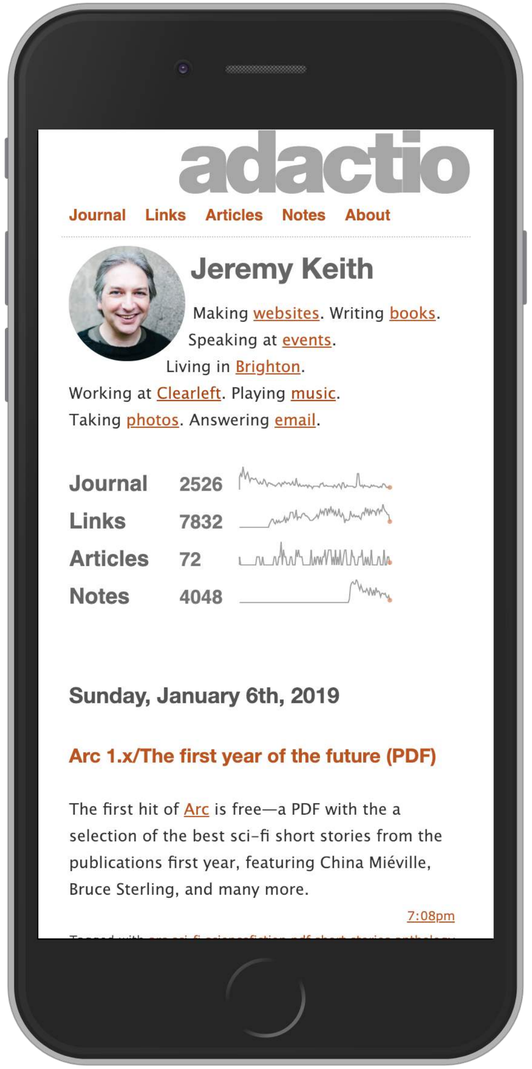
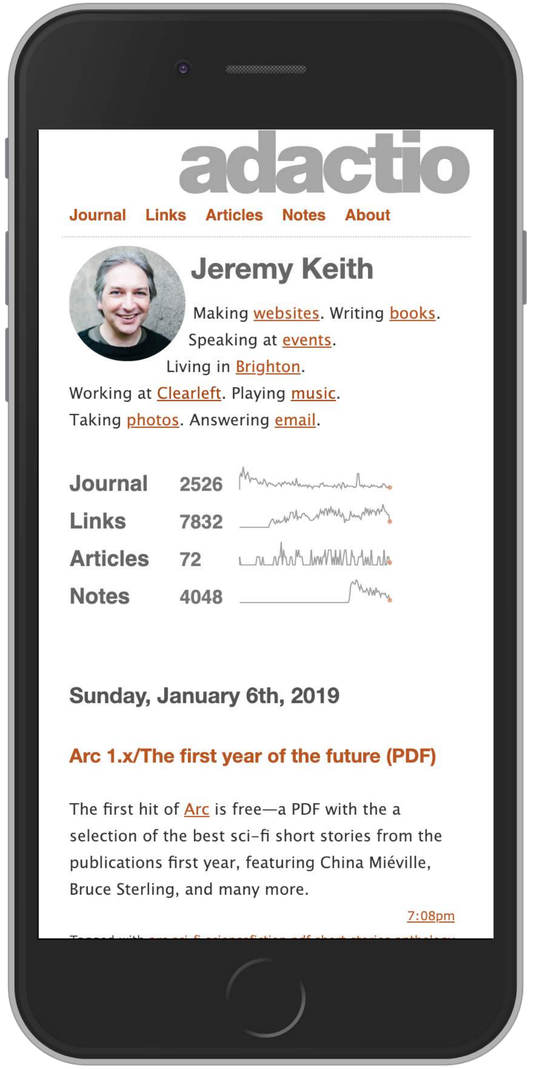
# Going Offline

# adactio.com


adactio
Journal Links Articles Notes About
Jeremy Keith
Making websites. Writing books.
Speaking at events.
Living in Brighton.
Working at Clearleft. Playing music.
Taking photos. Answering email.
Journal 2526
Links 7832
Articles 72
Notes 4048
Sunday, January 6th, 2019
Arc 1.x/The first year of the future (PDF)
The first hit of Arc is free—a PDF with the a selection of the best sci-fi short stories from the publications first year, featuring China Miéville, Bruce Sterling, and many more.
7:08pm

# adactio.com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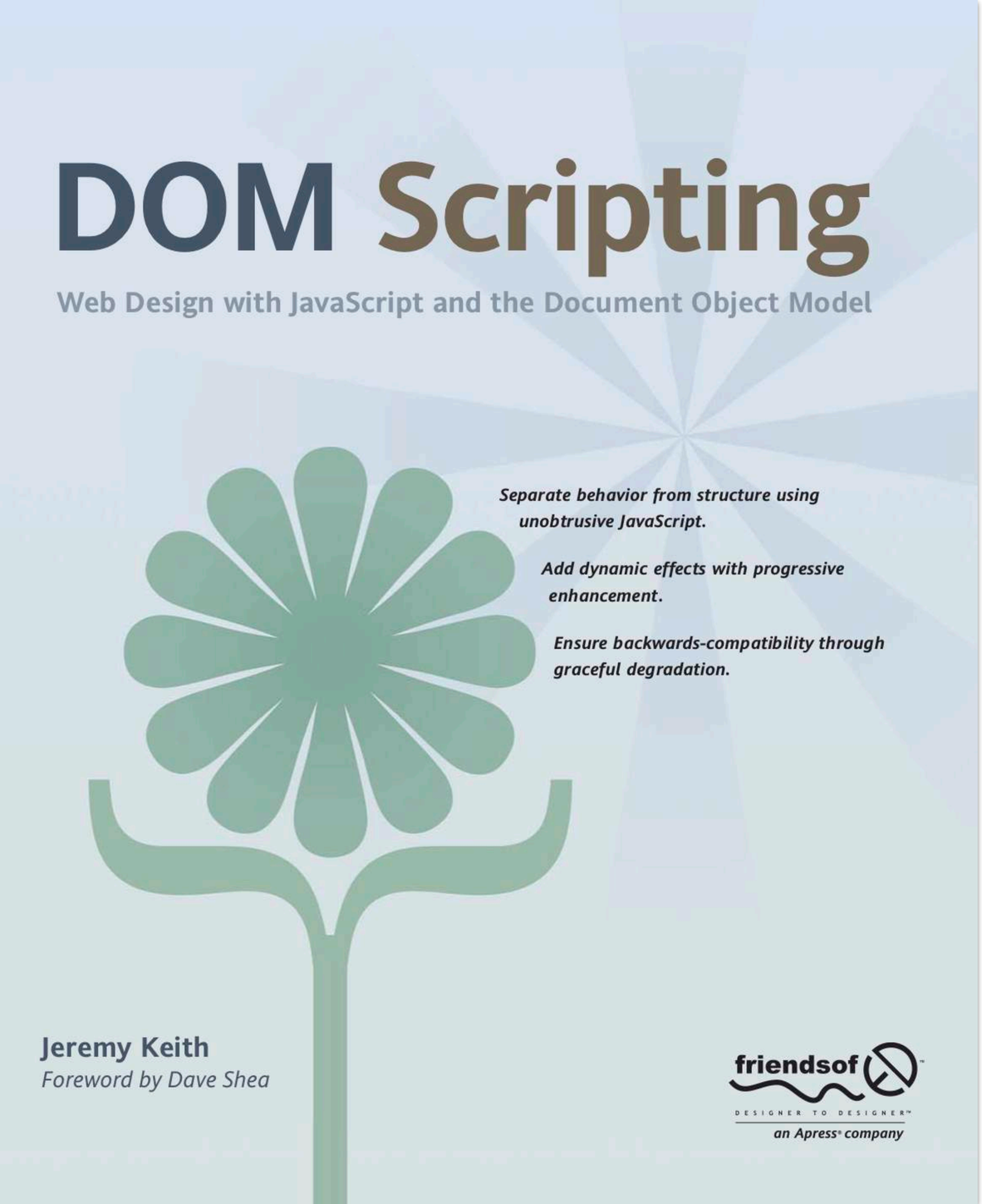
# resilientwebdesign.com


DOM Scripting
Web Design with JavaScript and the Document Object Model
Separate behavior from structure using unobtrusive JavaScript.
Add dynamic effects with progressive enhancement.
Ensure backwards-compatibility through graceful degradation.
Jeremy Keith
Foreword by Dave Shea
friendsof
DESIGNER TO DESIGNER™
an Apress® company

# 2005

# JavaScript

*When someone mouses over a link,*
*make it look different.*

*When someone fills out a form,*
*make sure the inputs are valid.*

# JavaScript

*Find stuff and do stuff to it.*

# JavaScript

*Find stuff and do stuff to it.*

# jQuery

# JavaScript

*Find stuff and do stuff to it.*

```
$('.stuff').click(doStuff);
```

# jQuery

# JavaScript

```
document.querySelector('.stuff')
.addEventListener('click', doStuff);
```

*Find stuff and do stuff to it.*

```
$('.stuff').click(doStuff);
```

# jQuery

# JavaScript

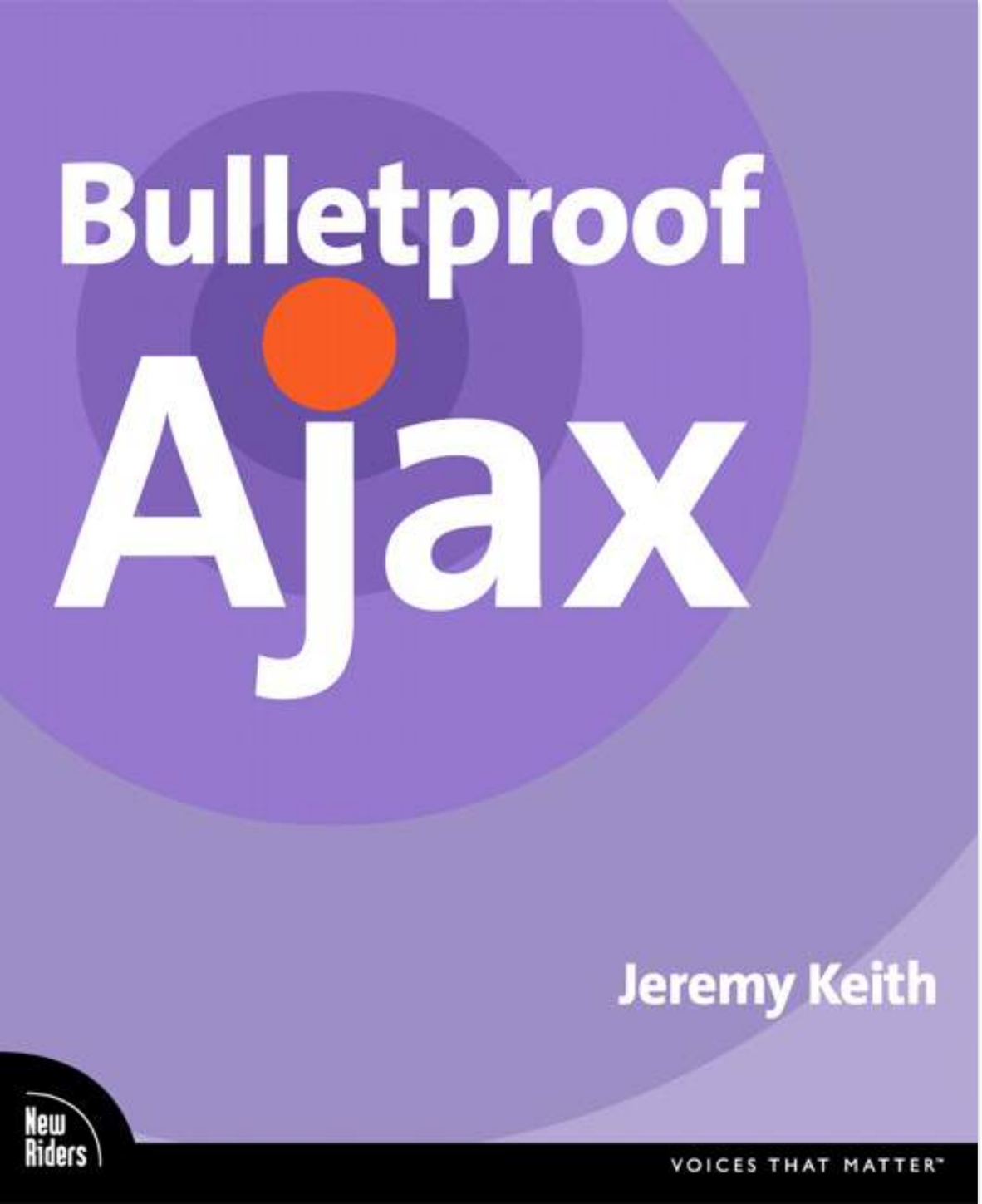
**code**

*Logic.*

# JavaScript

*Logic.*

**code**


Bulletproof
Ajax
Jeremy Keith
New Riders
VOICES THAT MATTER™

2007

*Update part of this page with data from a server.*

# Ajax

# DOM Scripting

*Find stuff on this page and do stuff to it.*

*Update part of this page with data from a server.*

# Ajax

# DOM Scripting

*Find stuff on this page and do stuff to it.*

*Update part of this page with data from a server.*

# Ajax

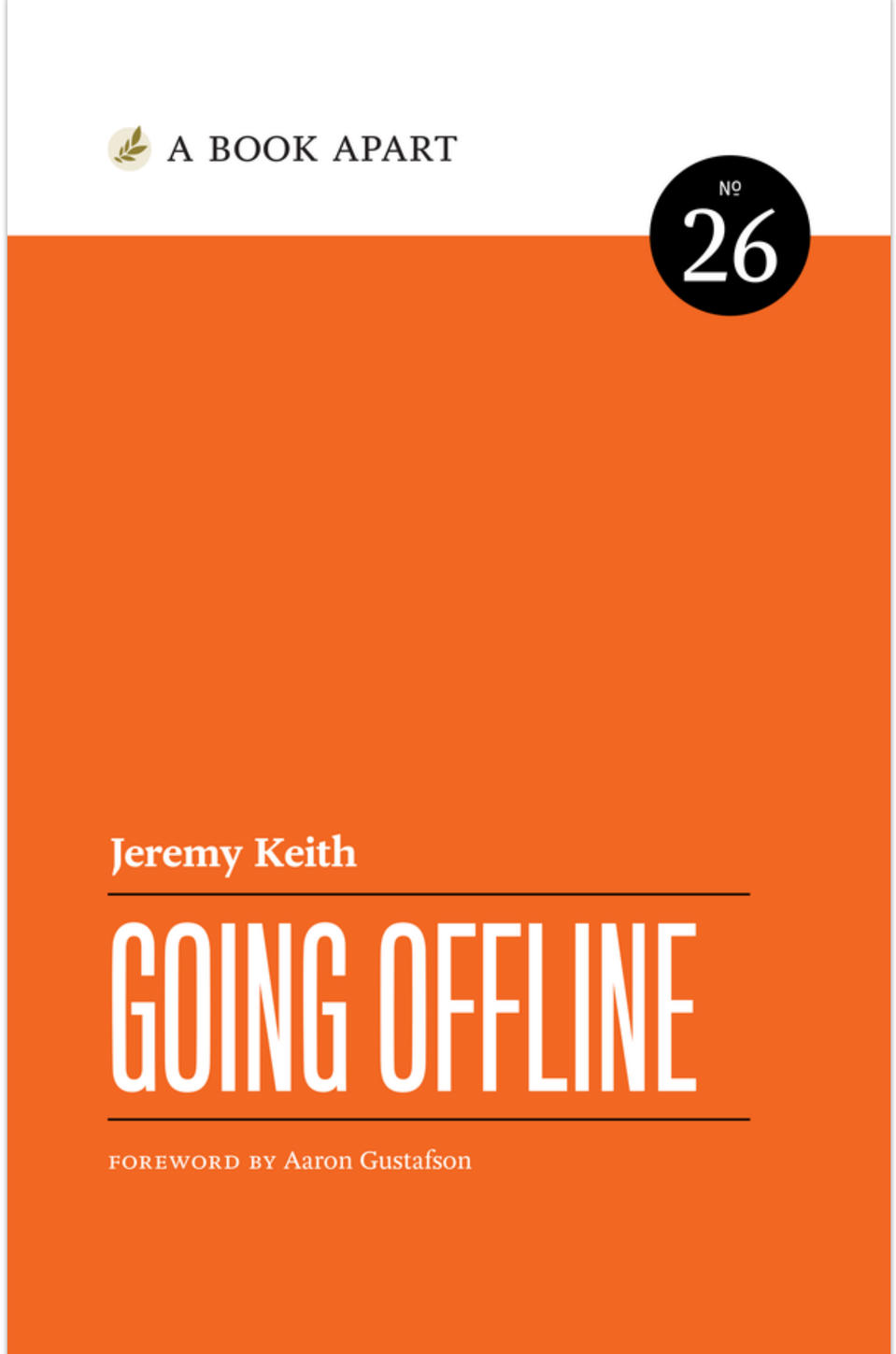
DOM Scripting

web worker

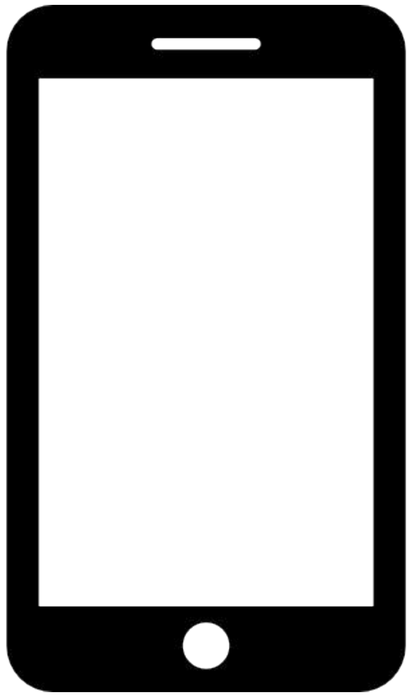
Ajax

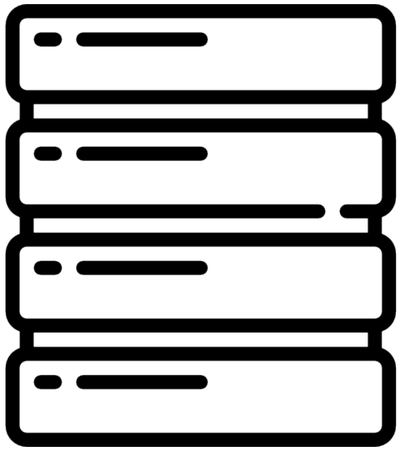
# web worker

# service worker

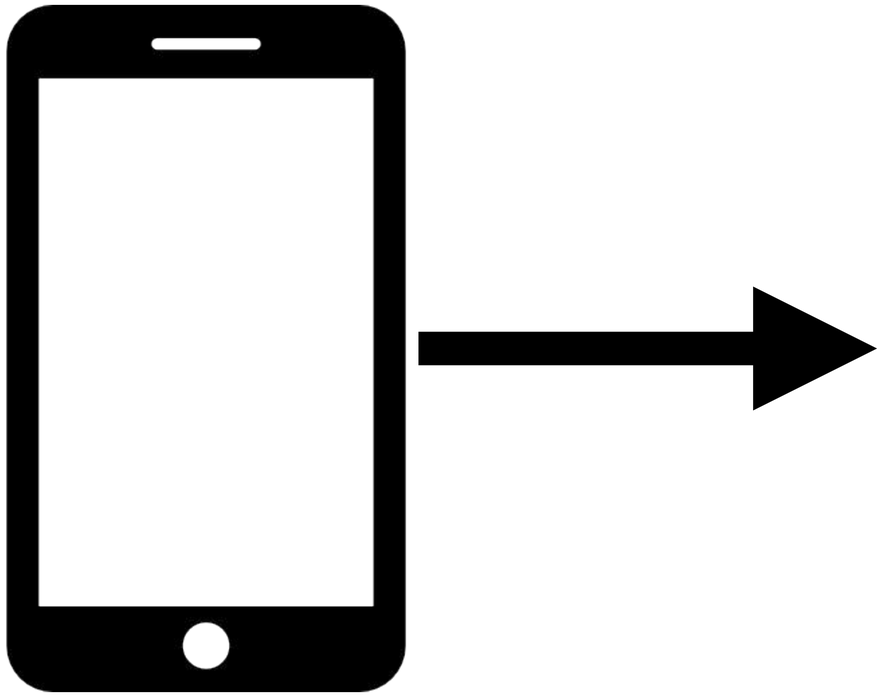

A BOOK APART
№
26
Jeremy Keith
GOING OFFLINE
FOREWORD BY Aaron Gustafson

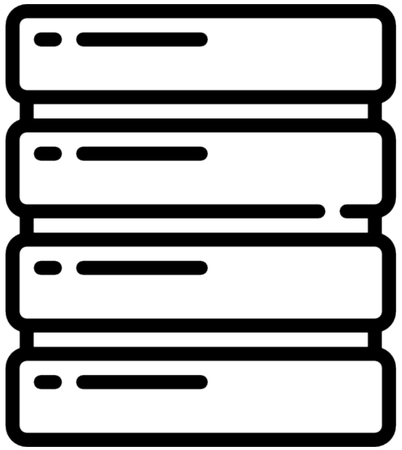
2018





example.com





example.com


example.com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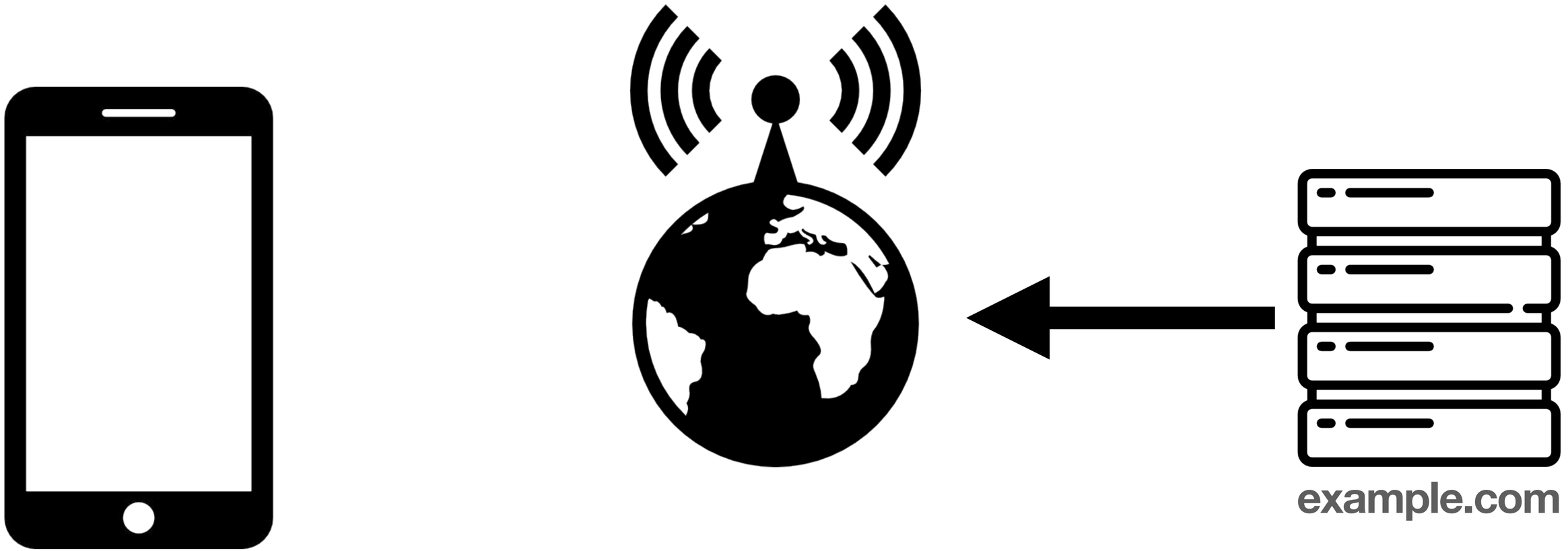
example.com


