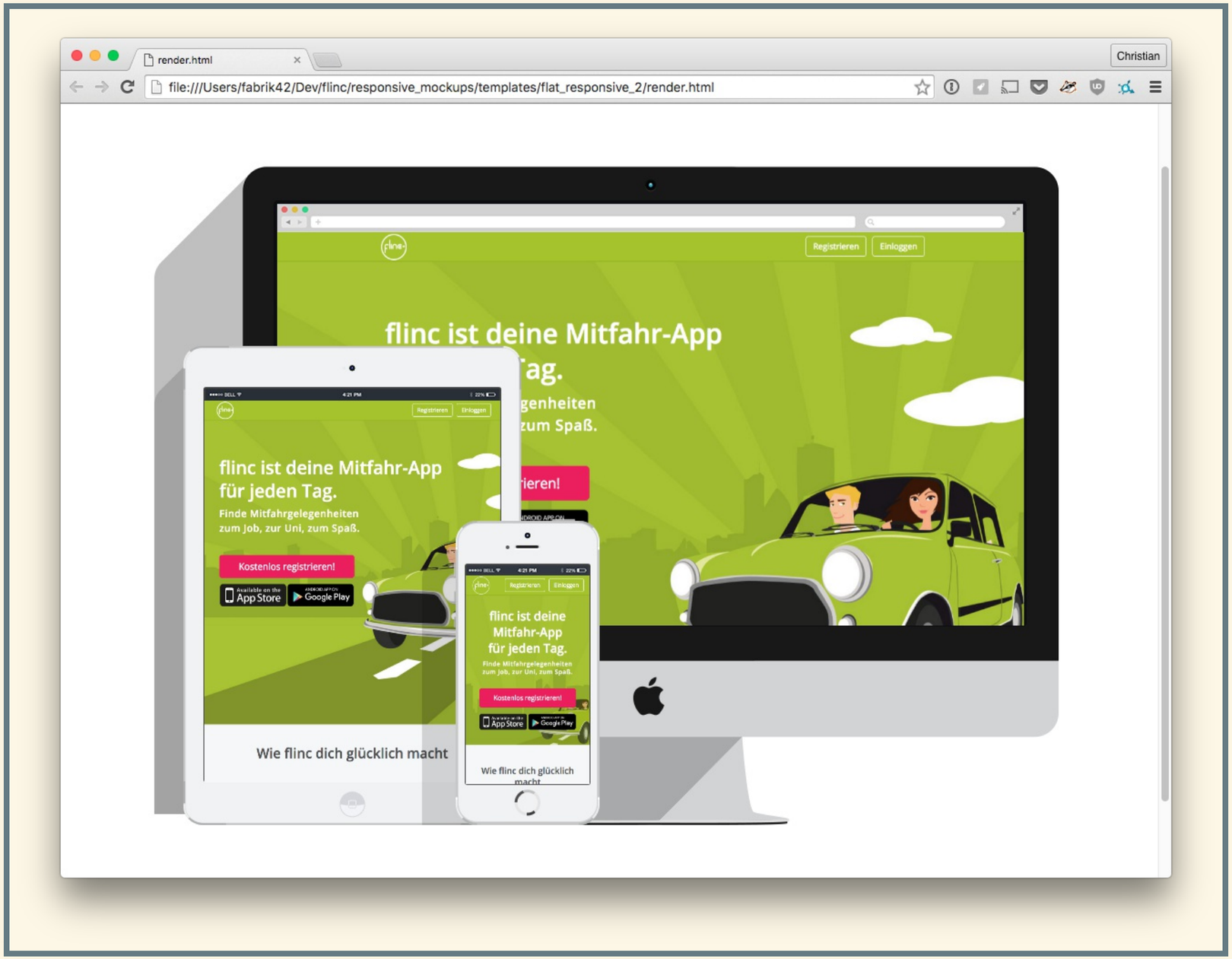
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RESPONSIVE MOCKUPS

github.com/fabrik42/responsive_mockups

Mockup graphics are nice, but what about...

MOCKUP PHOTOS?

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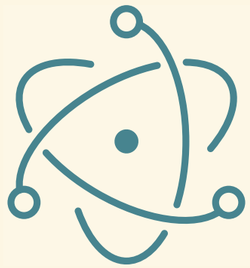
DEMO TIME!

http://phantomjs.org/supported-web-standards.html

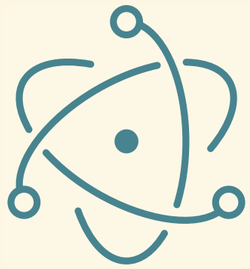
The following features, due to the nature of PhantomJS, are irrelevant:

- WebGL
- CSS 3D
- Video and Audio



ELECTRON

- Atom Editor
- Visual Studio Code
- Slack
- Mapbox Map Designer
- ... nightmare.js!



ELECTRON

Knows how to WebGL :)

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ONE MORE THING...

Now that we mastered all kind of images,
what about...

MOVIES!

POLITENESS

STOP MOTION IN HTML & JS

- Create an animation
- Stop at every frame
- Make a screenshot
- Go to the next frame

DEMO TIME!

Remember: We wanted to make things shareable.

CUSTOMIZED MOVIES!

```
browser
  .evaluate(function (currentFrame) {
    stage.goto(currentFrame);
  }, currentFrame)
```

Manipulate the movie while rendering the frames

ADVANCED DEMO TIME!

Q & A

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- fabrik42@gmail.com