

Mojito

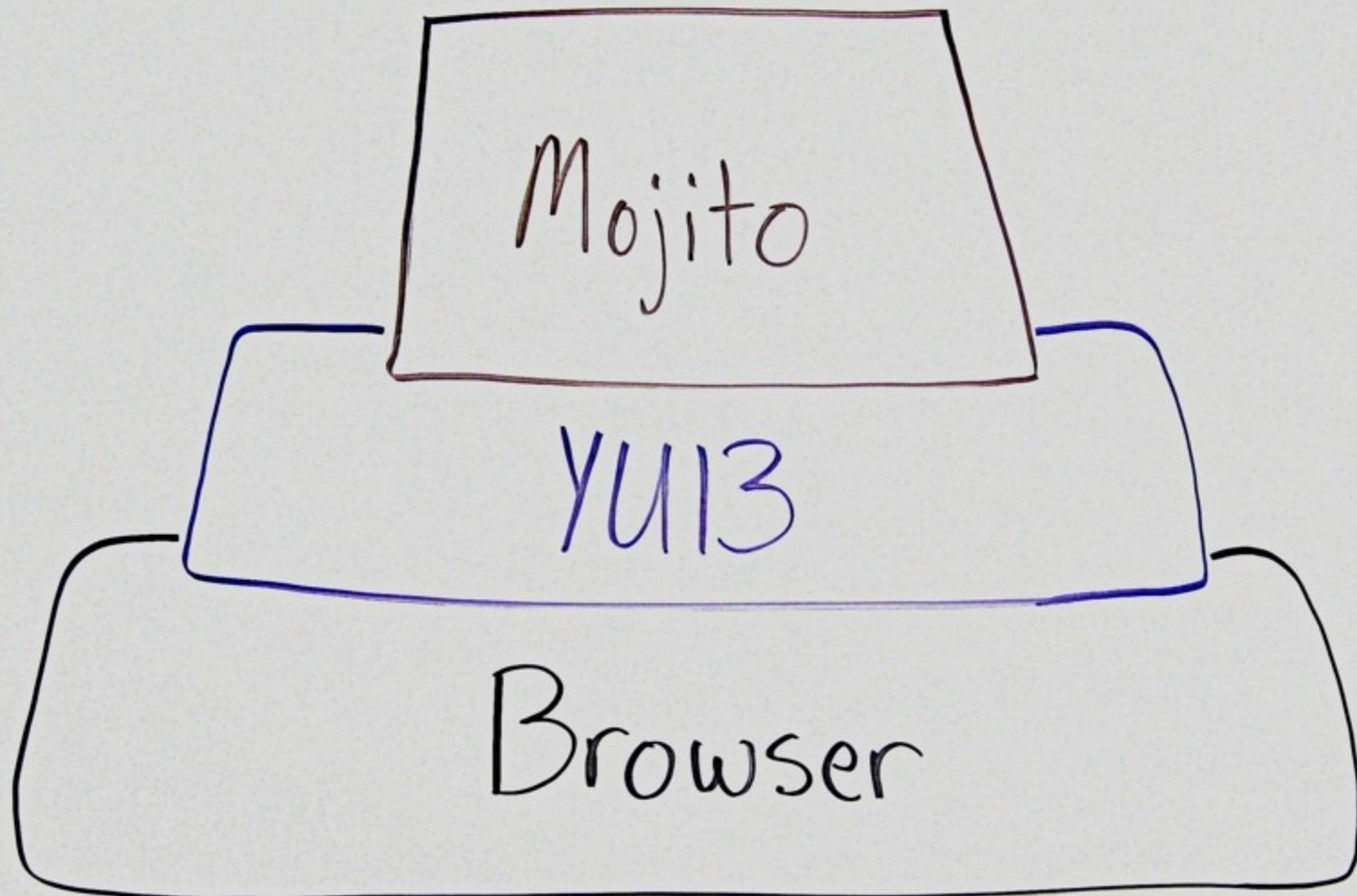
A Tale of Two Runtimes

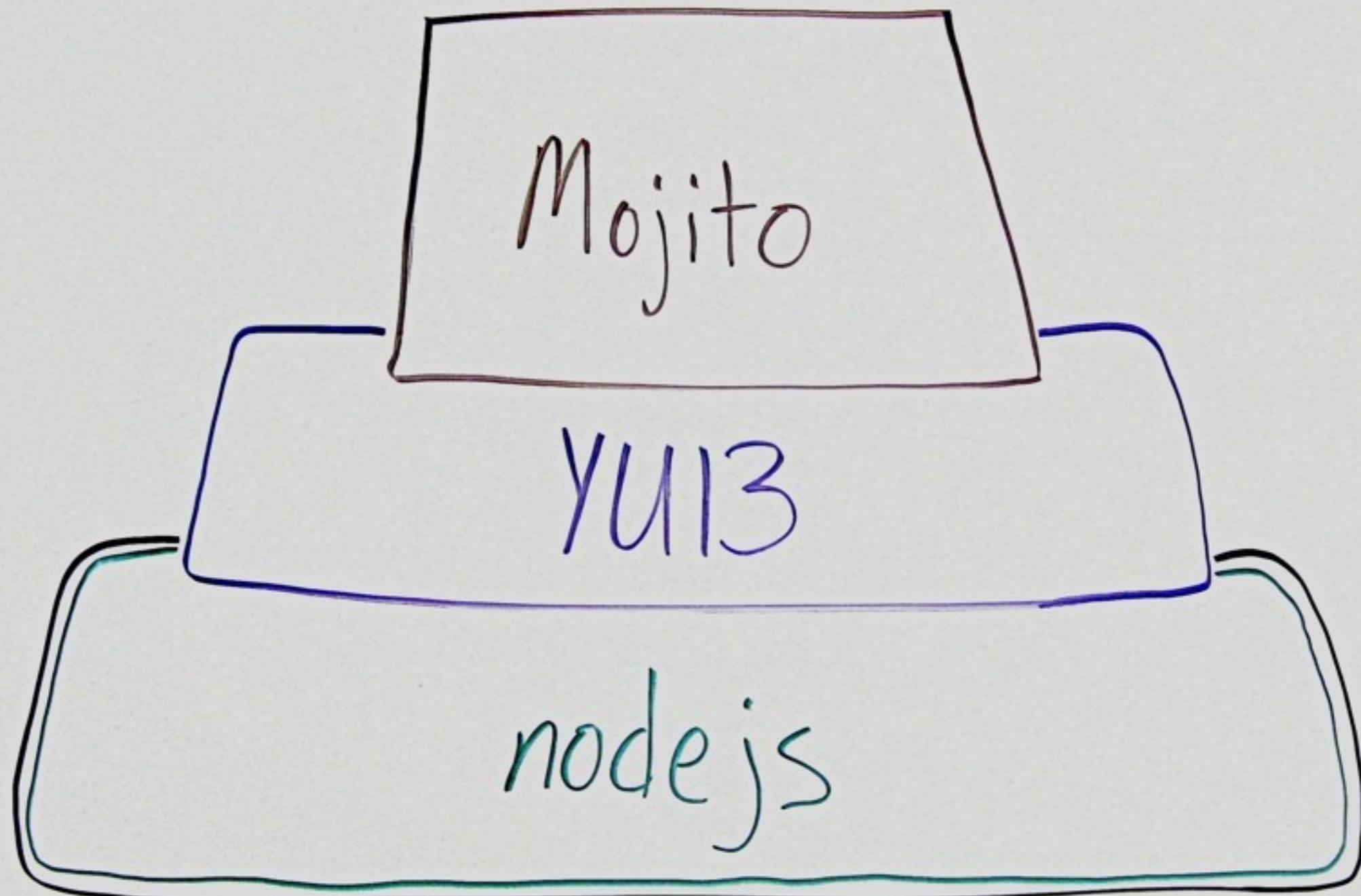