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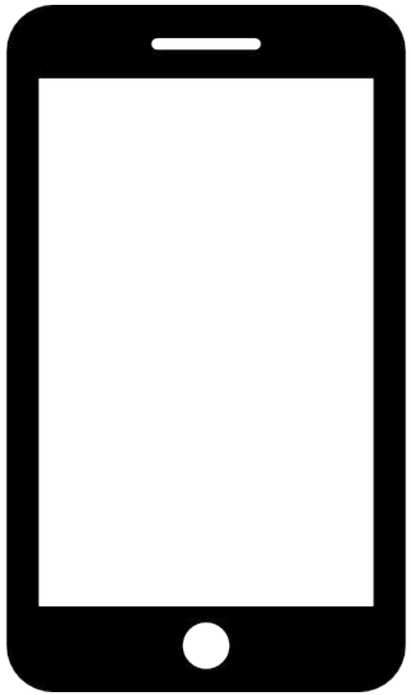
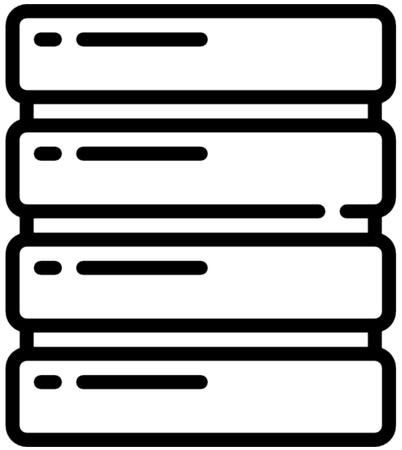


page.html
styles.css
script.js
icon.png



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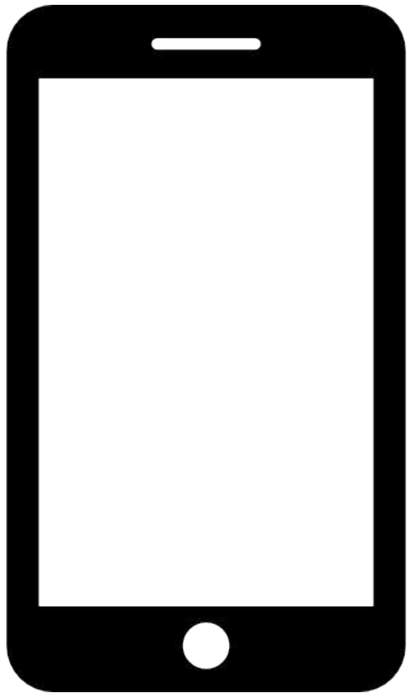
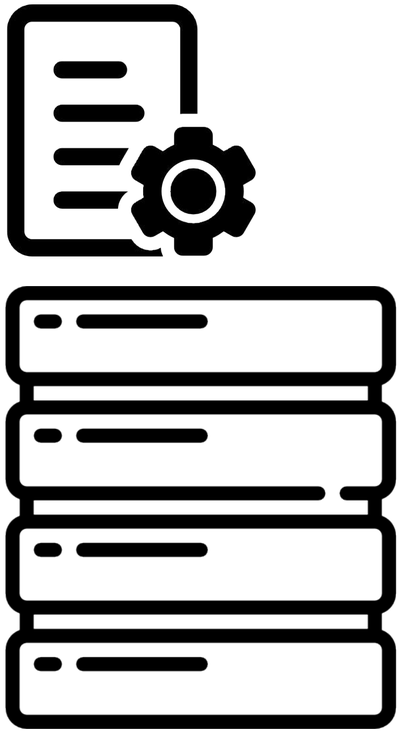


serviceworker.js



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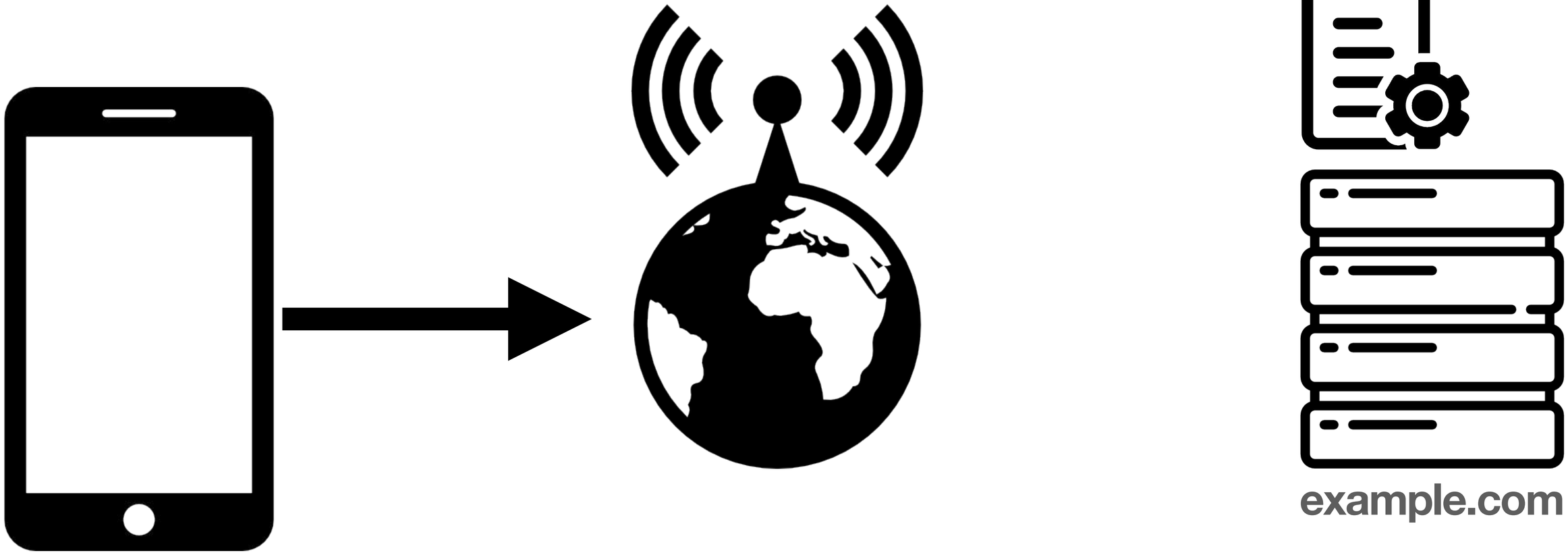
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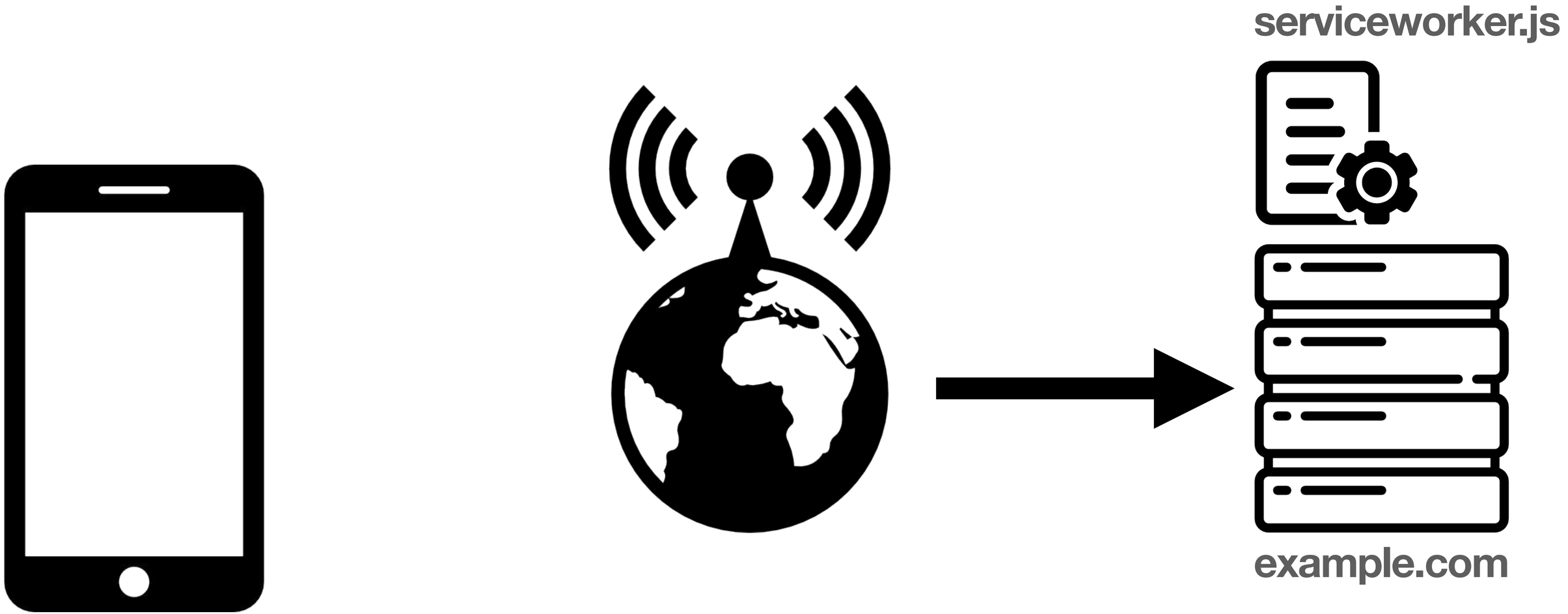
example.com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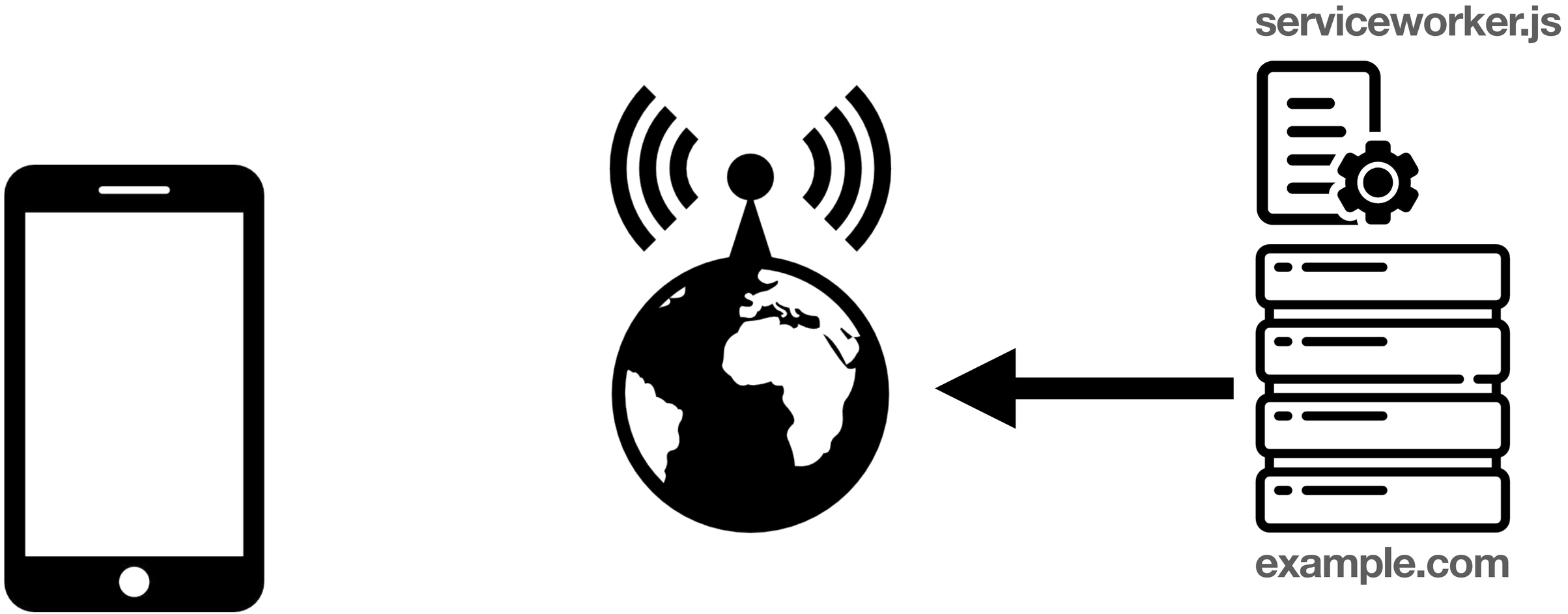
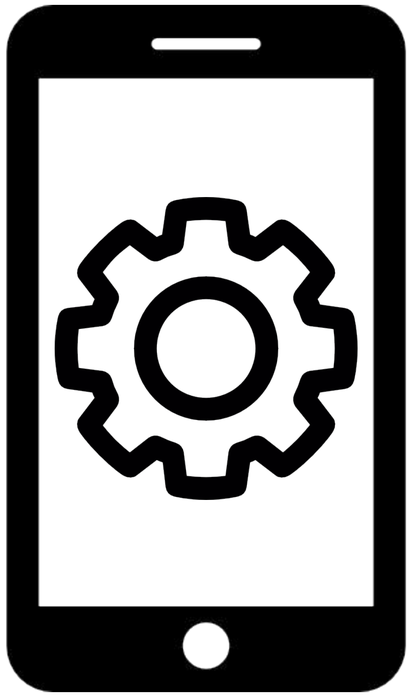
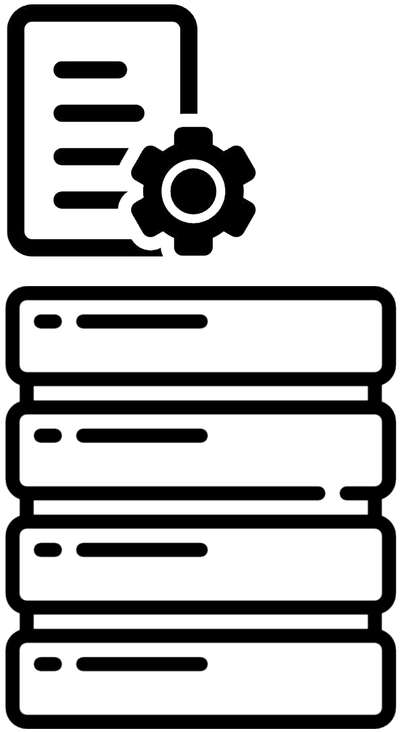
example.com


serviceworker.js
example.com

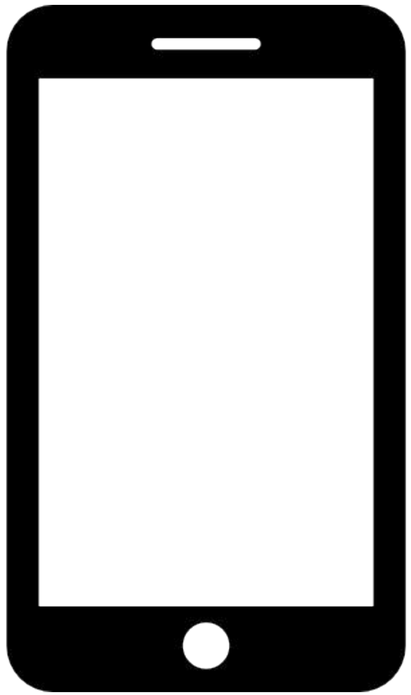

serviceworker.js
example.com

serviceworker.js





example.com



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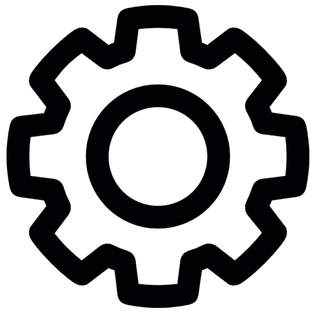
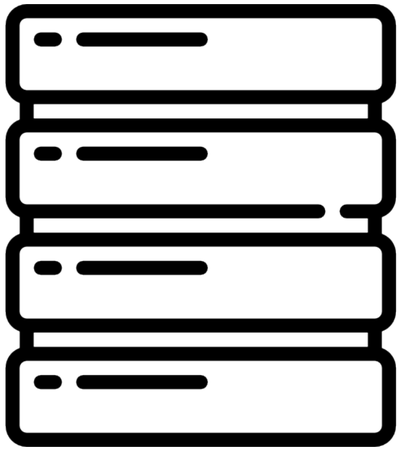
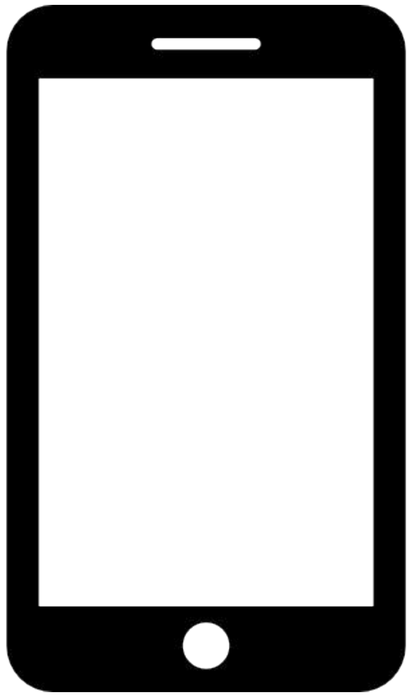




example.com



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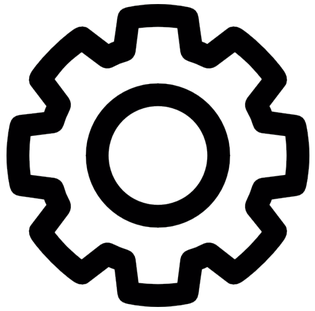
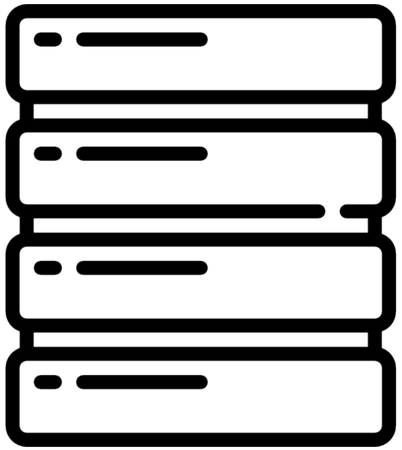




https://example.com

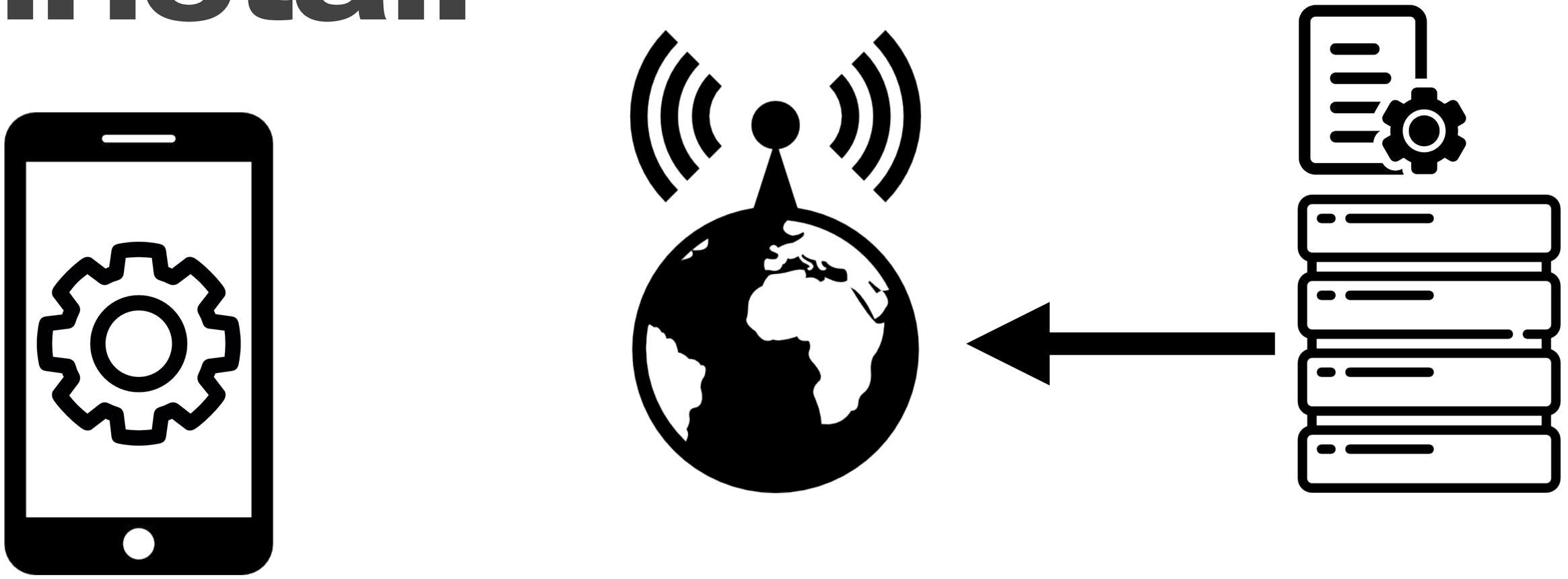
https

register
install
active
update

life cycle

# register

# install



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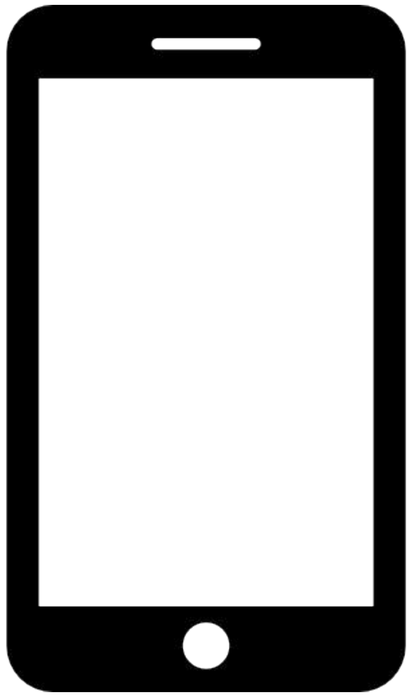

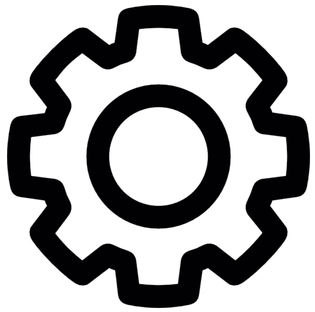

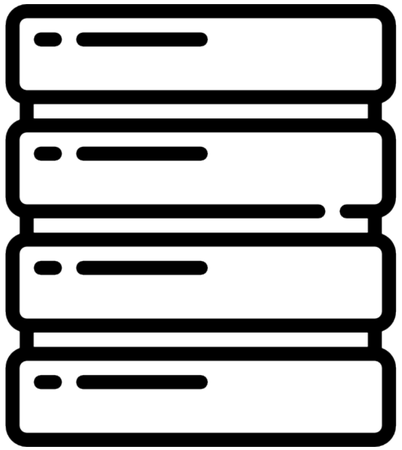

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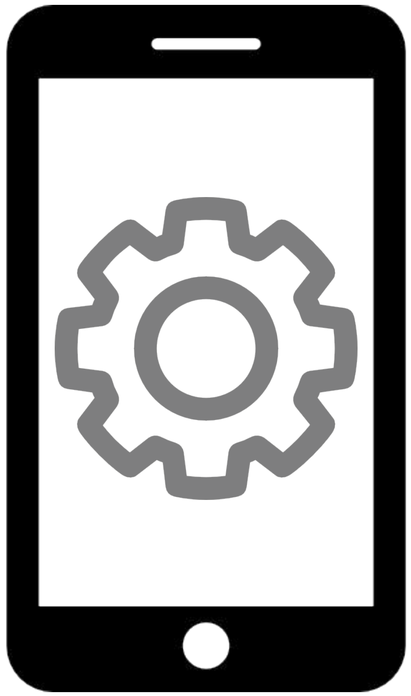

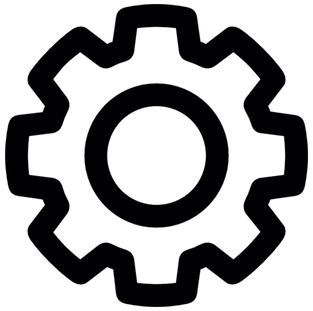

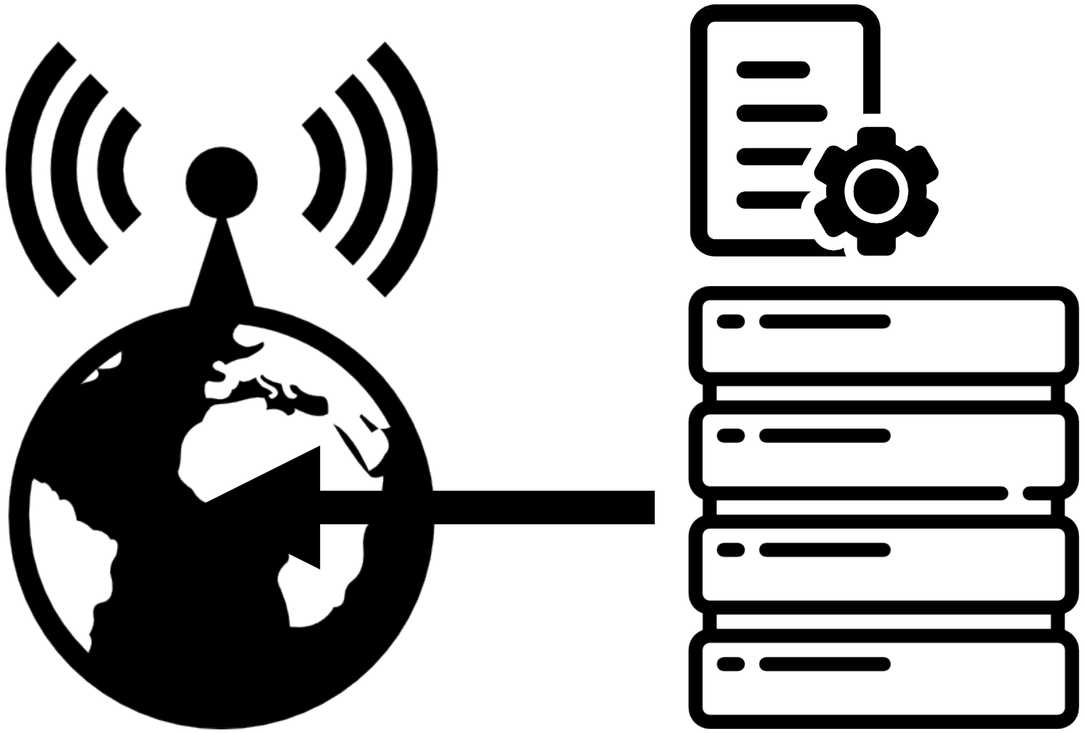

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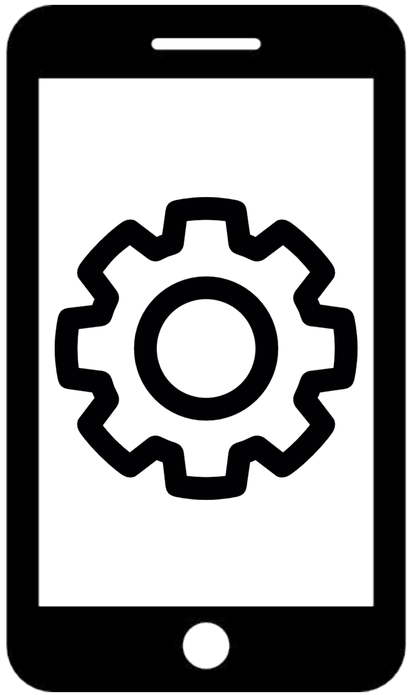
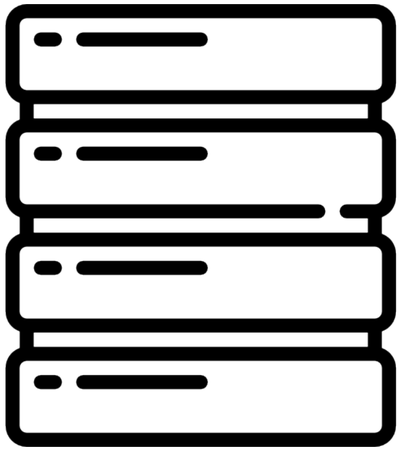
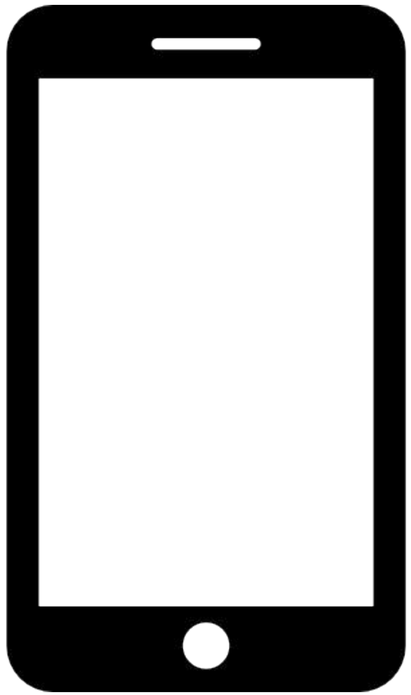
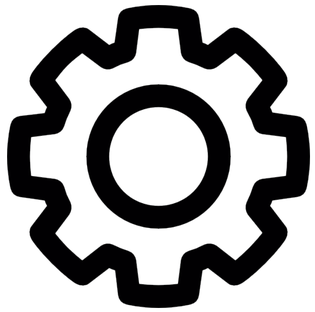
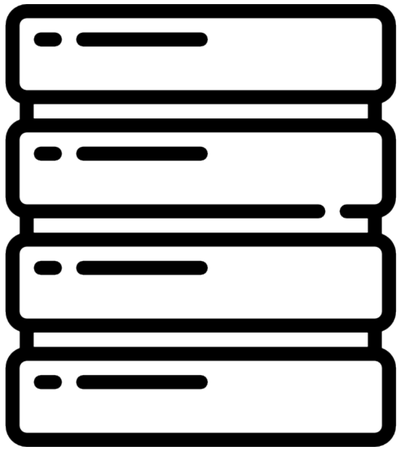




