

# Single page apps in depth

a.k.a Mixu's single page app book

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This free book is what I wanted when I started working with single page apps. It's not an API reference on a particular framework, rather, the focus is on discussing patterns, implementation choices and decent practices.

I'm taking a "code and concepts" approach to the topic - the best way to learn how to use something is to understand how it is implemented. My ambition here is to decompose the problem of writing a web app, take a fresh look at it and hopefully make better decisions the next time you make one.

Update: the book is now also on [Github](#).

## Introduction

- [Modern single page apps - an overview](#)

## Writing maintainable code

- [Maintainability depends on modularity: Stop using namespaces!](#)
- [Getting to maintainable](#)
- [Testing explained](#)

## Implementation alternatives: a look at the options

- [The view layer](#)
- [The model layer](#)

## Meditations on Models & Collections

- [Implementing a data source](#)
- [Implementing a model](#)
- [Implementing a collection](#)
- [Implementing a data cache](#)
- [Implementing associations](#)

## Views - templating, behavior and event consumption

- Templating: from data to HTML
- Behavior: binding DOM events to HTML and responding to events
- Consuming events from the model layer: communication between views and re-rendering views in response to model data changes

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**Leslie** • 10 years ago

Why isn't this book a single page app? :)



Why isn't this book a single page app. :/

70 ^ | v 1 • Reply • Share ›



**Jacob** → Leslie • 10 years ago

Actually, there is a single page html version :p Anyway, looks like a interesting read. Gt much easier on the eyes..

8 ^ | v 1 • Reply • Share ›



**Alexandre Gravem** → Jacob • 10 years ago

Get a Kindle ;-)

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**James Harton** → Alexandre Gravem • 10 years ago

reading the PDF on the kindle sucks.

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**mtakada** Mod → James Harton • 10 years ago

Why not try the mobi file then? It's the native format for the Kindle.

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**Jules Manson** → Leslie • 3 years ago

LMAO great point!!!

^ | v • Reply • Share ›



**Hongli Lai** • 9 years ago

What did you use to write the book and generate all the output formats?

6 ^ | v • Reply • Share ›



**mtakada** Mod → Hongli Lai • 9 years ago • edited

I wrote the book in HTML, used a custom Node-based generator script and Calibre to makefile and generator are on the github repository for the book.

1 ^ | v • Reply • Share ›



**felipe** → mtakada • 6 years ago

Genius!

7 ^ | v • Reply • Share ›



**Matt** • 10 years ago

thank you for writing this, I appreciate it

2 ^ | v • Reply • Share ›



**ivebencrazy** • 7 years ago

I just started learning javascript and node in like the last month, and I just thought I should let been an awwwwwesome resource for me since I've found them in the last week or two (altho yet, but I'm assuming it's also awesome). I'm super glad that you posted these, so thanks a t

1 ^ | v • Reply • Share ›



**The Percept** → ivebencrazy • 3 years ago

how's your progress till date ? It's been 4 years :)

— now's your progress till date ? it's been 4 years :)

^ | v • Reply • Share ›



**Draex** • 8 years ago

In chapter "Maintainability depends on modularity: Stop using namespaces!" / "Do not mix def

Found this code:

```
"module.exports = {
  initialize: function(win) {
    win.Foo.Bar = new Baz();
    var f = new FooObserver();
    FooObserver.observe('window.Foo.Bar');
  }
};"
```

Shouldn't f.observe("window.Foo.Bar") be there?

1 ^ | v • Reply • Share ›



**Uri** • 8 years ago

Brilliant!

"This free book is what I wanted when I started working with single page apps"

- I couldn't agree more.

私の心の底からありがとう

1 ^ | v • Reply • Share ›



**Jesus Bejarano** • 9 years ago

Increíble , siempre quise aprender como hacer una de estas aplicaciones , gracias por tu cola

1 ^ | v • Reply • Share ›



**sty** • 9 years ago

Why not write it in latex?