# active







# register

# register

*Get the JavaScript file ‘serviceworker.js’*

# register

```
<script src="/serviceworker.js">
</script>
```

# register

```
<script src="/serviceworker.js">
</script>
```

# register

```
<script>
navigator.serviceWorker.register();
</script>
```

# register

```
<script>
navigator.serviceWorker.register
('/serviceworker.js');
</script>
```

# register

```
<script>
navigator.serviceWorker.register
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</script>
```

# register

```
<script>
navigator.serviceWorker.register
('/assets/js/serviceworker.js');
</script>
```

# register

```
<script>
navigator.serviceWorker.register
('/serviceworker.js');
</script>
```

# register

```
<script>
if (navigator.serviceWorker) {
    navigator.serviceWorker.register
    ('/serviceworker.js');
}
</script>
```

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*Get the JavaScript file ‘serviceworker.js’*

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<script>
if (navigator.serviceWorker) {
    navigator.serviceWorker.register
    ('/serviceworker.js');
}
</script>
```

# register

*Install the JavaScript file ‘serviceworker.js’*

```
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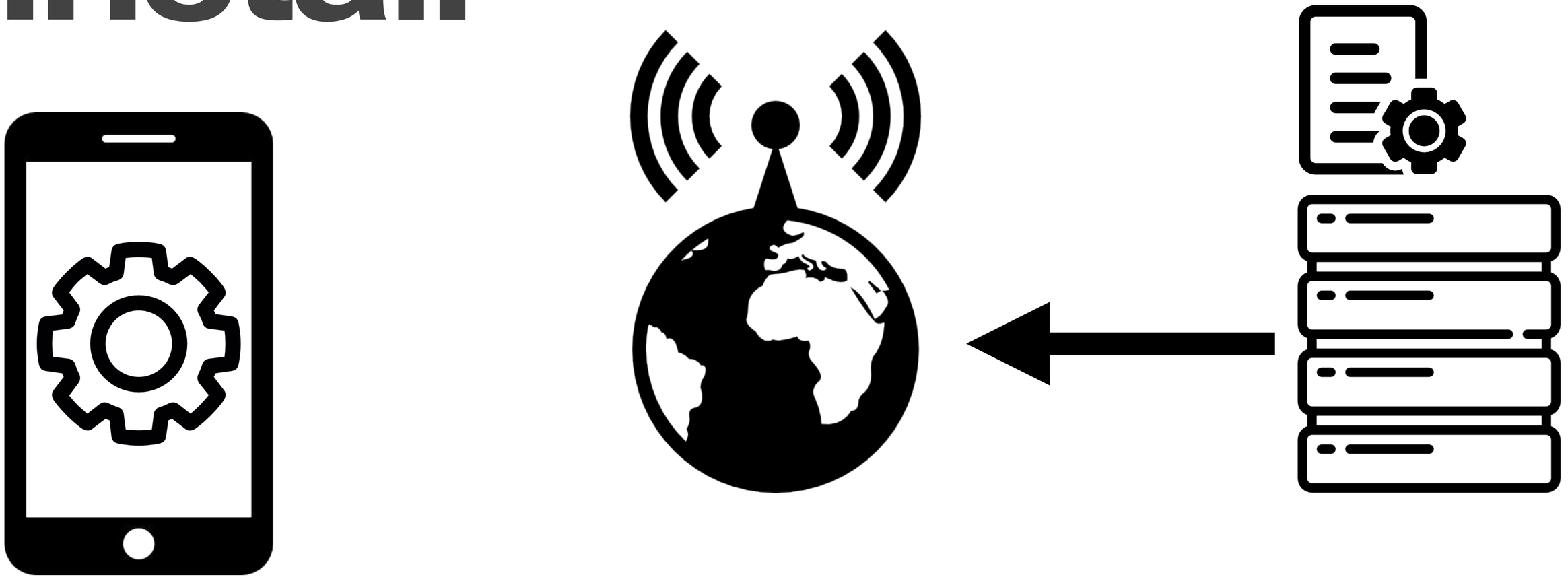
if (navigator.serviceWorker) {
    navigator.serviceWorker.register
    ('/serviceworker.js');
}
</script>
```

# install



# install

# caching

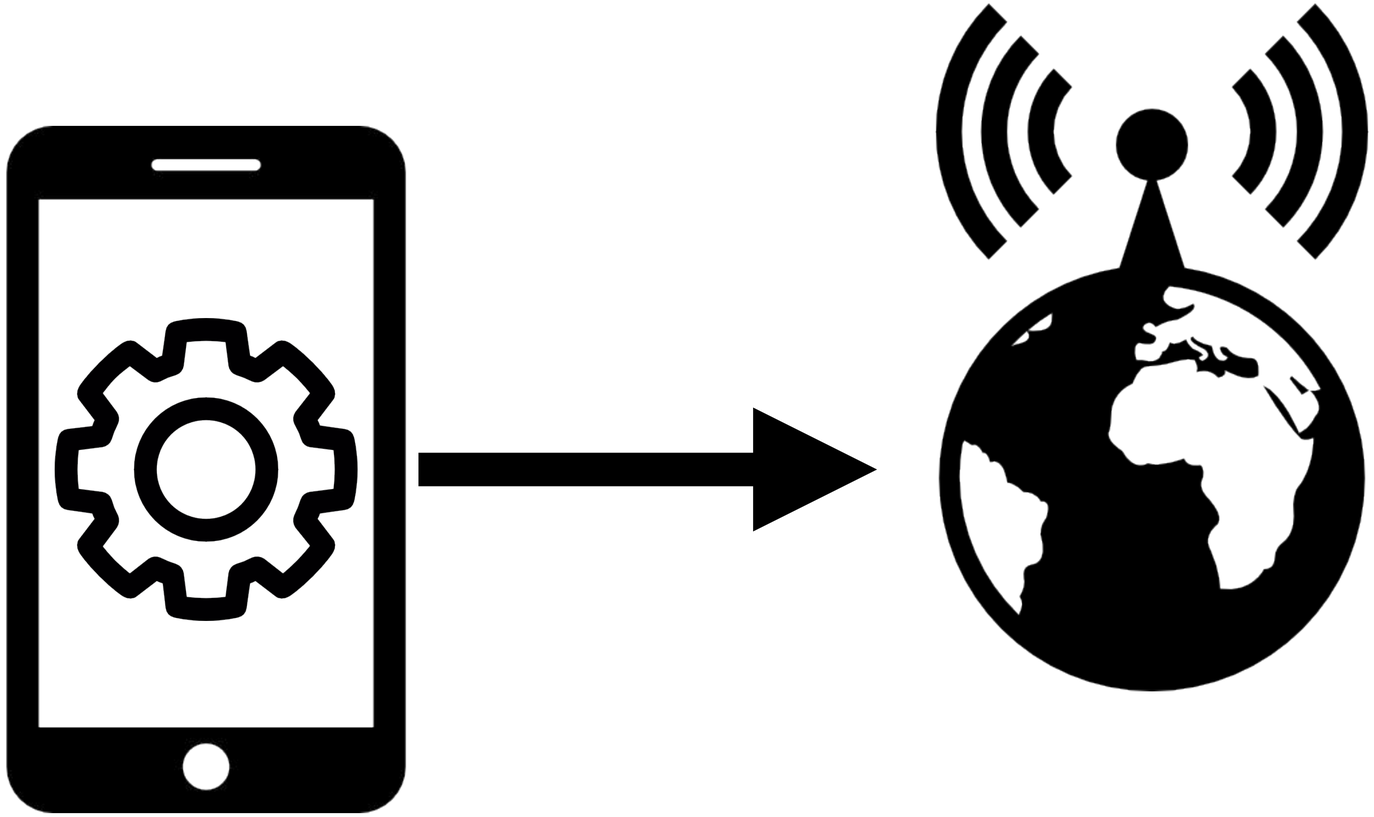
memory cache
browser cache
Cache API

# caching

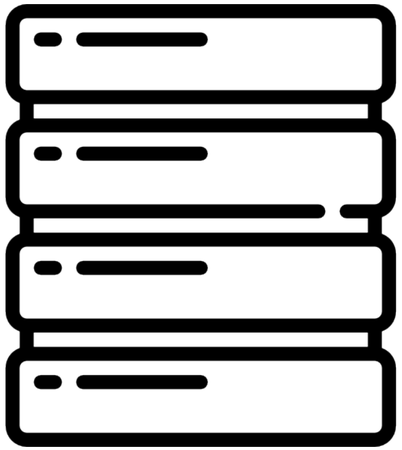
# install

# precaching

# install



styles.css
script.js
icon.png



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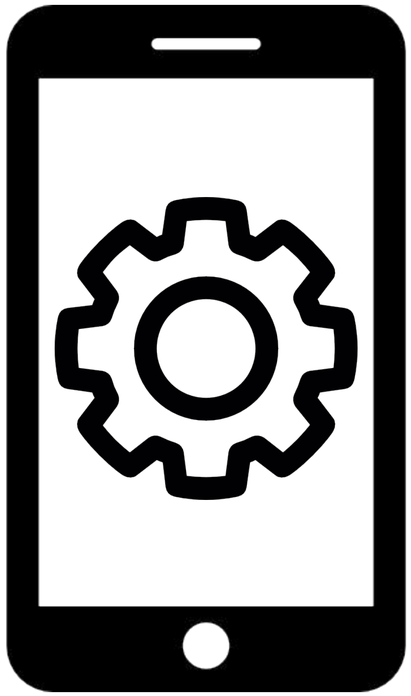

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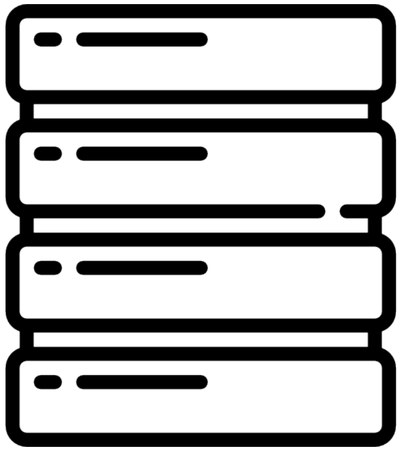
script.js
icon.png



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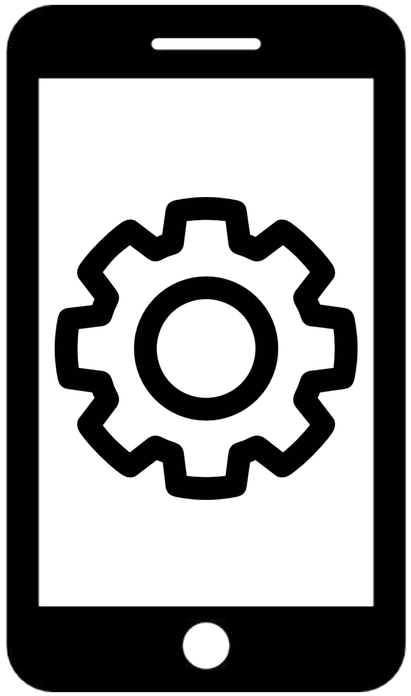

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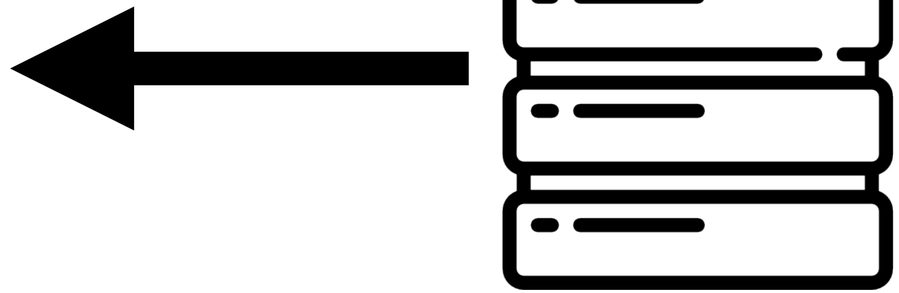

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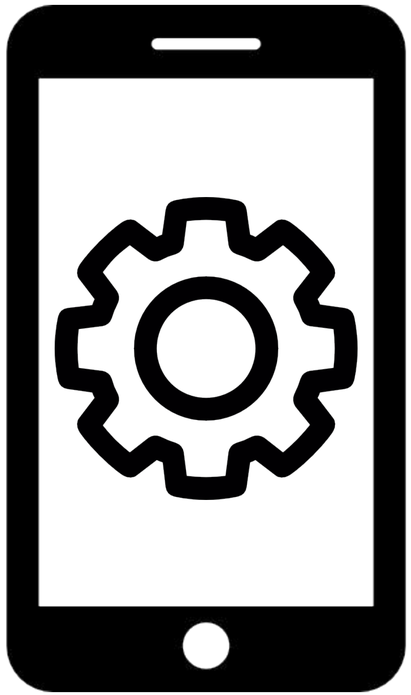

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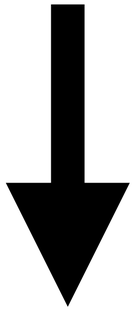

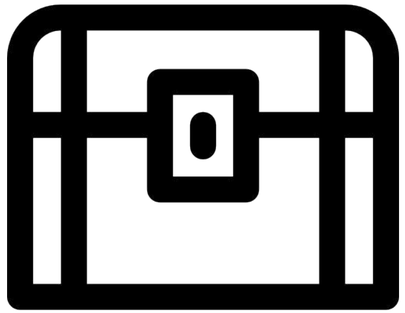

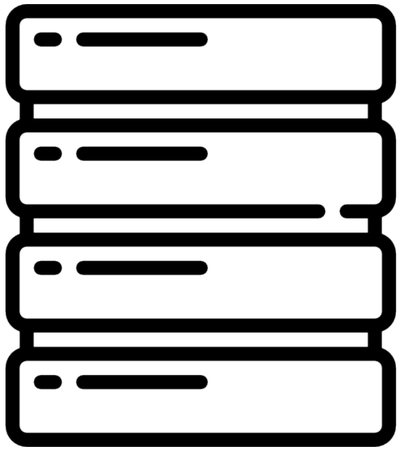

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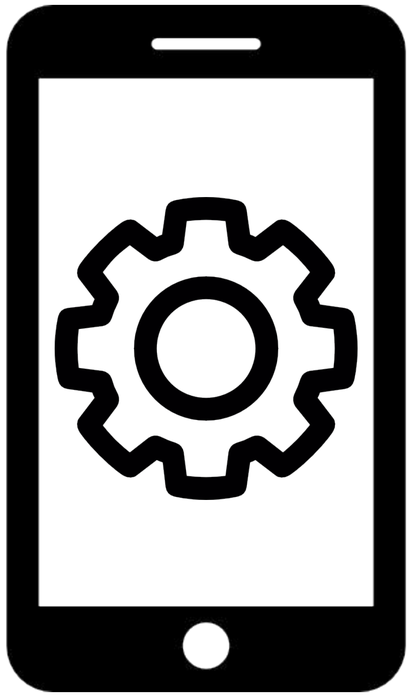

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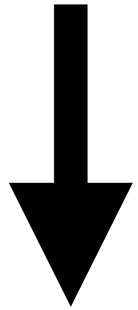
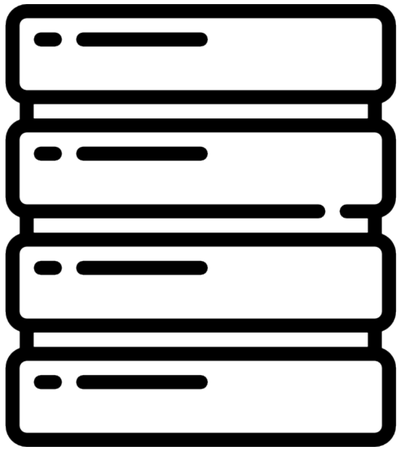
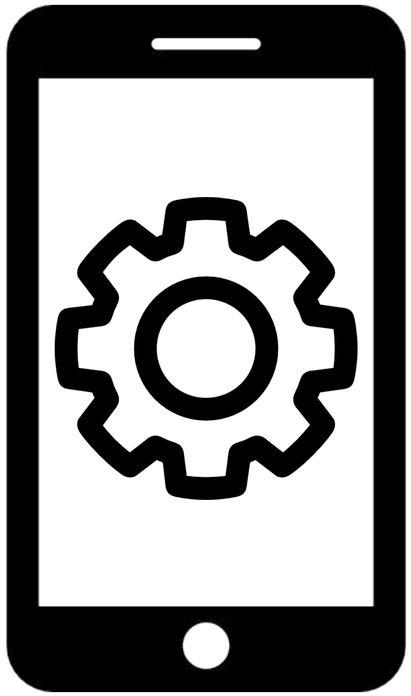
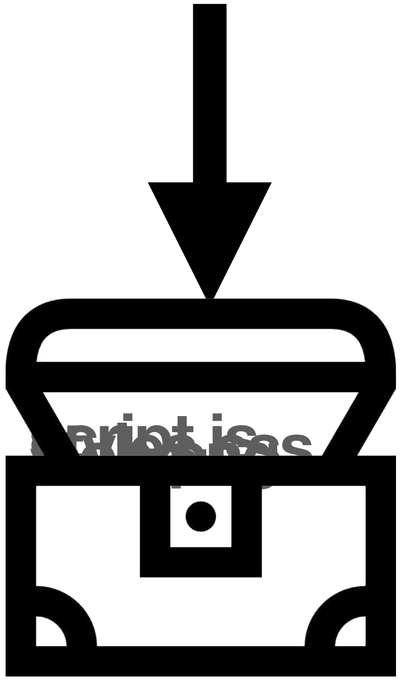
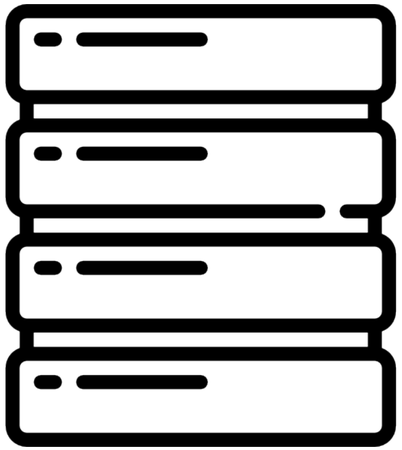




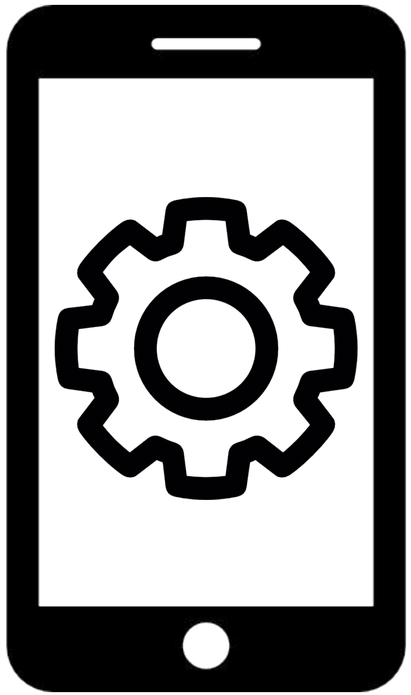
# install

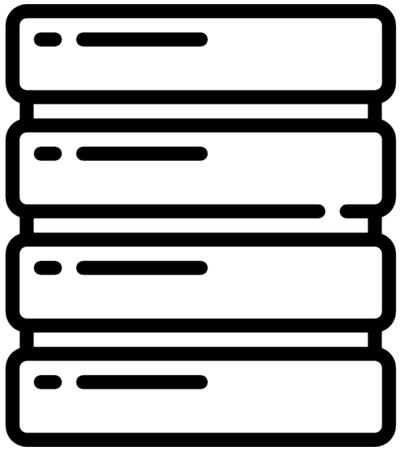


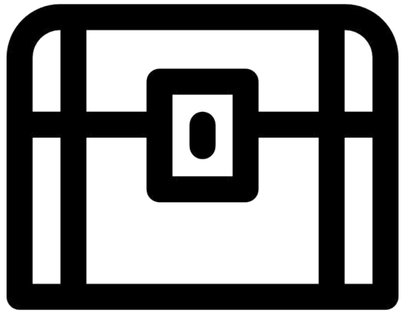




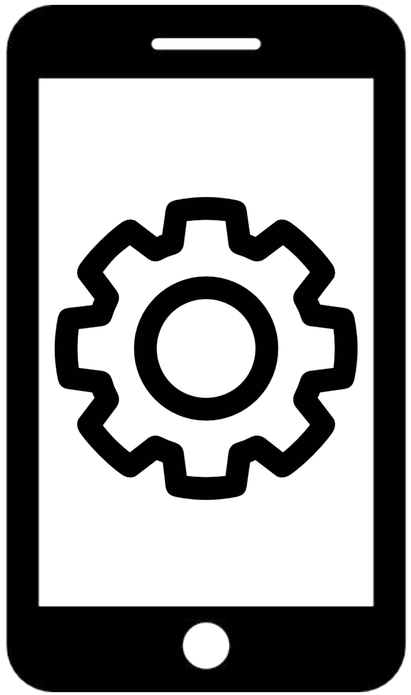
# install



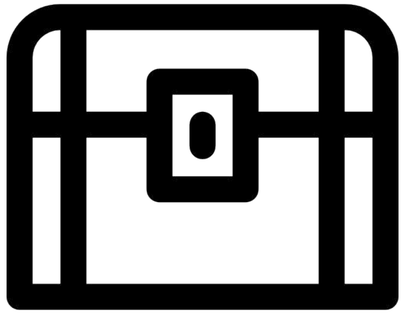




# install



# precaching



# precaching

*When this service worker is installing*
*open a cache and then*
*put a bunch of files in that cache.*

# precaching

*When this service worker is installing*

# precaching

*When this service worker is installing*

**addEventListener()**

# precaching

*When this service worker is installing*

```
addEventListener('install')
```

# precaching

*When this service worker is installing*

```
addEventListener('install', function(event) {

});
```

# precaching

*When this service worker is installing*

```
addEventListener('install', event => {

});
```

# precaching

*open a cache*

# precaching

*open a cache*

```
caches.open()
```

# precaching

*open a cache*

```
caches.open('files')
```

# precaching

*open a cache and then*

```
caches.open('files')
```

# precaching

*open a cache and then*

```
caches.open('files').then()
```

# precaching

*open a cache and then*

```
caches.open('files').then( cache => {

});
```

# precaching

*put a bunch of files in that cache.*

# precaching

*put a bunch of files in that cache.*

```
cache.addAll()
```

# precaching

*put a bunch of files in that cache.*

```
cache.addAll([
  '/css/styles.css',
  '/js/script.js',
  '/img/icon.png'
]);
```

# precaching

# precaching

*When this service worker is installing*

```
addEventListener('install', event => {

});
```

# precaching

*When this service worker is installing*
*open a cache*

```
caches.open('files')
```

# precaching

*When this service worker is installing*
*open a cache and then*

```
caches.open('files').then( cache => {

});
```

# precaching

*When this service worker is installing*
*open a cache and then*
*put a bunch of files in that cache.*

```
cache.addAll([
  '/css/styles.css',
  '/js/script.js',
  '/img/icon.png'
]);
```

# precaching

*When this service worker is installing*
*open a cache and then*
*put a bunch of files in that cache.*

# precaching

```
addEventListener('install', event => {

});
```

# precaching

```
addEventListener('install', event => {
  caches.open('files')

});
```

# precaching

```
addEventListener('install', event => {
  caches.open('files').then( cache => {

  });
});
```

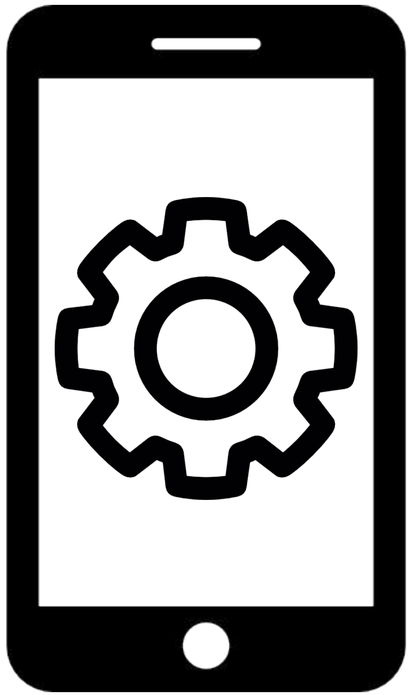
# precaching

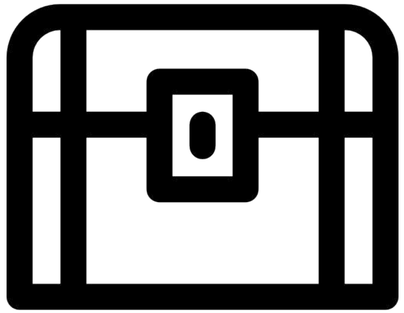
```
addEventListener('install', event => {
  caches.open('files').then( cache => {
    cache.addAll([
      '/css/styles.css',
      '/js/script.js',
      '/img/icon.png'
    ]);
  });
});
```

# precaching

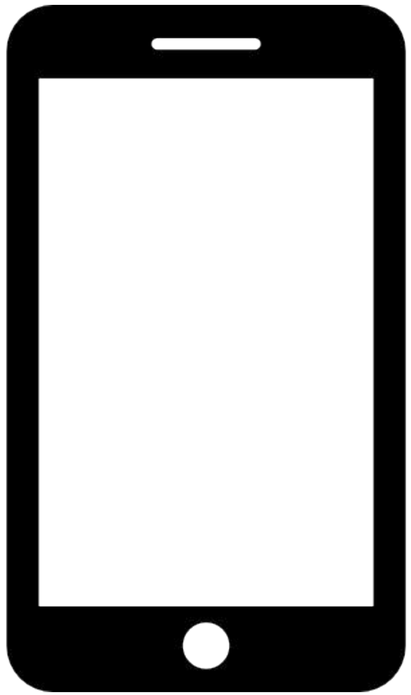
```
addEventListener('install', event => {
  caches.open('files').then( cache => {
    cache.addAll([
      '/css/styles.css',
      '/js/script.js',
      '/img/icon.png'
    ]);
  });
});
```

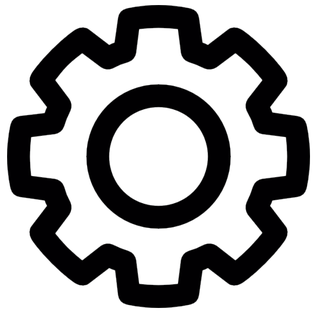
# install

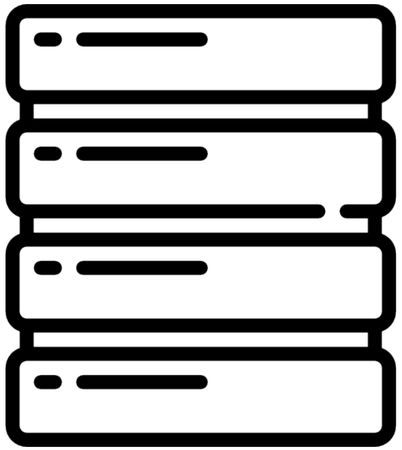


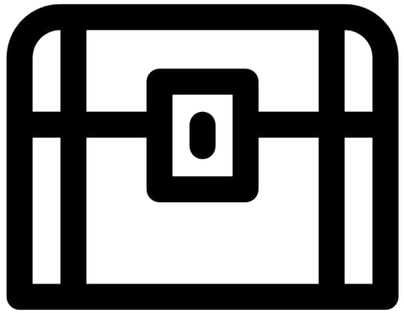


# active









# cache first

*When a file is requested*
*try to find the file in the cache first*
*otherwise fetch the file from the network.*

# cache first

*When a file is requested*

# cache first

*When a file is requested*

**addEventListener()**

# cache first

*When a file is requested*

```
addEventListener('fetch')
```

# cache first

*When a file is requested*

```
addEventListener('fetch', event => {

});
```

# cache first

*When a file is requested*

```
addEventListener('fetch', event => {
  event.respondWith(

  );
});
```

# cache first

*try to find the file in the cache first*

# cache first

*try to find the file in the cache first*

```
caches.match(event.request)
```

# cache first

*try to find the file in the cache first*

```
caches.match(event.request)
.then( response => {

})
```

# cache first

*try to find the file in the cache first*

```
caches.match(event.request)
.then( response => {
  return response;
})
```

# cache first

*try to find the file in the cache first*
*otherwise fetch the file from the network.*

```
caches.match(event.request)
.then( response => {
  return response;
})
```

# cache first

*try to find the file in the cache first*
*otherwise fetch the file from the network.*

```
caches.match(event.request)
.then( response => {
  return response || fetch(event.request);
})
```

# cache first

*When a file is requested*
*try to find the file in the cache first*
*otherwise fetch the file from the network.*

# cache first

```
addEventListener('fetch', event => {
  event.respondWith(




  );
});
```

# cache first

```
addEventListener('fetch', event => {
  event.respondWith(
    caches.match(event.request)
    .then( response => {
      return response
    })
  );
});
```

# cache first

```
addEventListener('fetch', event => {
  event.respondWith(
    caches.match(event.request)
    .then( response => {
      return response || fetch(event.request);
    })
  );
});
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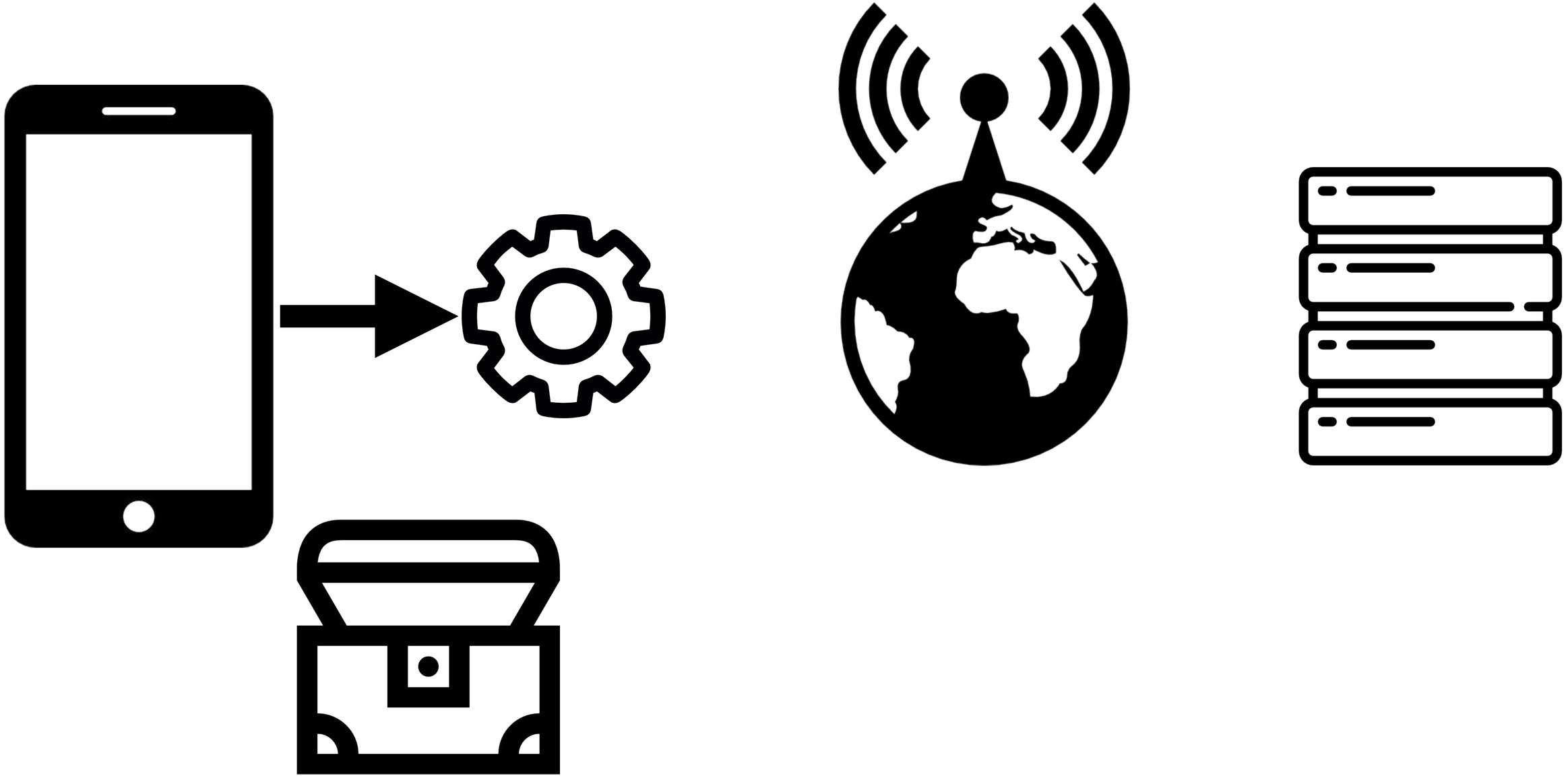
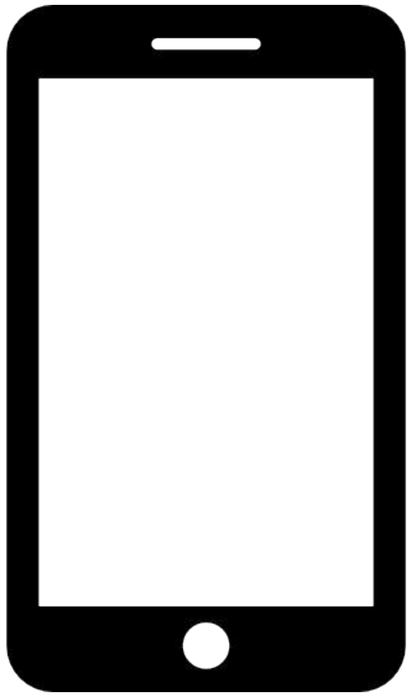
# cache first

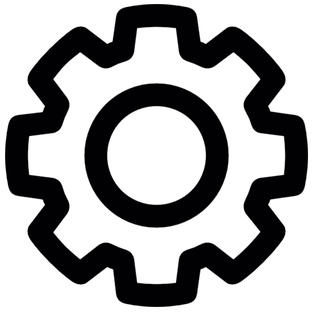
```
addEventListener('fetch', event => {
  event.respondWith(
    caches.match(event.request)
    .then( response => {
      return response || fetch(event.request);
    })
  );
});
```

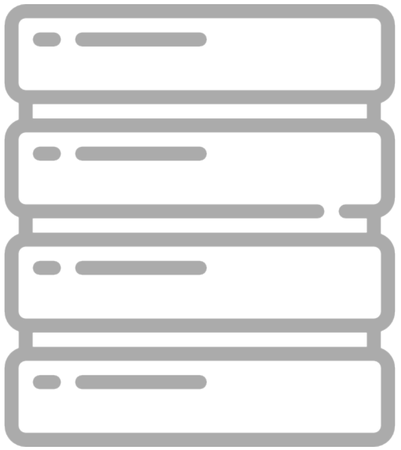
# cache first



# offline first

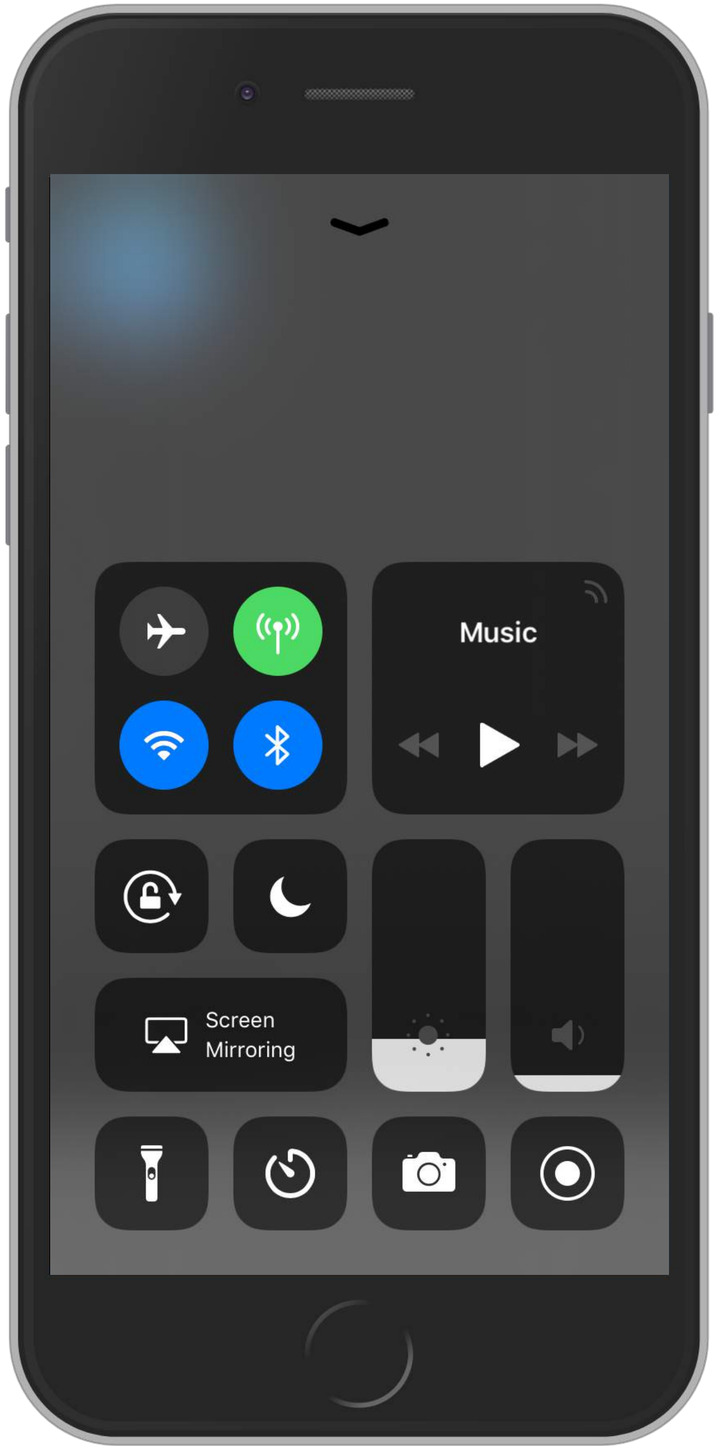




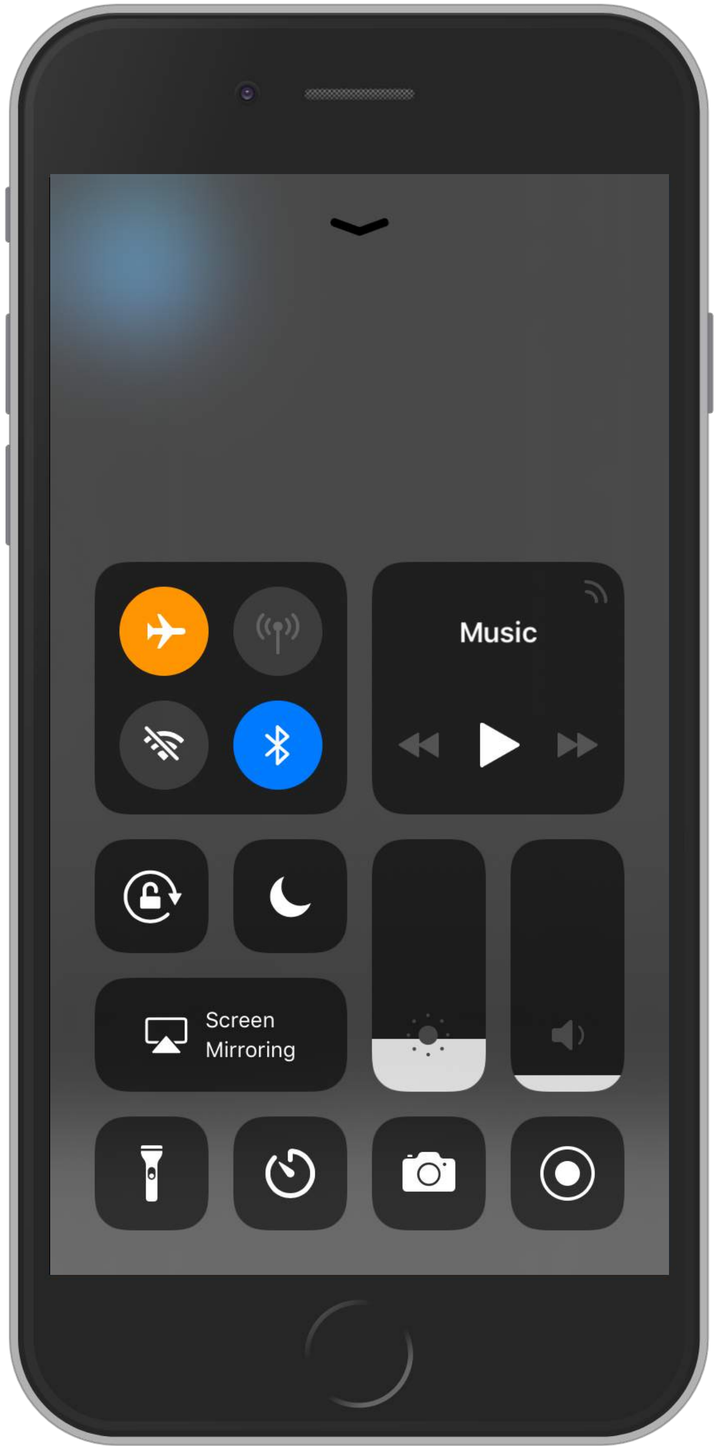


# offline first

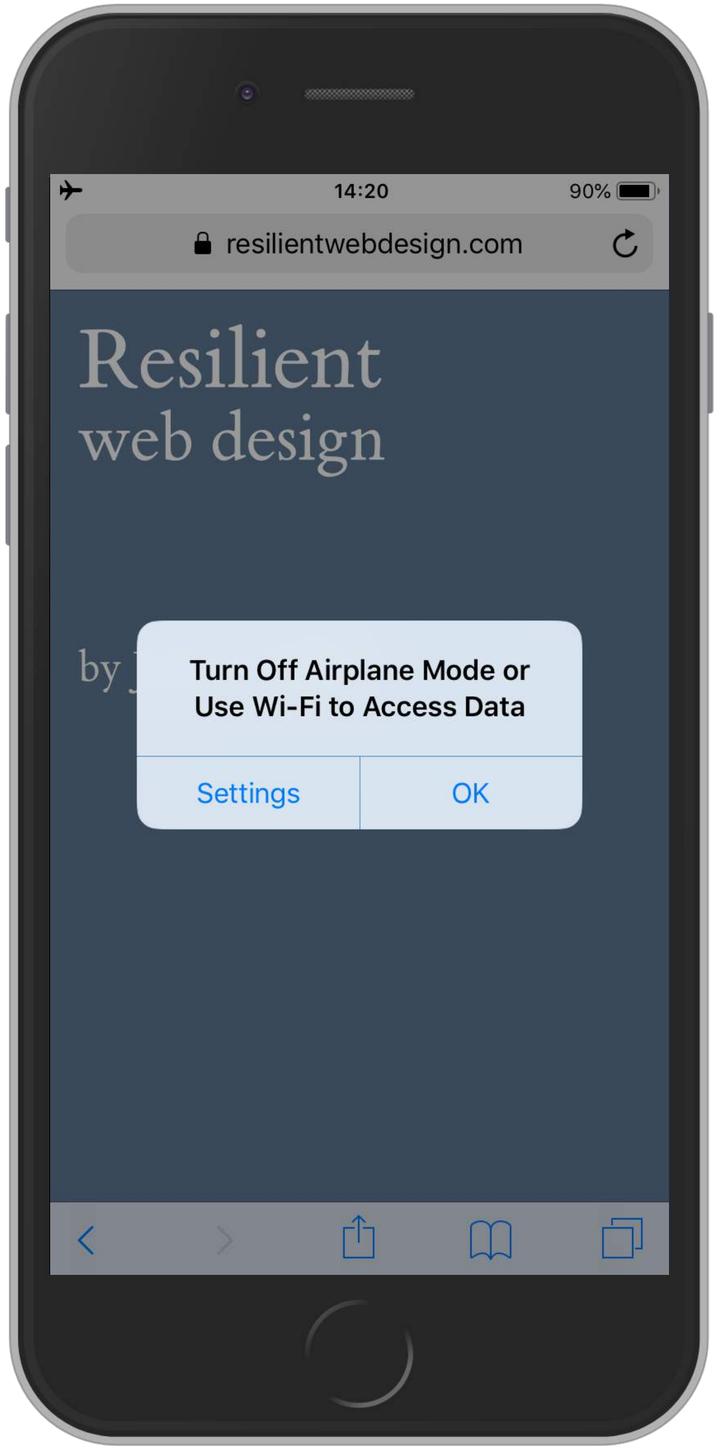
# offline first



# offline first

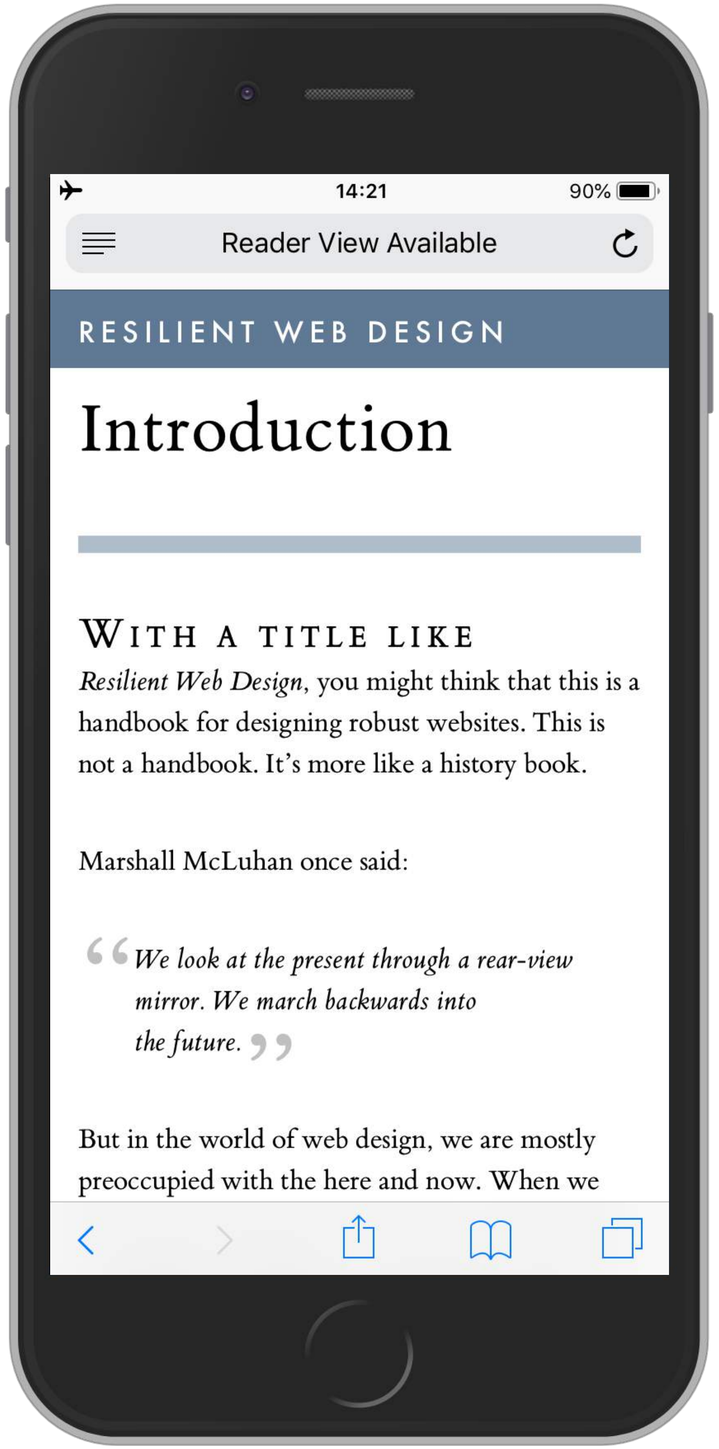


# offline first

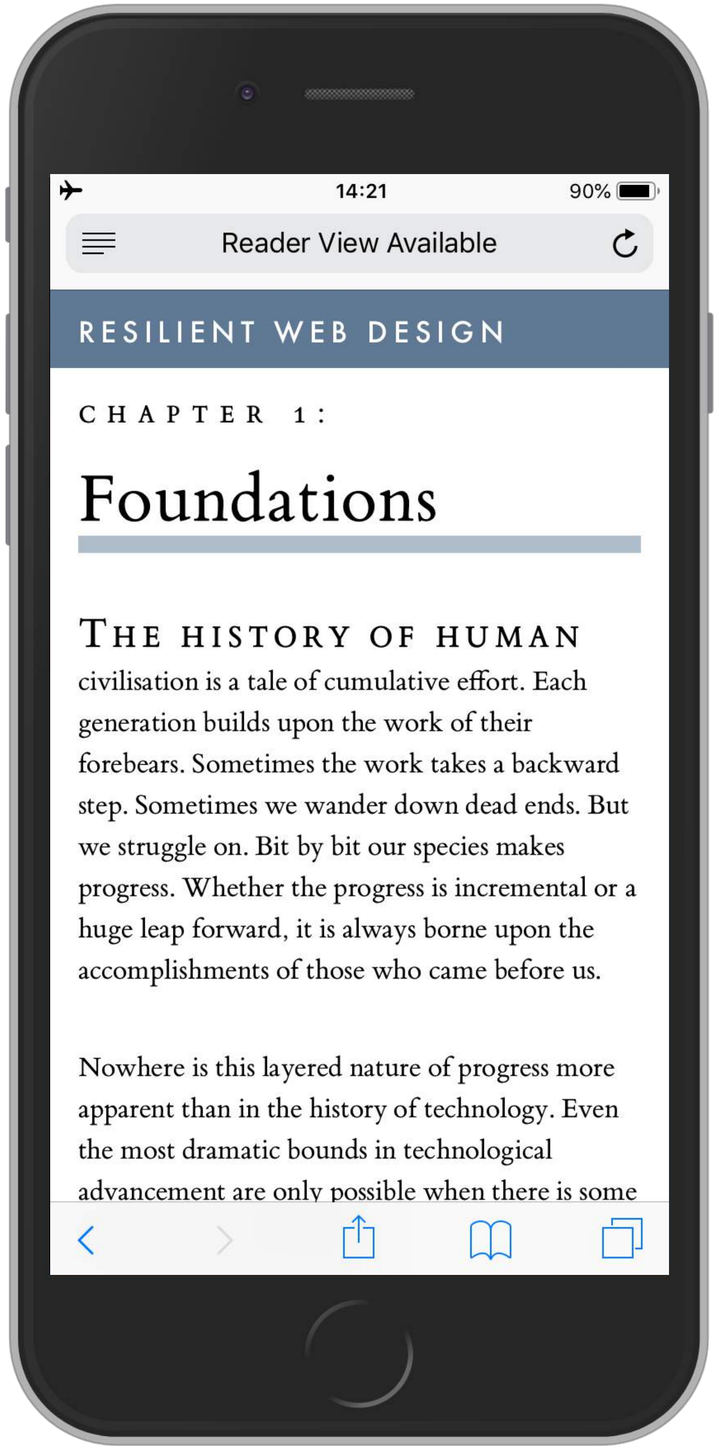


# offline first

# offline first



# offline first



# offline first

# precaching

# cache first

# install

# active

# css js img

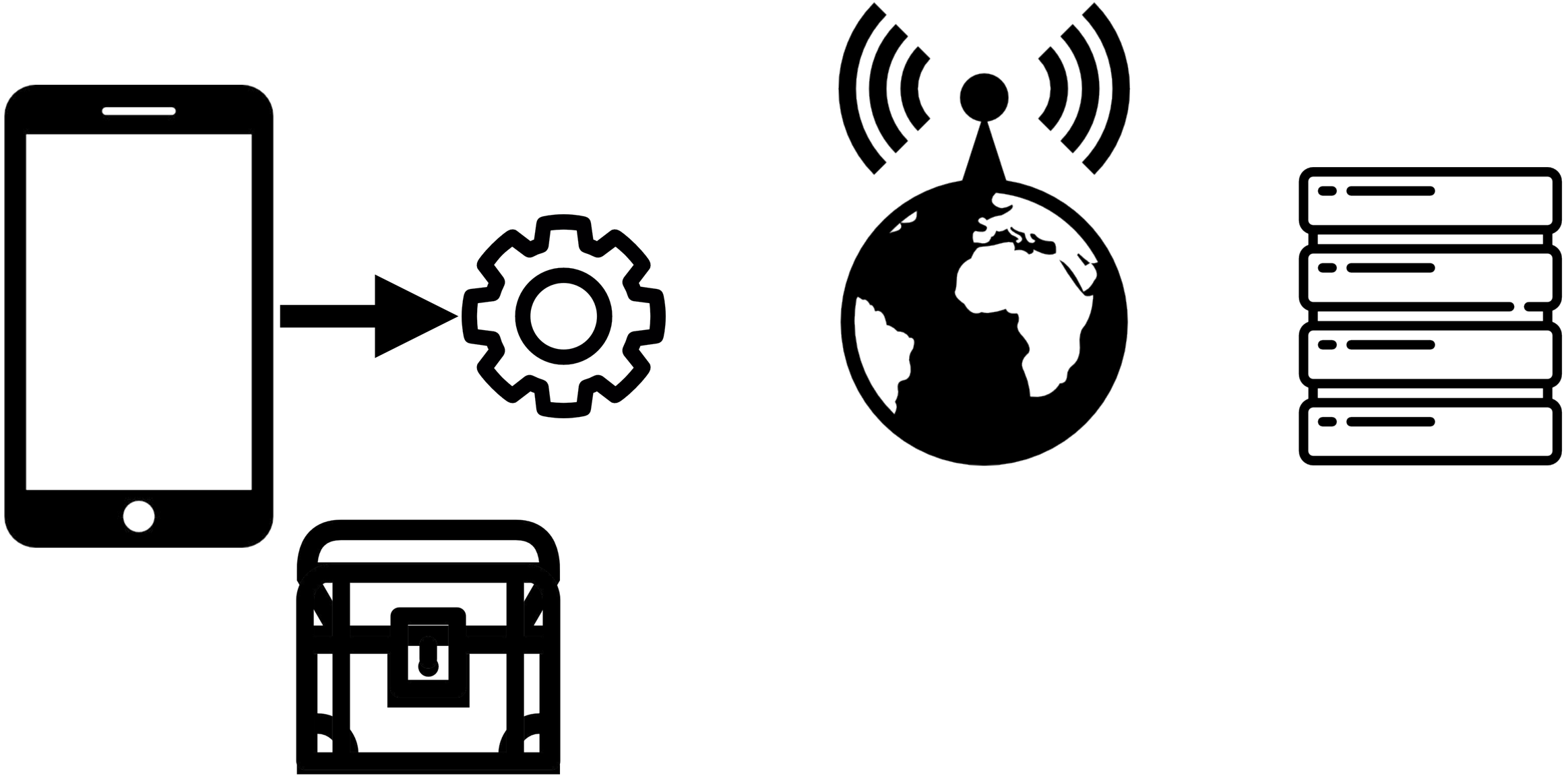
# precaching

# cache first

# html

# network first
# custom offline page

# network first



# precaching

```
addEventListener('install', event => {
  caches.open('files').then( cache => {
    cache.addAll([
      '/css/styles.css',
      '/js/script.js',
      '/img/icon.png'
    ]);
  });
});
```