2 ^ | v 2 • Reply • Share ›



**JennaRink** • 5 years ago

Mobile version has a bug...

^ | v • Reply • Share ›



**Gonki** • 5 years ago

2DX is an in-memory noSQL database with high performance SPA that can display >2 million

<http://js2dx.com>

^ | v • Reply • Share ›



**CodeMonkey3119** • 6 years ago

I find the json SPA's to be a bit labor intensive. We started a new project at work recently and [www.WebRocketX.com](http://www.WebRocketX.com) So far so good.

^ | v • Reply • Share ›



**ttedy** • 7 years ago

Amazing experience, i was reading it the past week and find that pdf format for the code som a stop and continue reading few minutes after.

Thanks for share your experience with us.

^ | v • Reply • Share ›



**James** • 7 years ago

For those who use AngularJS, there's a new open-source single page app CMS, [https://github](https://github.com)

^ | v • Reply • Share ›



**mrchris2000** • 8 years ago

Any chance you could add a chapter on authentication in an SPA world?

This is something I've seen partially addressed in several places but never really in any depth. It appears that user login is generally handled outside the SPA itself and then authentication is sort of in depth description of the whys and hows.

^ | v • Reply • Share ›



**Guanghui Zhang** • 8 years ago

Very useful to create online book.

^ | v • Reply • Share ›



**uk best essay** • 8 years ago

The obvious way to learn to use one thing would be to understand how it can be applied. My decompose the condition connected with creating a new net request, create a refreshing look choices next time you make just one.

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**Liujian** • 8 years ago

I think I found a error in the code of Model set method of Chapter 8. There should be a staterr otherwise variable attr would be undefined.

```
Model.prototype.set = function(key, value) {  
  var self = this;  
  if(arguments.length == 1 && key === Object(key)) {  
    Object.keys(attr).forEach(function(key) {  
      self.set(key, attr[key]);  
    });  
    return;  
  }  
  if(!this._data.hasOwnProperty(key)) {  
    this.length++;  
  }  
  this._data[key] = (typeof value == 'undefined' ?  
    true : value);  
};
```

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**Gaston** • 9 years ago

Thank you for writing this.

I'm pretty new to js and I'm starting my first UI project after many years of java programming, When I started my project I did some research I've chosen Angularjs because the framework i many of this concepts.

I'd love to read your opinion about it.

^ | v • Reply • Share ›



**kan** • 9 years ago

If u r discussion about framework i think you should give some more pictorial examples rather really do not understand the node js code in chapter 2. It reduce readability of your book.

^ | v • Reply • Share ›



**Ajinkya** • 9 years ago

its really greatful, thanks for your JS guide !

^ | v • Reply • Share ›



**cliffeh** • 9 years ago

Hi, Mikito.

Thanks for this - I really like & basically agree with what you've written. I'd love to see view.jsc public soon? Or can you give access By Invitation Only? :)

I'd be interested in hearing your thoughts on Backbone. I think it's generic & flexible enough t good, some not so good.

Anyway, thanks again & keep up the good work.

^ | v • Reply • Share ›



**gwallan** • 9 years ago

thanks,i like it.

^ | v • Reply • Share ›



**Stevo** • 9 years ago

Thank you very much!

^ | v • Reply • Share ›



**Jacob T. Nielsen** • 10 years ago

Impressive piece of work. Thanks for taking the time to do this!

^ | v • Reply • Share ›



**Ivar** • 10 years ago

impressive work - thanks for sharing.

I've really appreciated going over your thoughts. You speak with an authority of someone whc approaches.

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**Emil Ahlbäck** • 10 years ago

The .pdf link is not linking to a PDF. Looking forward to reading!

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**hrtalekom** • 7 years ago



hrctelekom · 7 years ago

<https://sebir.net>

<https://hrctelekom.com>

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A book about single page applications by [Mikito Takada](#).