# precaching

```
addEventListener('install', event => {
  caches.open('files').then( cache => {
    cache.addAll([
      '/css/styles.css',
      '/js/script.js',
      '/img/icon.png',
      '/offline.html'
    ]);
  });
});
```

# network first

*When a page is requested*
*try to fetch the page from the network first*
*otherwise retrieve the offline page from the cache.*

# network first

*When a page is requested*

```
addEventListener('fetch', event => {

});
```

# network first

*When a page is requested*

```
addEventListener('fetch', event => {
  if (event.request.headers
      .get('Accept').includes('text/html') {

  }
});
```

# network first

*try to fetch the page from the network first*

```
event.respondWith(
   fetch(event.request)
   .then( response => {
     return response;
   })
);
```

# network first

*otherwise retrieve the offline page from the cache.*

```
.catch( error => {
  return caches.match('/offline.html');
})
```

# network first

# network first

```
addEventListener('fetch', event => {
  if (event.request.headers.get('Accept').includes('text/html') {




  }
});
```

# network first

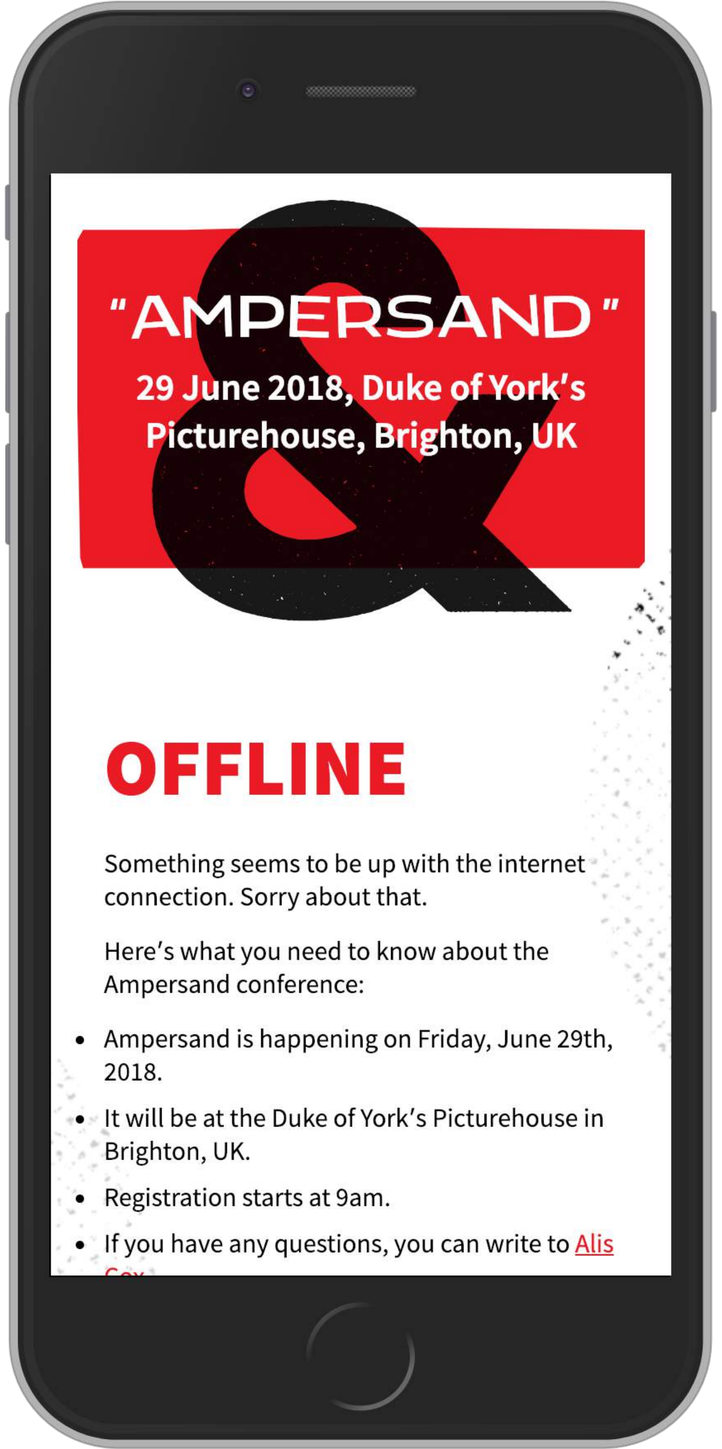
```
addEventListener('fetch', event => {
  if (event.request.headers.get('Accept').includes('text/html') {
    event.respondWith(
      fetch(event.request)
      .then( response => {
        return response;
      })



    );
  }
});
```

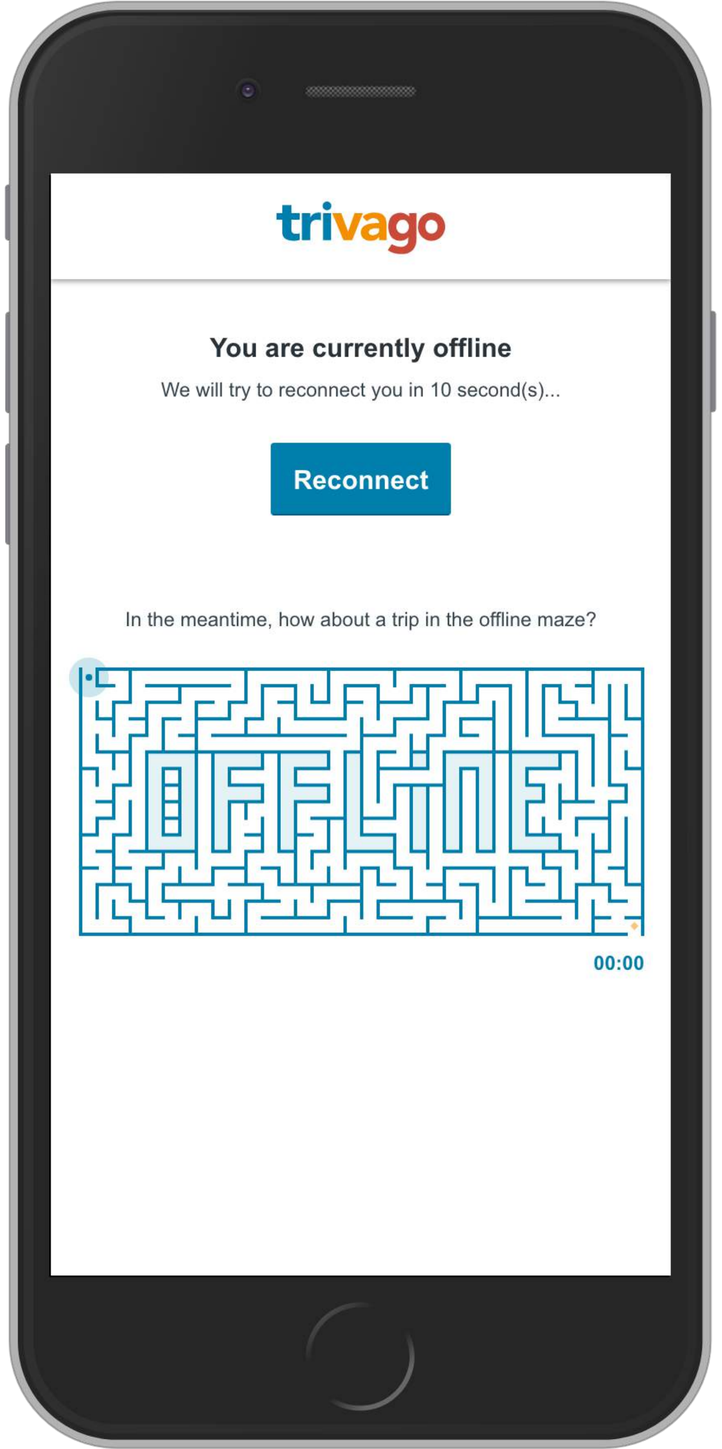
# network first

```
addEventListener('fetch', event => {
  if (event.request.headers.get('Accept').includes('text/html') {
    event.respondWith(
      fetch(event.request)
      .then( response => {
        return response;
      })
      .catch( error => {
        return  caches.match('offline.html');
      })
    );
  }
});
```

# network first

```
addEventListener('fetch', event => {
  if (event.request.headers.get('Accept').includes('text/html') {
    event.respondWith(
      fetch(event.request)
      .then( response => {
        return response;
      })
      .catch( error => {
        return  caches.match('offline.html');
      })
    );
  }
});
```


"AMPERSAND"
29 June 2018, Duke of York's Picturehouse, Brighton, UK
OFFLINE
Something seems to be up with the internet connection. Sorry about that.
Here's what you need to know about the Ampersand conference:
Ampersand is happening on Friday, June 29th, 2018.
It will be at the Duke of York's Picturehouse in Brighton, UK.
Registration starts at 9am.
If you have any questions, you can write to Alis


trivago
You are currently offline
We will try to reconnect you in 10 second(s)...
Reconnect
In the meantime, how about a trip in the offline maze?
00:00

# html

# network first
# custom offline page

# html

# network first

# cache as you go

# custom offline page

# html

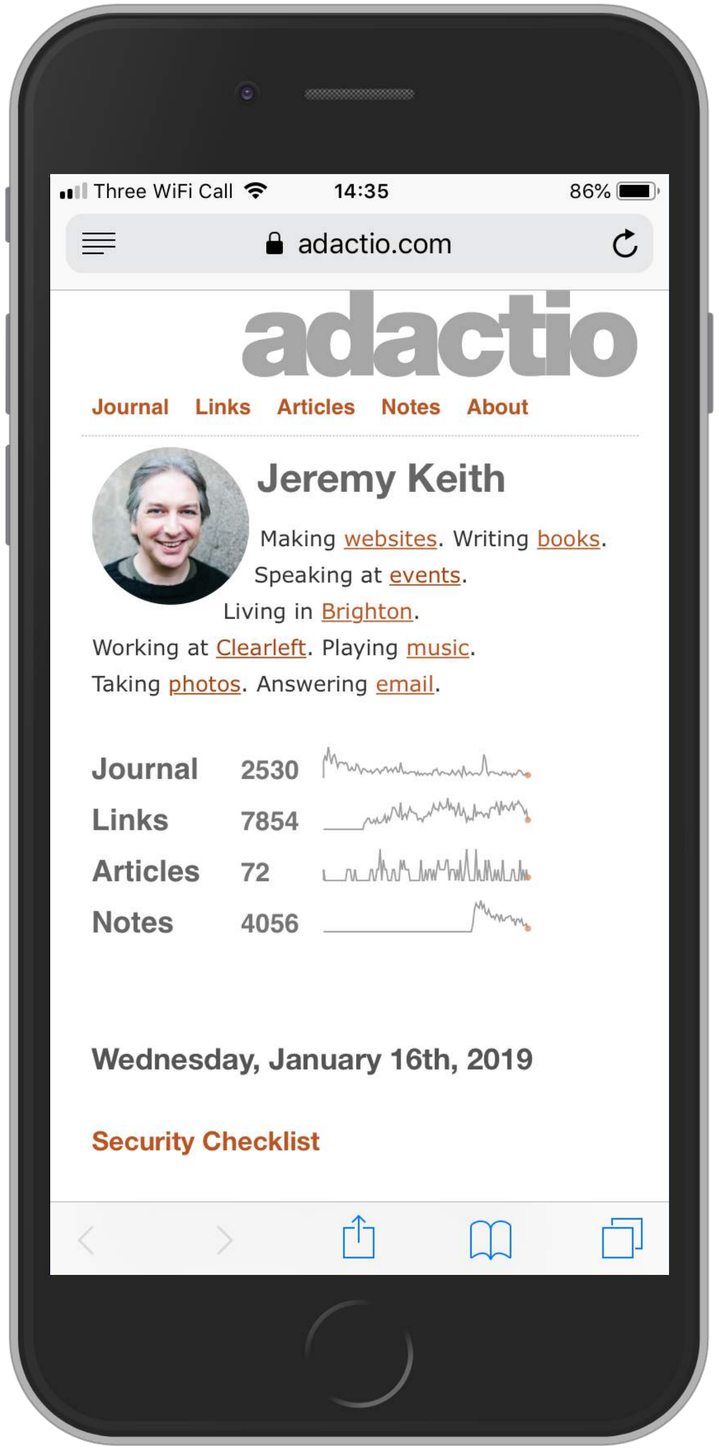
# network

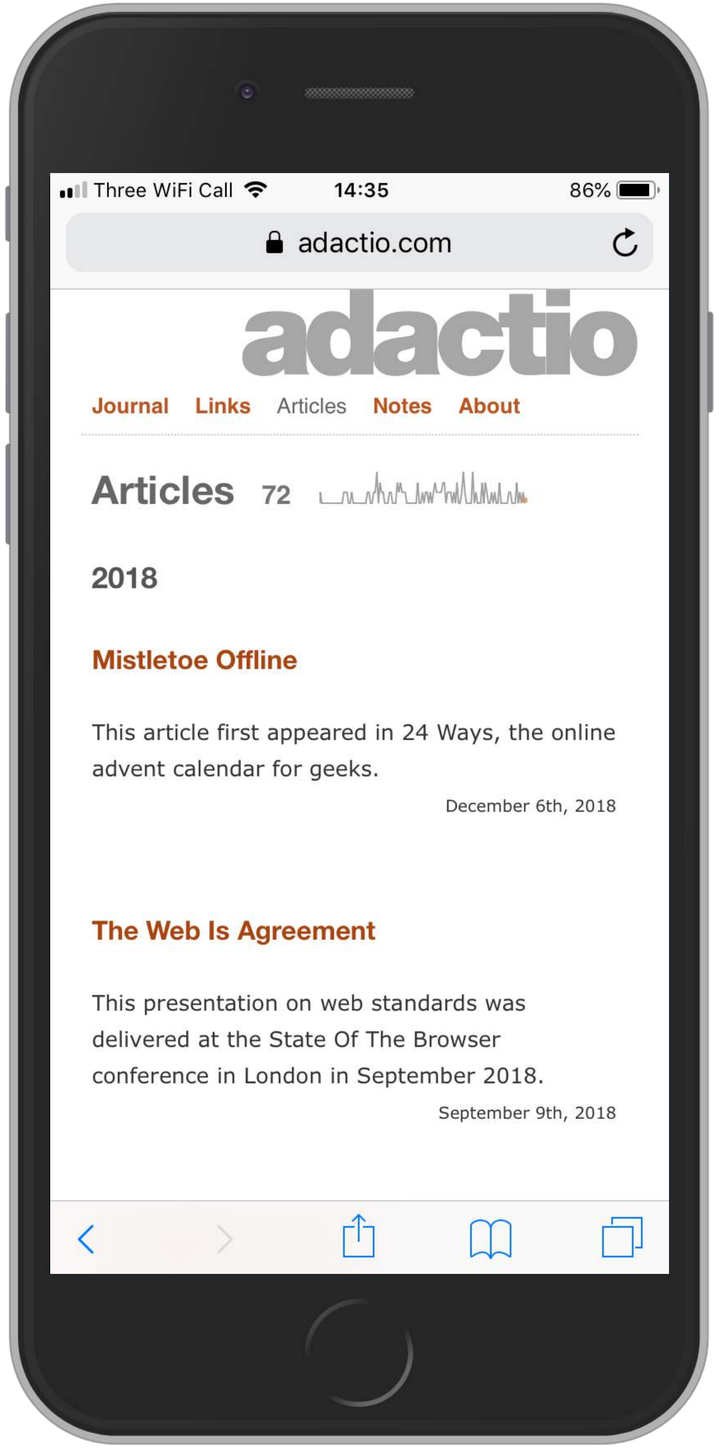
# cache

# custom offline page

# cache as you go

*When a page is requested*
*try to fetch the page from the network first*
***and store a copy in the cache***
*otherwise try to retrieve the page from the cache*
*otherwise retrieve the offline page from the cache.*


Three WiFi Call
14:35
86%
adactio.com
adactio
Journal
Links
Articles
Notes
About
Jeremy Keith
Making websites. Writing books.
Speaking at events.
Living in Brighton.
Working at Clearleft. Playing music.
Taking photos. Answering email.
Journal 2530
Links 7854
Articles 72
Notes 4056
Wednesday, January 16th, 2019
Security Checklist


Three WiFi Call
14:35
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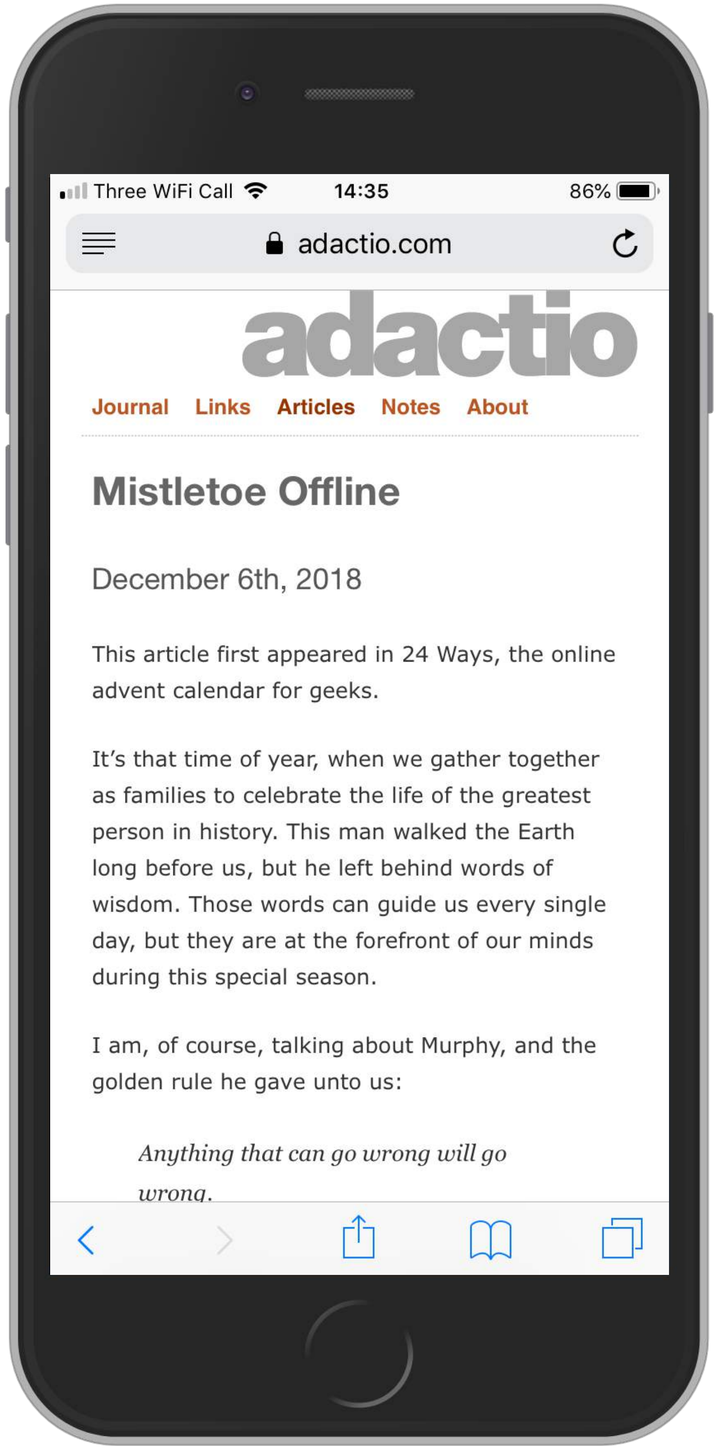
adactio
Journal Links Articles Notes About
Articles 72
2018
Mistletoe Offline
This article first appeared in 24 Ways, the online advent calendar for geeks.
December 6th, 2018
The Web Is Agreement
This presentation on web standards was delivered at the State Of The Browser conference in London in September 2018.
September 9th, 2018


Three WiFi Call
14:35
86%
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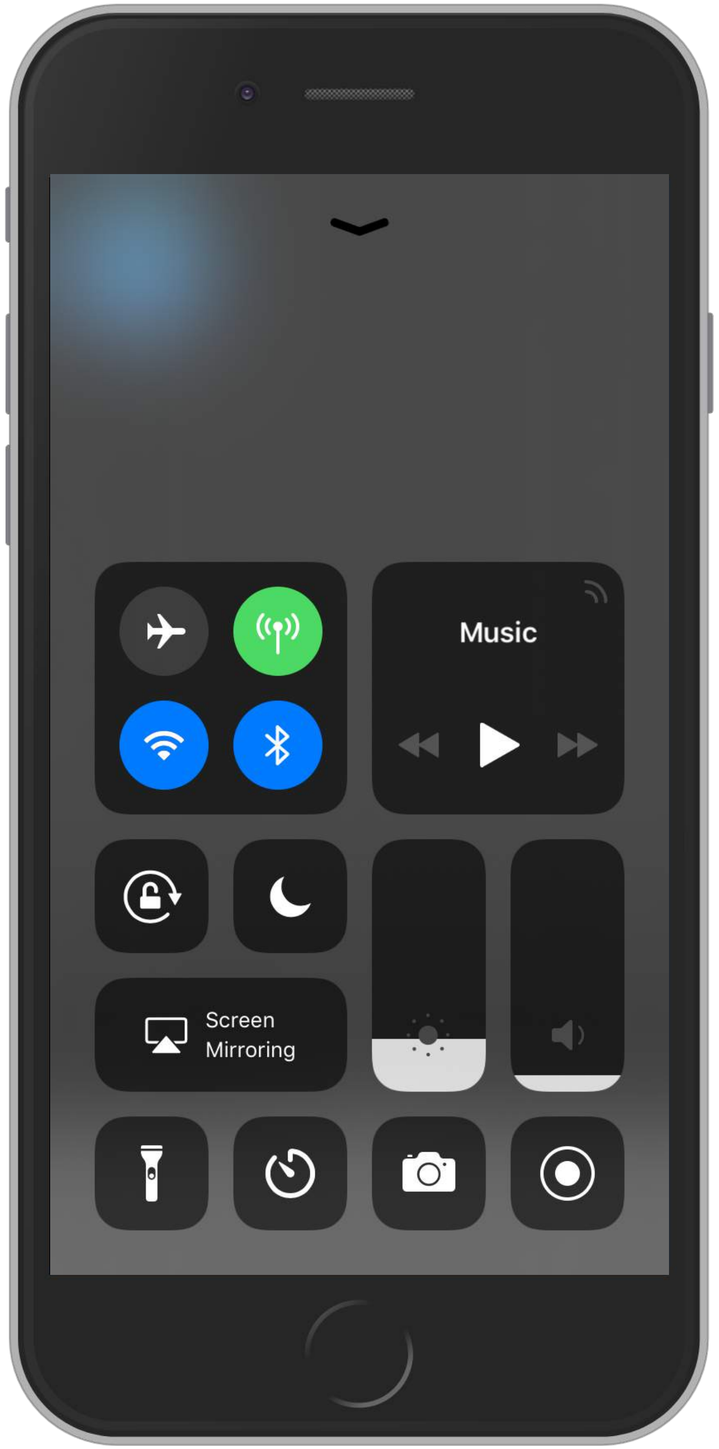
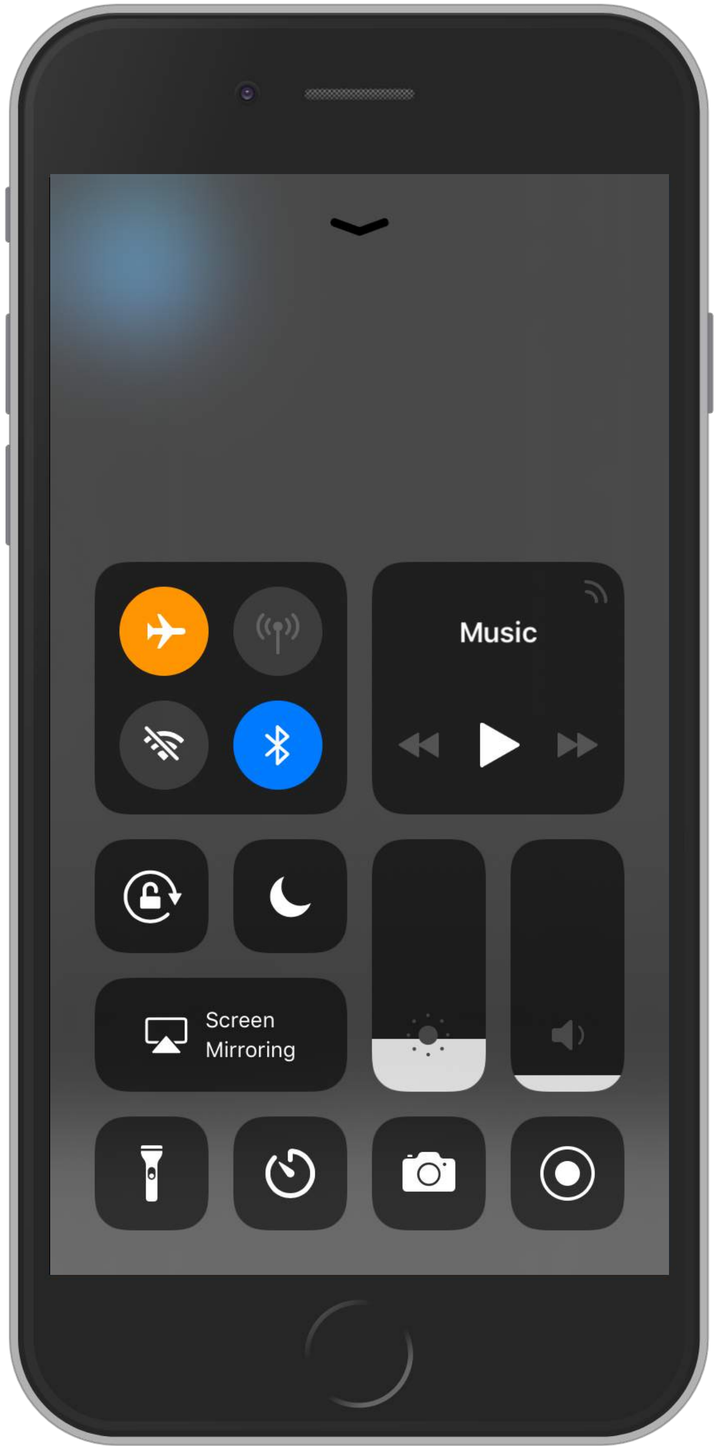
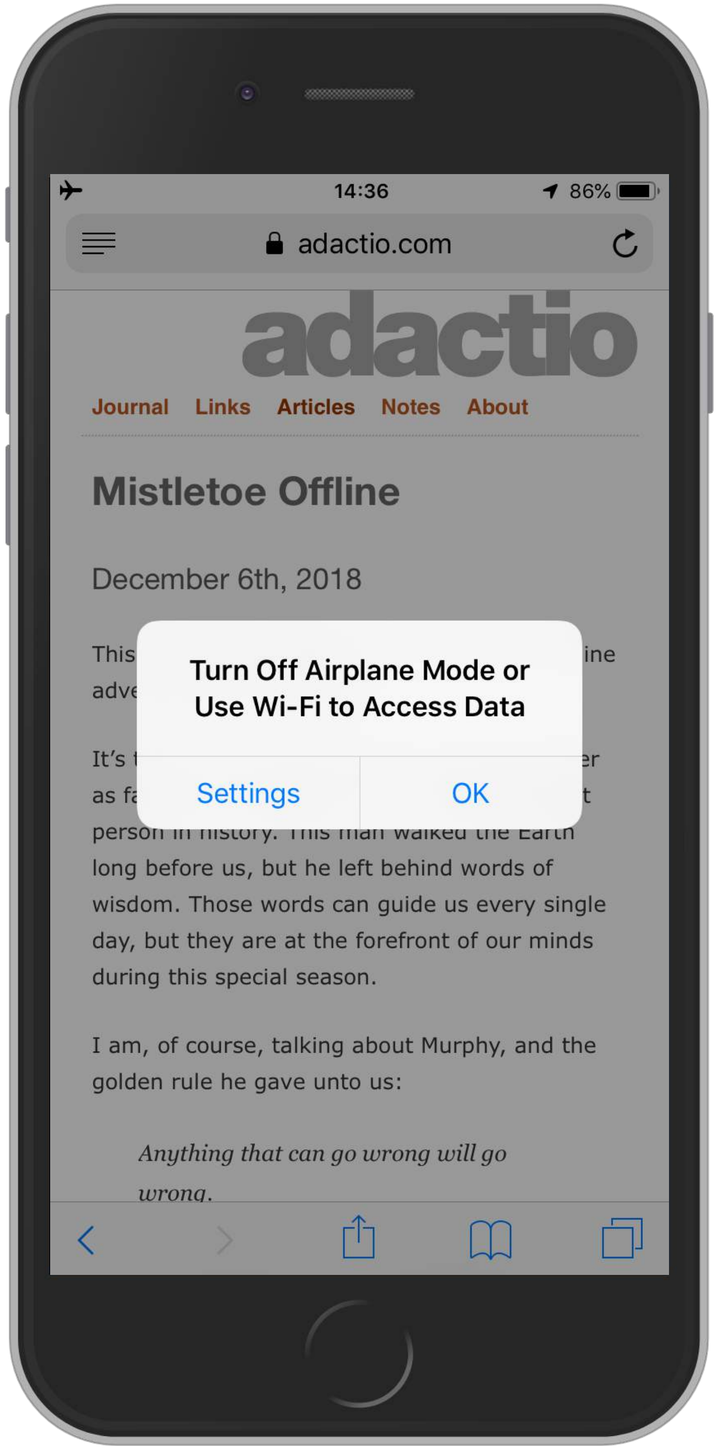
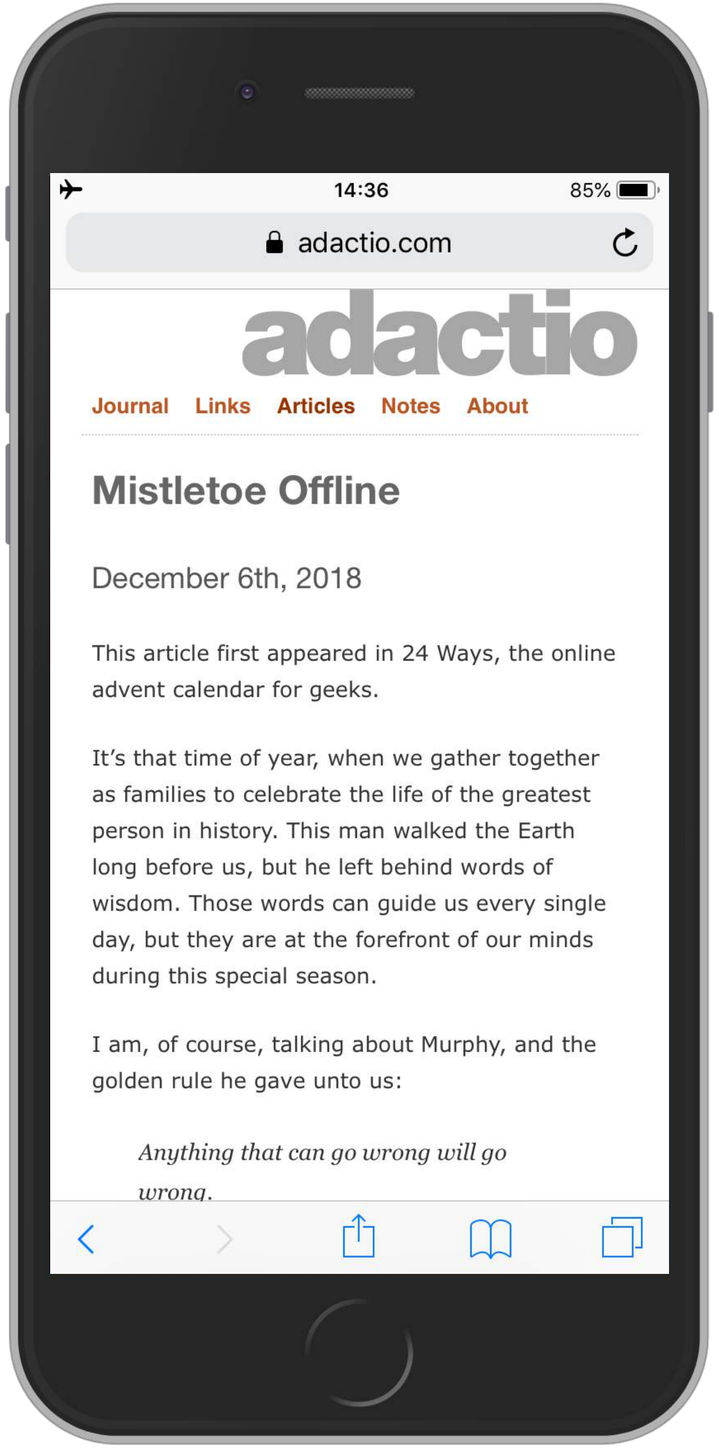
Journal
Links
Articles
Notes
About
Mistletoe Offline
December 6th, 2018
This article first appeared in 24 Ways, the online advent calendar for geeks.
It's that time of year, when we gather together as families to celebrate the life of the greatest person in history. This man walked the Earth long before us, but he left behind words of wisdom. Those words can guide us every single day, but they are at the forefront of our minds during this special season.
I am, of course, talking about Murphy, and the golden rule he gave unto us:
Anything that can go wrong will go wrong.


Music
Screen
Mirroring


Music
Screen
Mirroring


14:36
86%
adactio.com
adactio
Journal Links Articles Notes About
Mistletoe Offline
December 6th, 2018
Turn Off Airplane Mode or Use Wi-Fi to Access Data
Settings
OK
long before us, but he left behind words of wisdom. Those words can guide us every single day, but they are at the forefront of our minds during this special season.
I am, of course, talking about Murphy, and the golden rule he gave unto us:
Anything that can go wrong will go wrong.


14:36
85%
adactio.com
adactio
Journal Links Articles Notes About
Mistletoe Offline
December 6th, 2018
This article first appeared in 24 Ways, the online advent calendar for geeks.
It's that time of year, when we gather together as families to celebrate the life of the greatest person in history. This man walked the Earth long before us, but he left behind words of wisdom. Those words can guide us every single day, but they are at the forefront of our minds during this special season.
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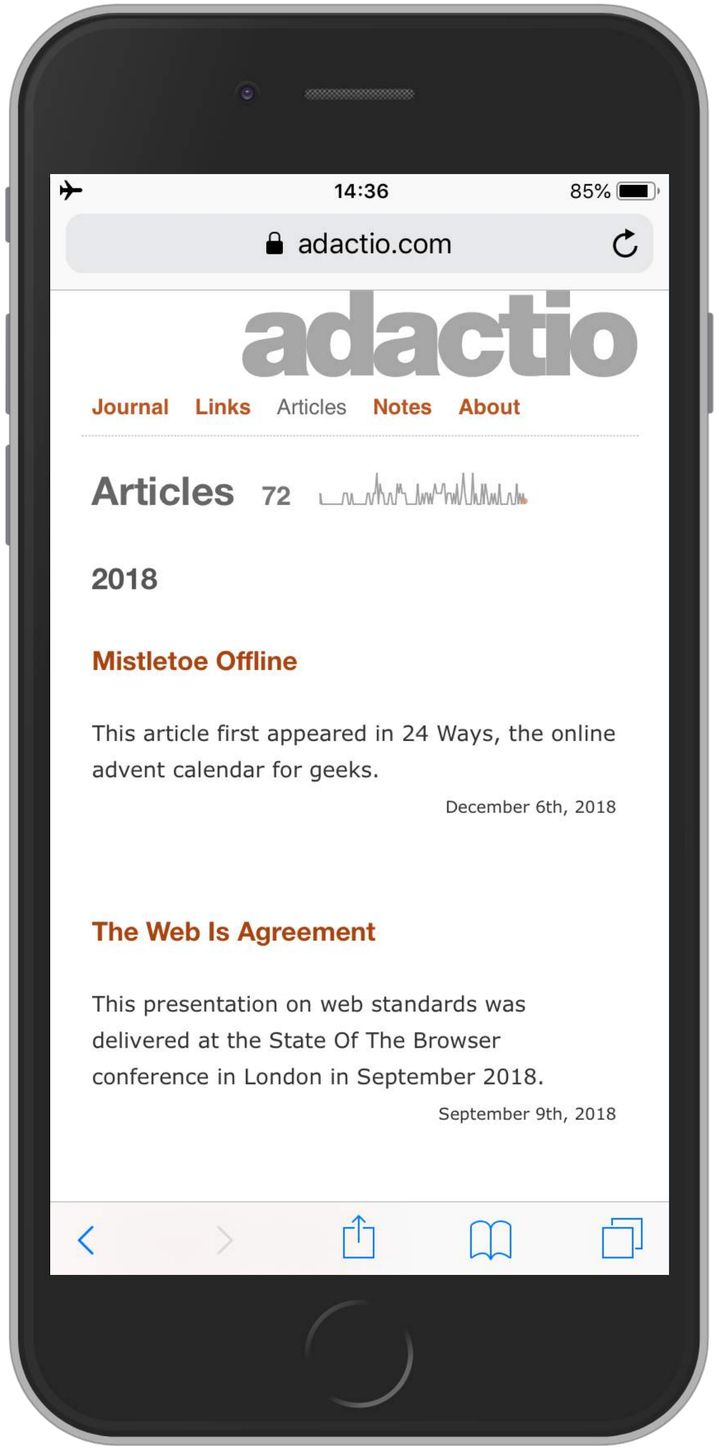
14:36
85%
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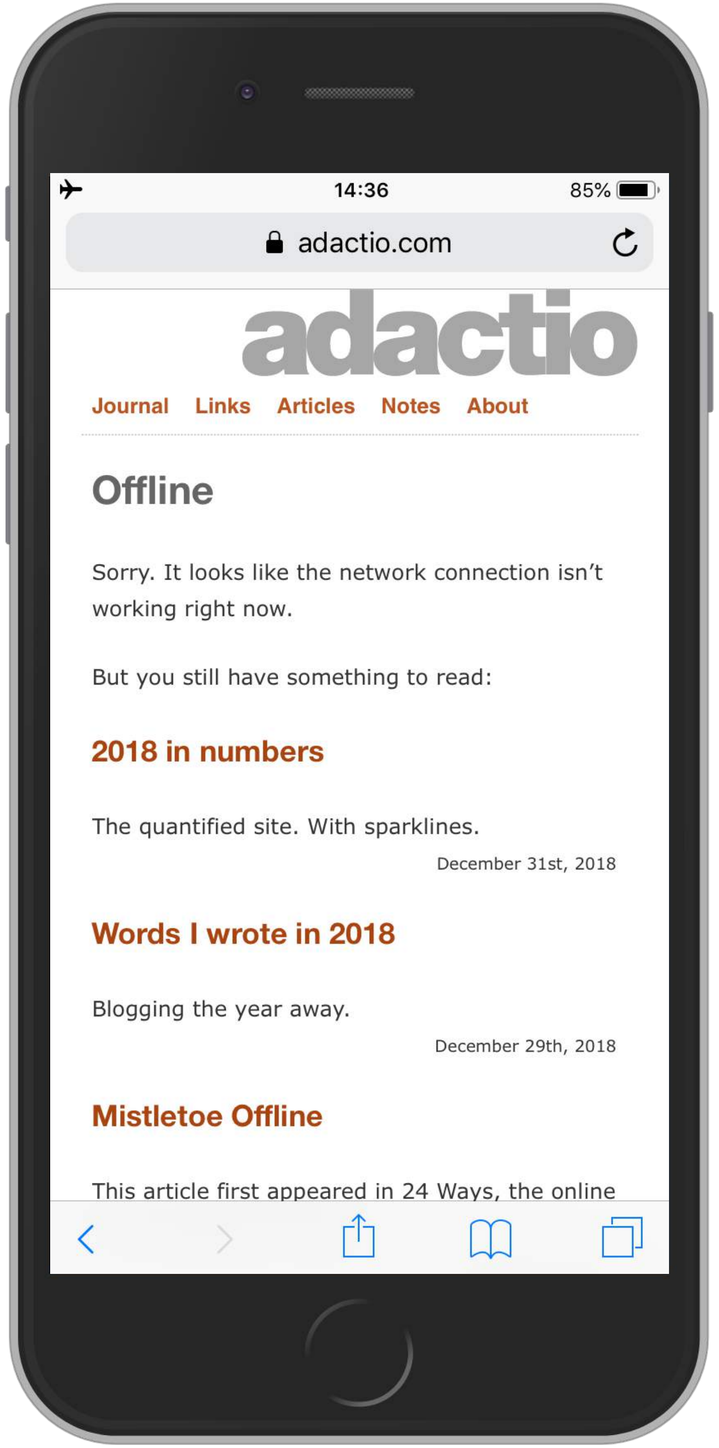
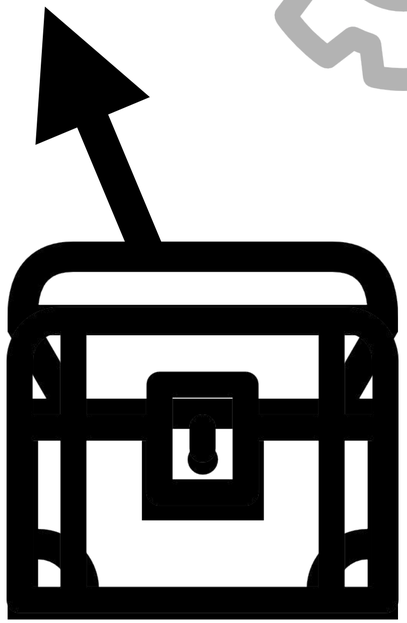
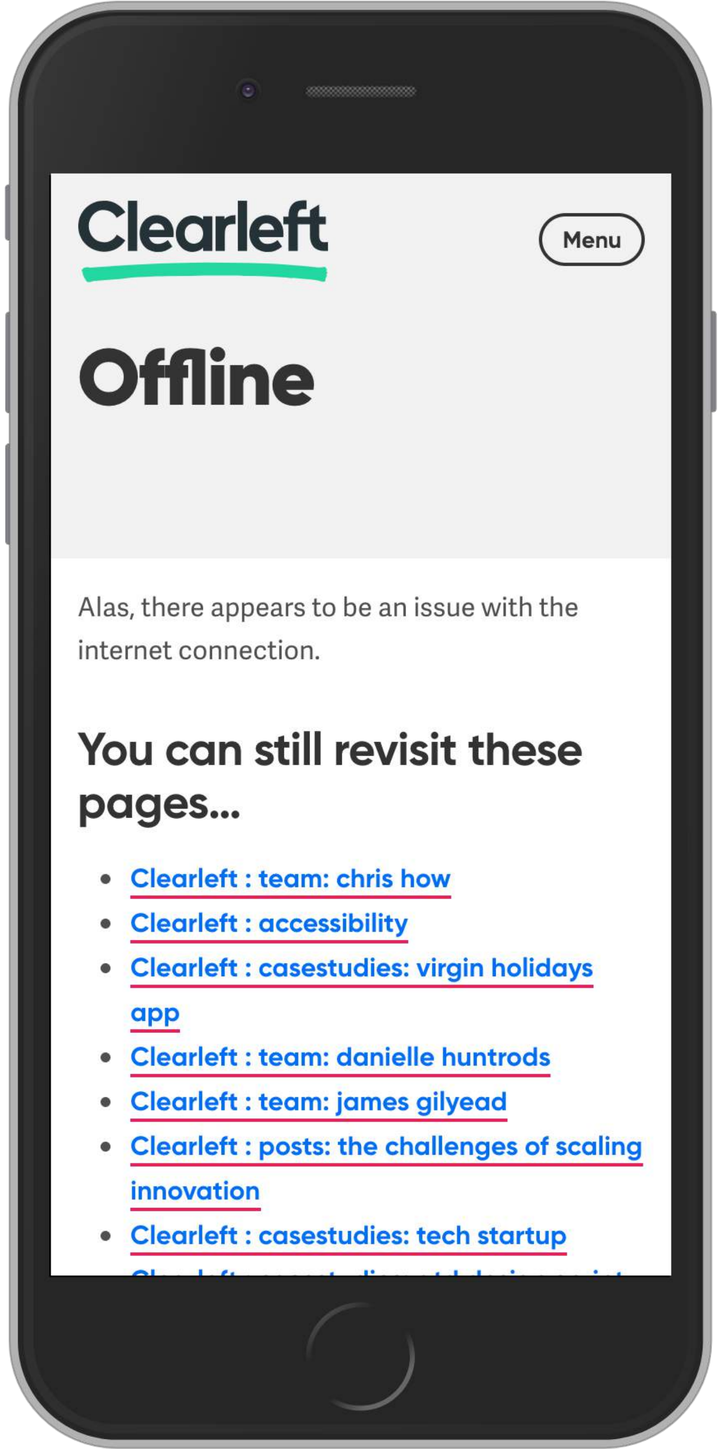
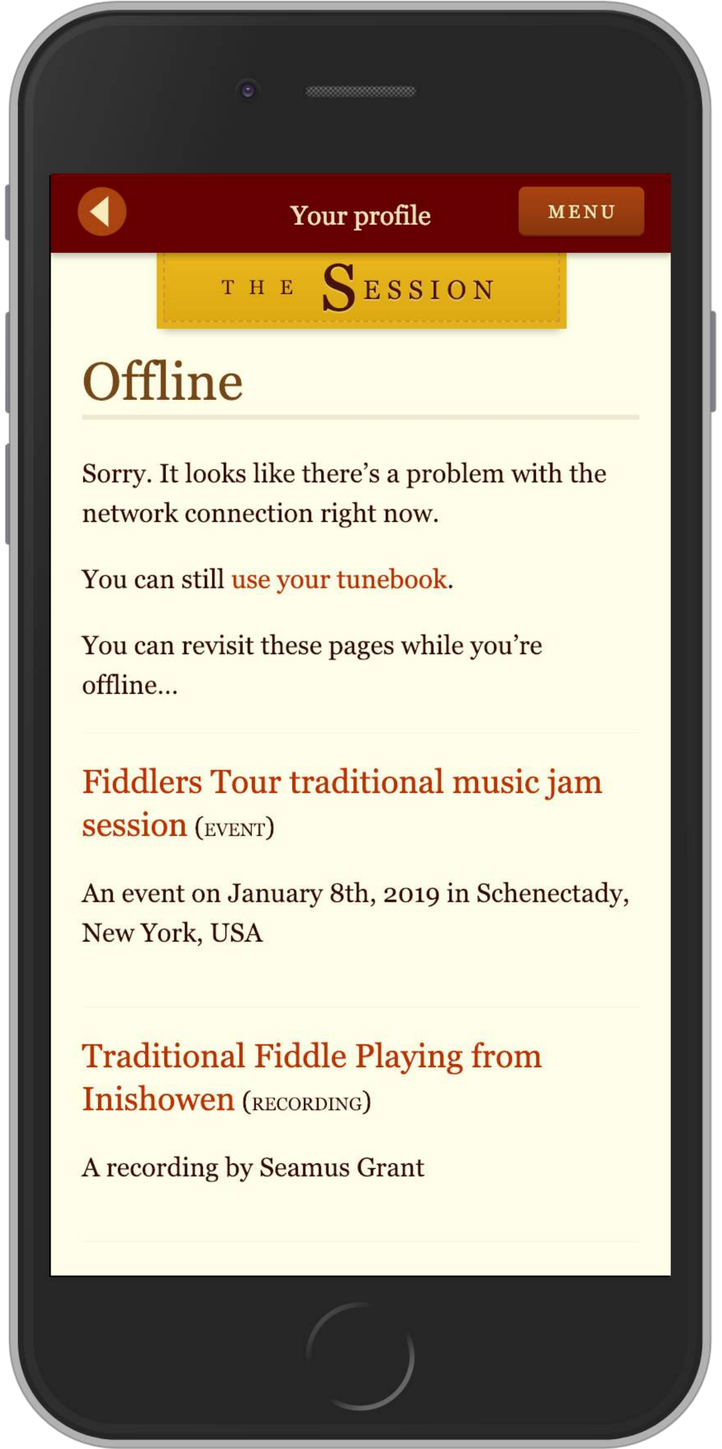
Articles 72
2018
Mistletoe Offline
This article first appeared in 24 Ways, the online advent calendar for geeks.
December 6th, 2018
The Web Is Agreement
This presentation on web standards was delivered at the State Of The Browser conference in London in September 2018.
September 9th, 2018


14:36
85%
adactio.com
adactio
Journal
Links
Articles
Notes
About
Offline
Sorry. It looks like the network connection isn’t working right now.
But you still have something to read:
2018 in numbers
The quantified site. With sparklines.
December 31st, 2018
Words I wrote in 2018
Blogging the year away.
December 29th, 2018
Mistletoe Offline
This article first appeared in 24 Ways, the online

# custom offline page


Clearleft
Menu
Offline
Alas, there appears to be an issue with the internet connection.
You can still revisit these pages...
Clearleft : team: chris how
Clearleft : accessibility
Clearleft : casestudies: virgin holidays app
Clearleft : team: danielle huntrods
Clearleft : team: james gilyead
Clearleft : posts: the challenges of scaling innovation
Clearleft : casestudies: tech startup


Your profile
MENU
THE SESSION
Offline
Sorry. It looks like there's a problem with the network connection right now.
You can still use your tunebook.
You can revisit these pages while you're offline...
Fiddlers Tour traditional music jam session (EVENT)
An event on January 8th, 2019 in Schenectady, New York, USA
Traditional Fiddle Playing from Inishowen (RECORDING)
A recording by Seamus Grant

html

css js img

network

cache

cache

network

fallback

html css js img

freshness speed

articles

shopping

travel

games

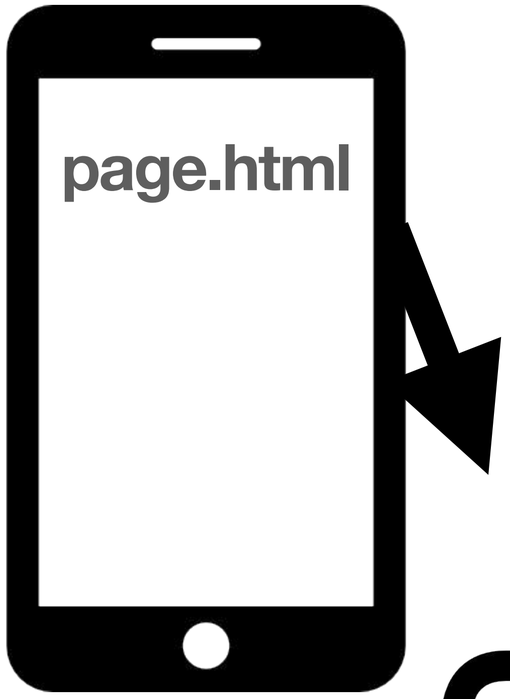
reference

# cache on demand articles

# cache on demand

*When the user presses a button*
*put a copy of this page in the cache.*

# cache on demand




# una.im


12:29
Home
Writing
Speaking
About
RSS
2017 IN REVIEW
December 31, 2017
Listen to this blog post:
To be honest, this year was pretty hard for me. And it wasn't just the political climate: I had a lot going on that made it difficult to care about side projects and blog posts as much. But I'm really hopeful next year will be better 🙏

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Save for Offline
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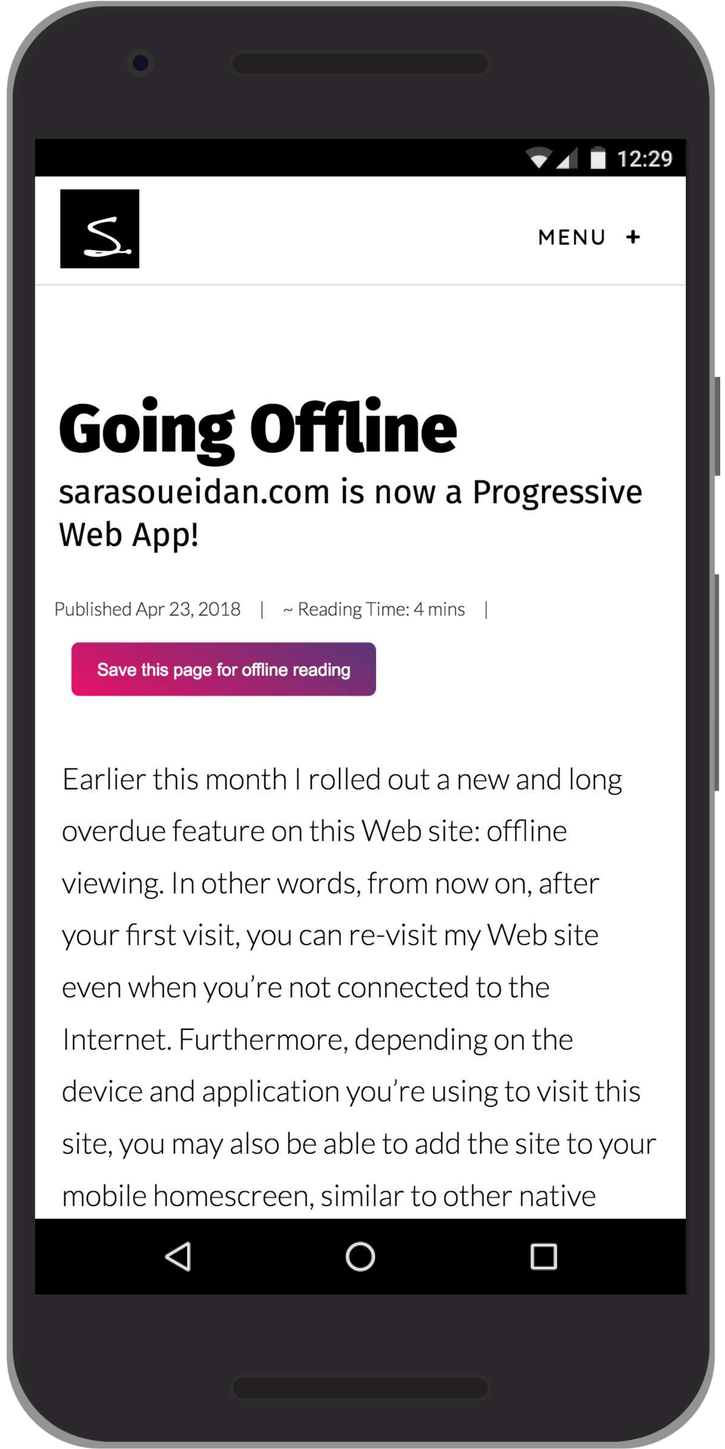
# sarasoueidan.com



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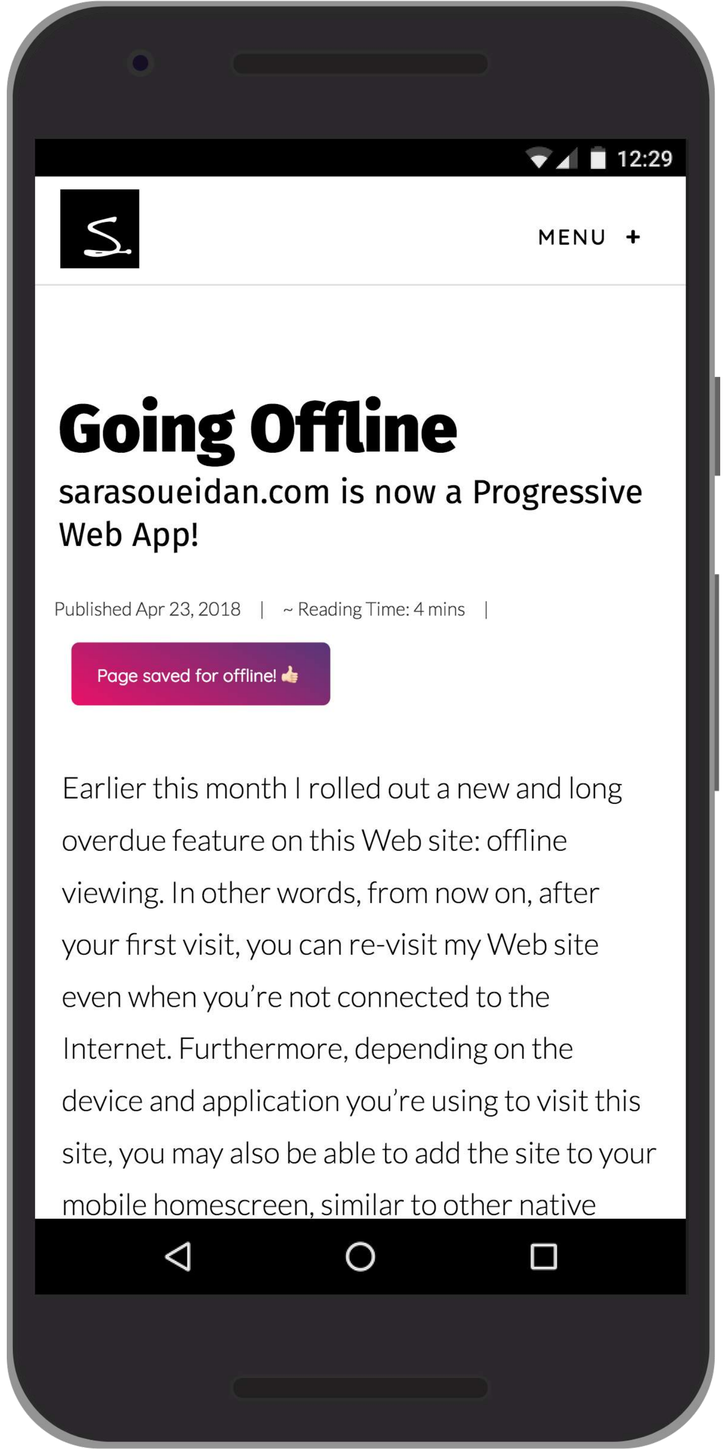

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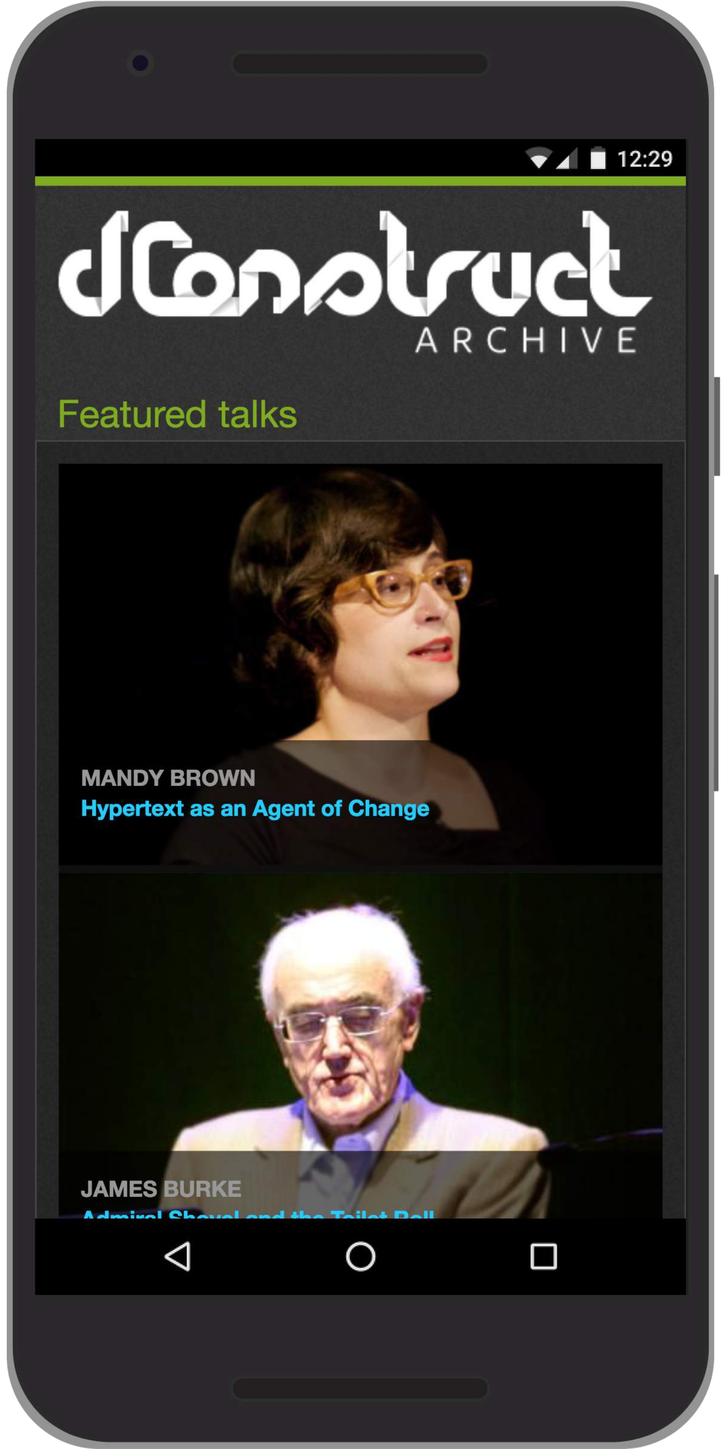

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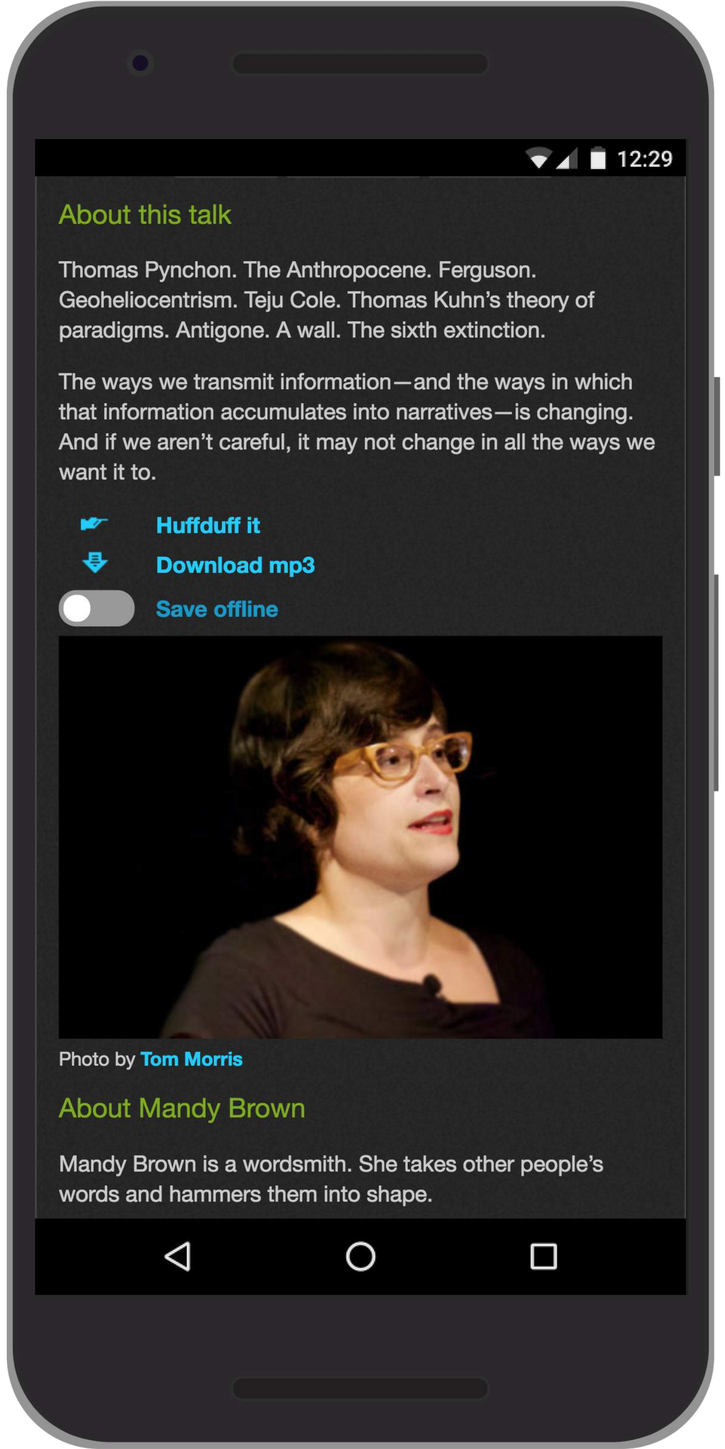

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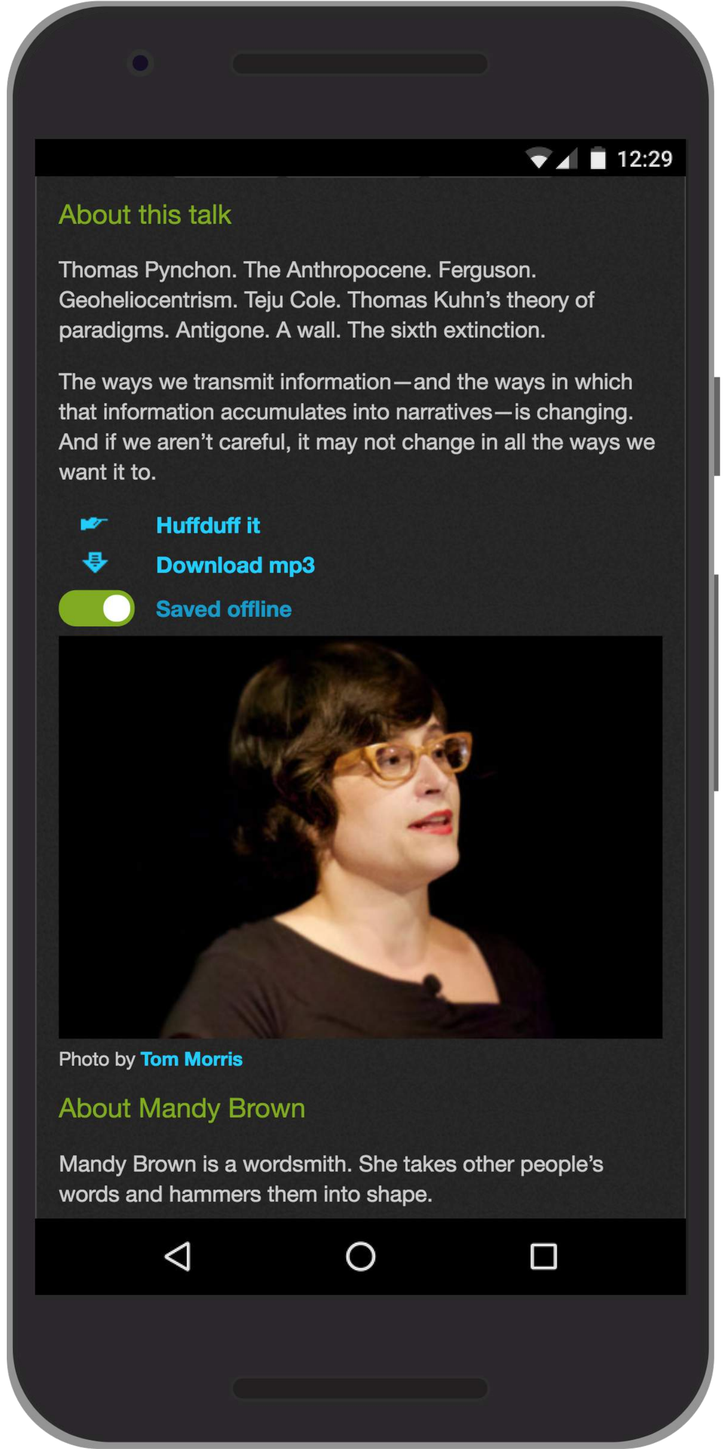

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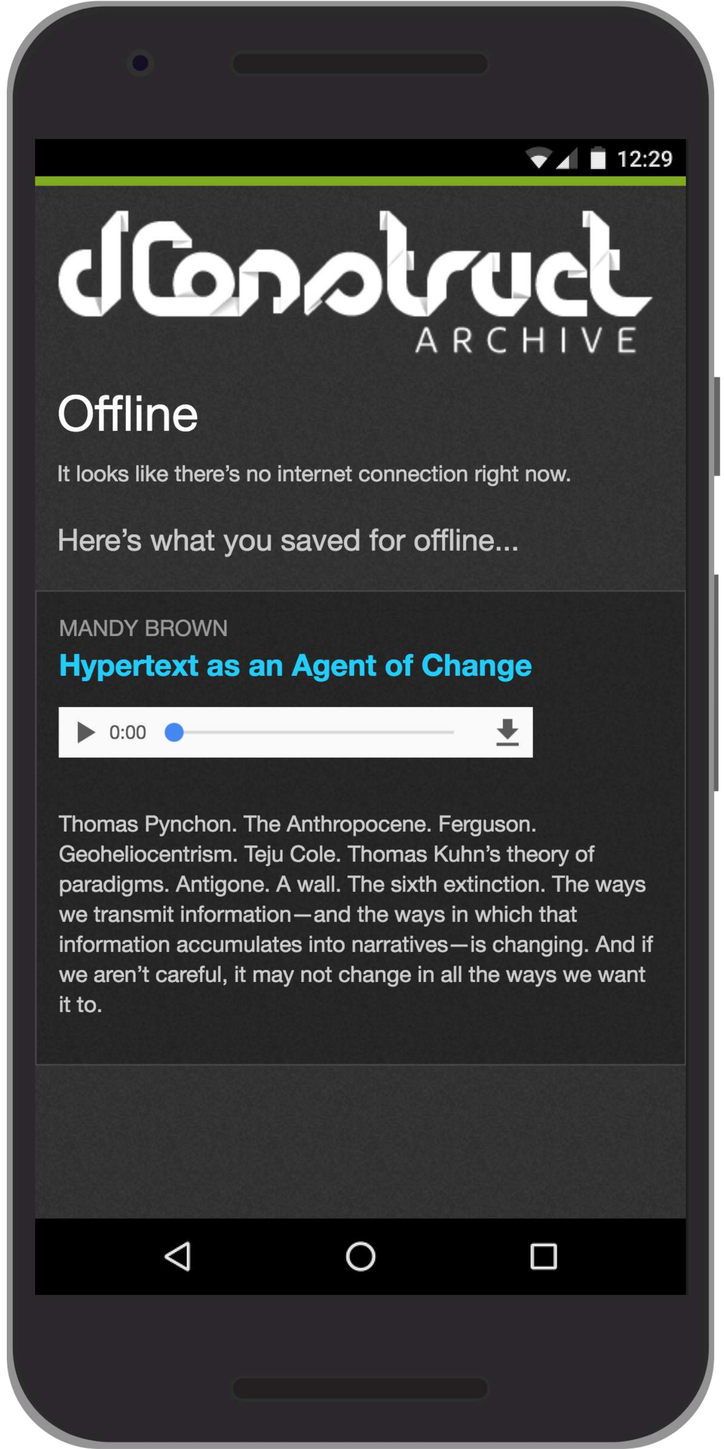

# web app manifest
# https
# service worker

# web app manifest

```
<link rel="manifest"
  href="/manifest.json">
```

# web app manifest

```
{
  name: "Resilient Web Design",
  short_name: "Resilience",
  display: "standalone",
  start_url: "/",
  theme_color: "#5f7995",
  icons: {
    {
      src: "/icon.png",
      sizes: "512x512",
      type: "image/png"
    }
  }
}
```


Three WiFi Call
14:46
84%
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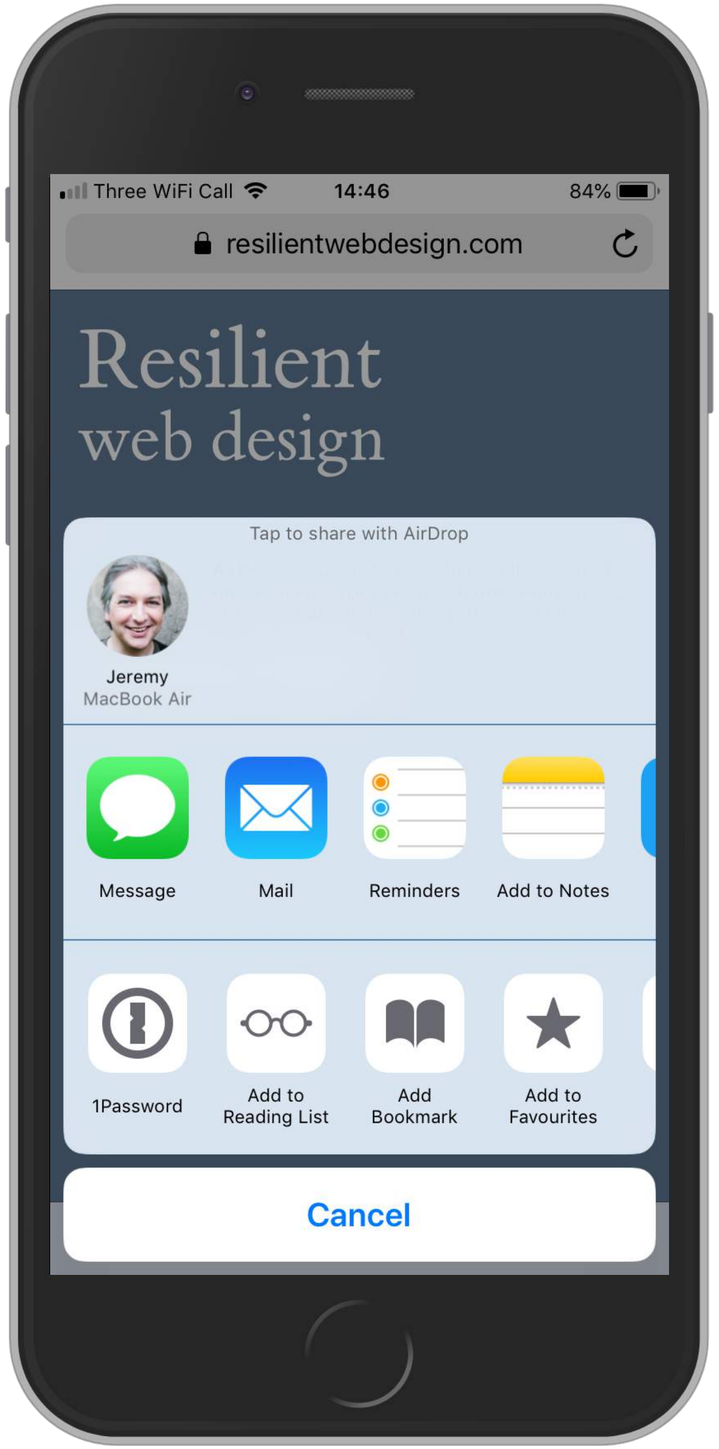
Resilient
web design
by Jeremy Keith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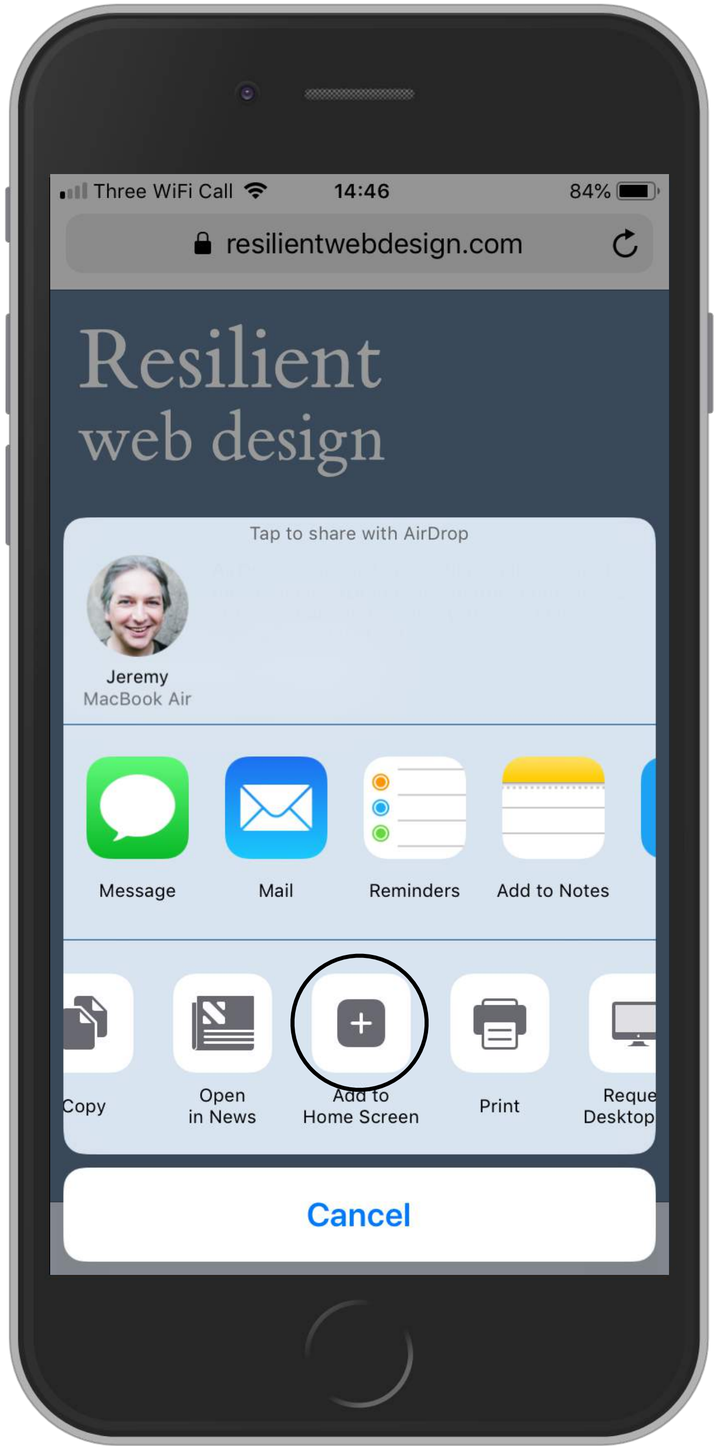
web design
Tap to share with AirDrop
Jeremy
MacBook Air
Message
Mail
Reminders
Add to Notes
1Password
Add to Reading List
Add Bookmark
Add to Favourites
Cancel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Tap to share with AirDrop
Jeremy
MacBook Air
Message
Mail
Reminders
Add to Notes
Copy
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in News
Add to
Home Screen
Print
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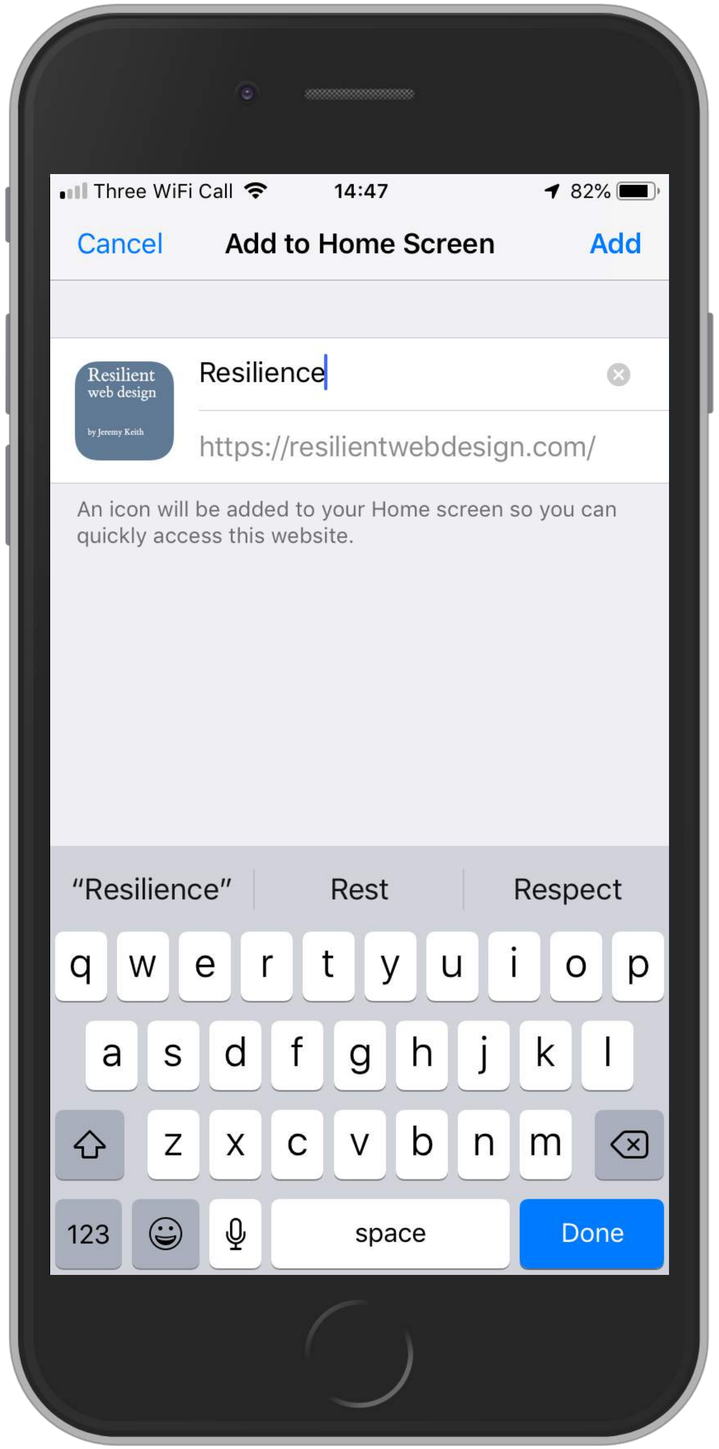
Cancel


Three WiFi Call
14:47
82%
Cancel
Add to Home Screen
Add
Resilient web design
by Jeremy Keith
Resilience
https://resilientwebdesign.com/
An icon will be added to your Home screen so you can quickly access this website.
“Resilience”
Rest
Respect
q w e r t y u i o p
a s d f g h j k l
z x c v b n m
123
space
Done


Three WiFi Call
14:47
82%
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web design
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Resilience


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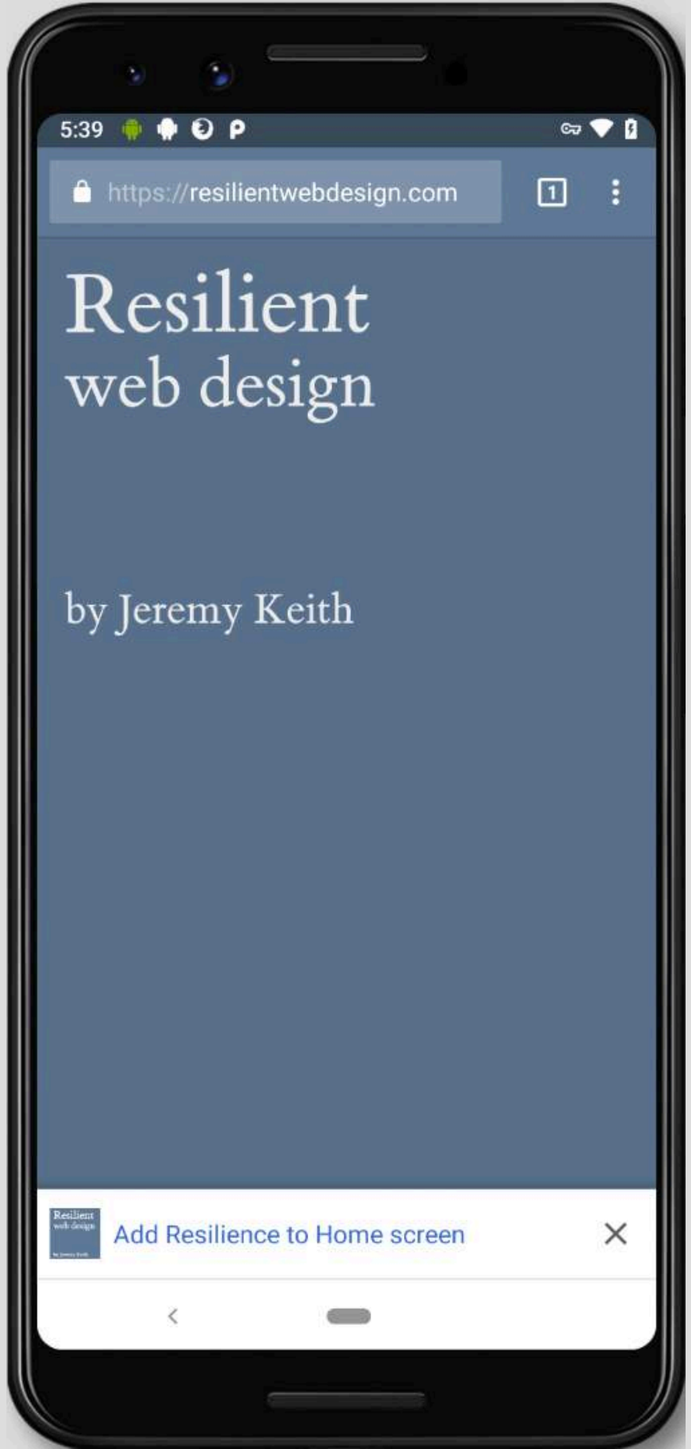
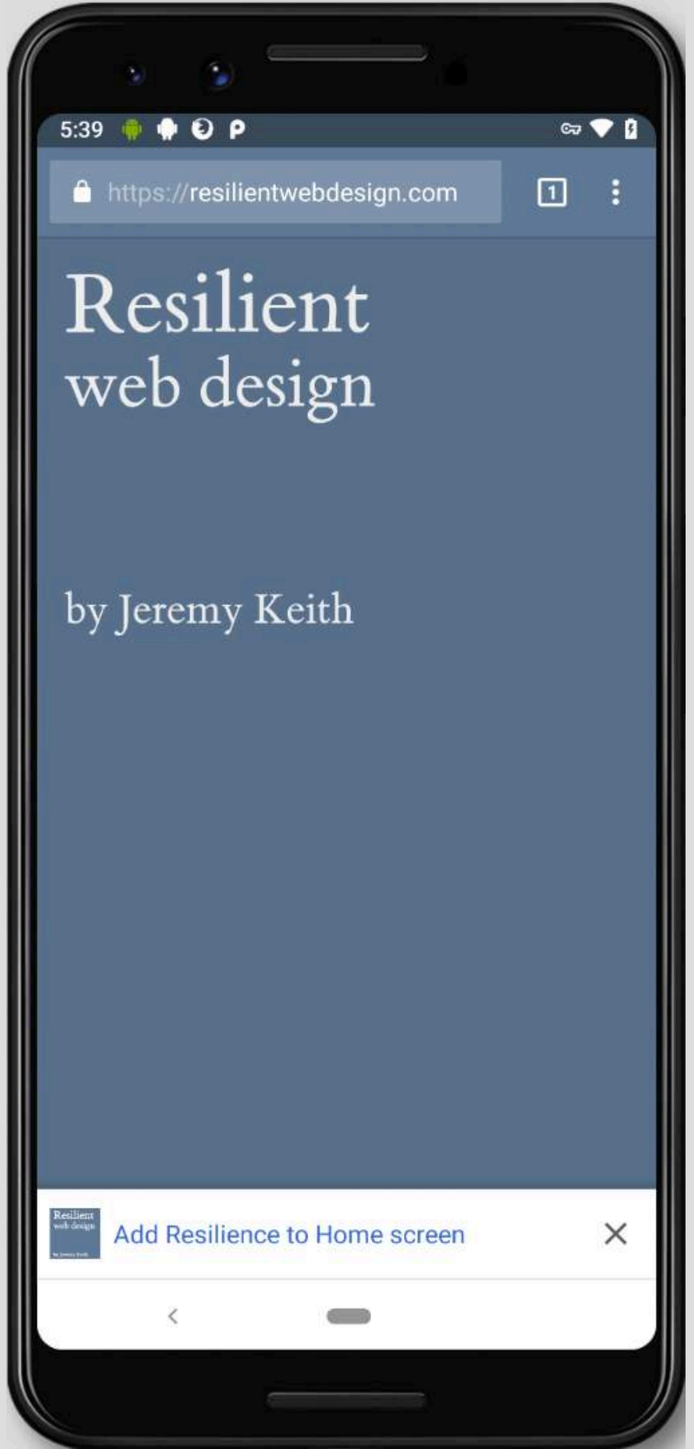
Three WiFi Call
14:47
82%
RESILIENT WEB DESIGN
Introduction
WITH A TITLE LIKE
*Resilient Web Design*, you might think that this is a handbook for designing robust websites. This is not a handbook. It's more like a history book.
Marshall McLuhan once said:
*We look at the present through a rear-view mirror. We march backwards into the future.*
But in the world of web design, we are mostly preoccupied with the here and now. When we think beyond our present moment, it is usually to contemplate the future—to imagine the devices, features, and interfaces that don't yet exist. We don't have time to look back upon our past, and


5:39
https://resilientwebdesign.com
1
Resilient
web design
by Jeremy Keith
Add Resilience to Home screen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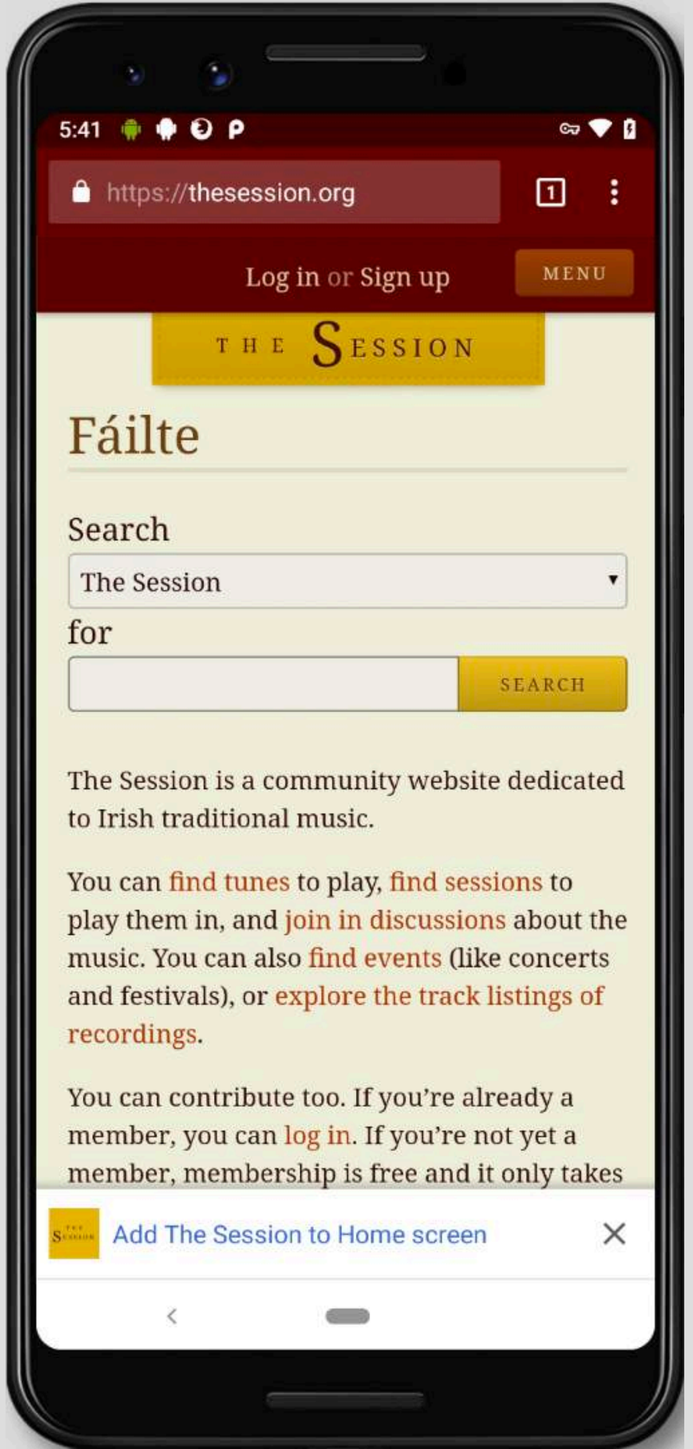
5:41
https://thesession.org
Log in or Sign up
MENU
THE SESSION
Fáilte
Search
The Session
for
SEARCH
The Session is a community website dedicated to Irish traditional music.
You can find tunes to play, find sessions to play them in, and join in discussions about the music. You can also find events (like concerts and festivals), or explore the track listings of recordings.
You can contribute too. If you're already a member, you can log in. If you're not yet a member, membership is free and it only takes
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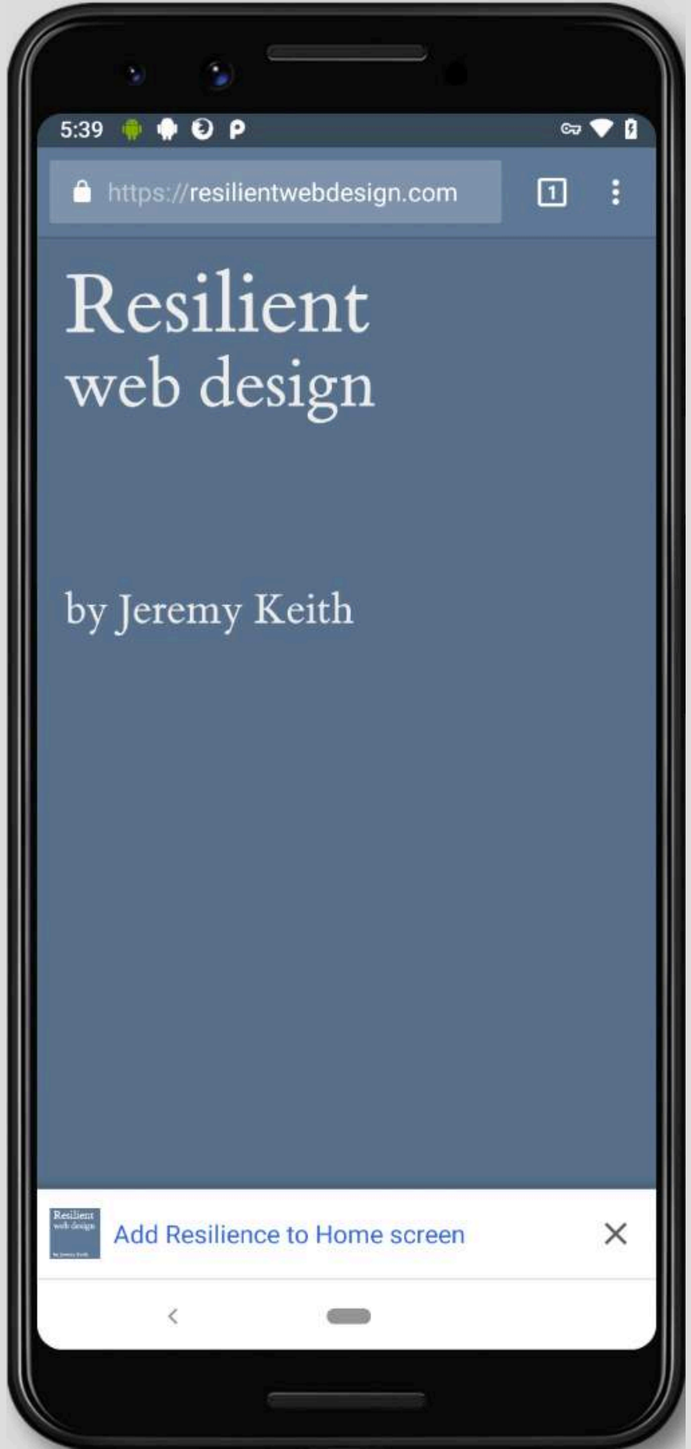
5:42
https://2018.ampersandconf.com
SCHEDULE
VENUE
WORKSHOPS
SPONSORSHIP
"AMPERSAND"
The Web Typography Conference
A day of inspiration and cutting edge techniques from worldwide experts
29 JUNE 2018
Duke of York's Picturehouse, Brighton, UK
Add Ampersand to Home screen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https://resilientwebdesign.com
Resilient web design
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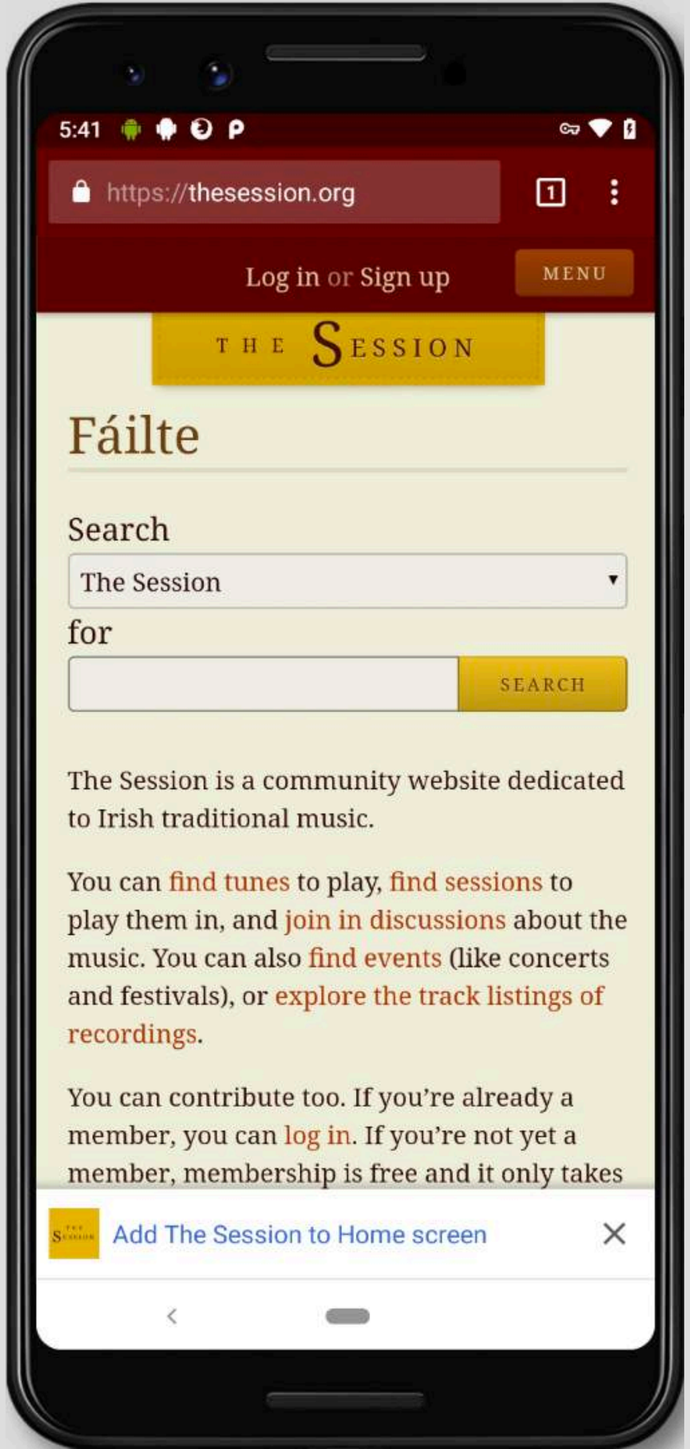
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Log in or Sign up
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SEARCH
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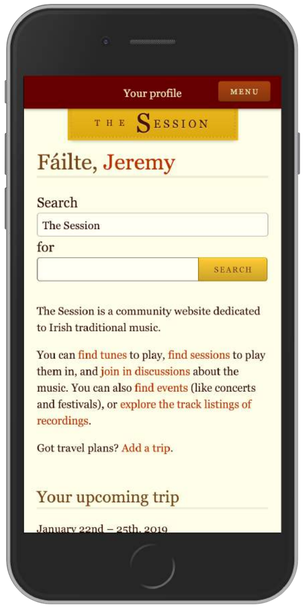
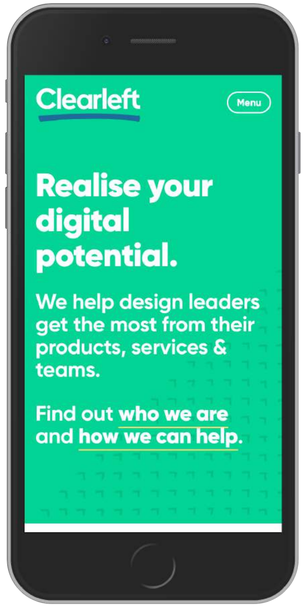
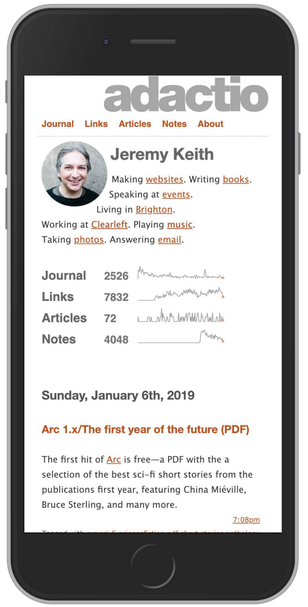
web app manifest
https
service worker

progressive web app



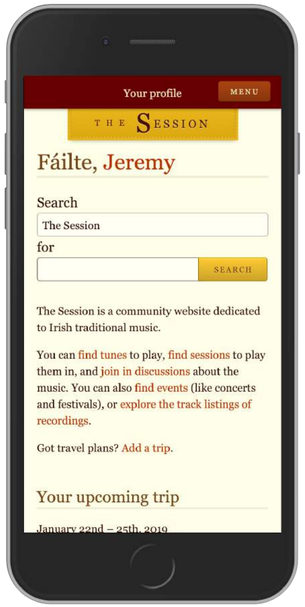


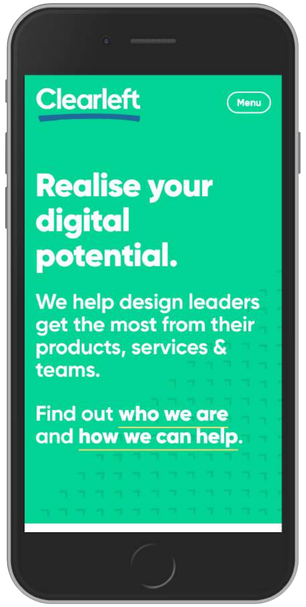



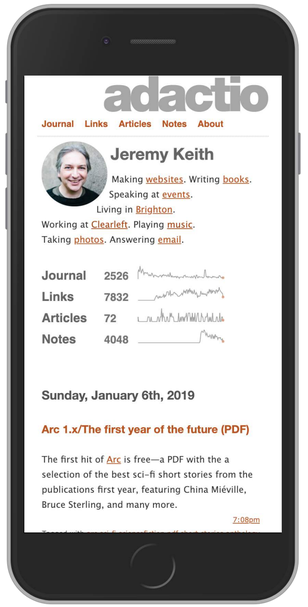




# progressive







# progressive

# Thank you