@rhyolight

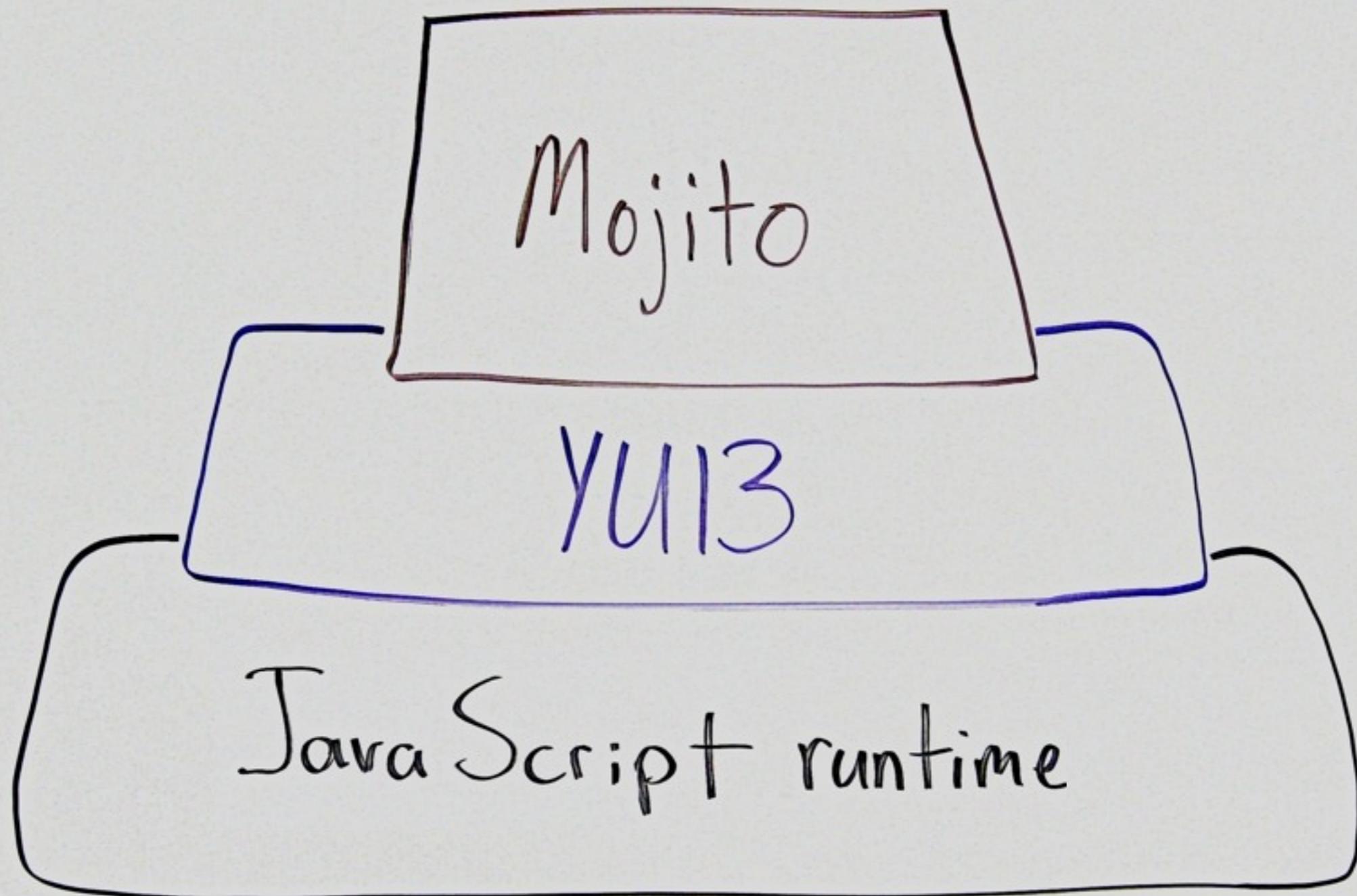
Matthew Taylor
YAHOO!

Mojito is a
Web Application Framework

- ★ 100% JavaScript
- ★ Client + Server
- ★ Presentation-Centric

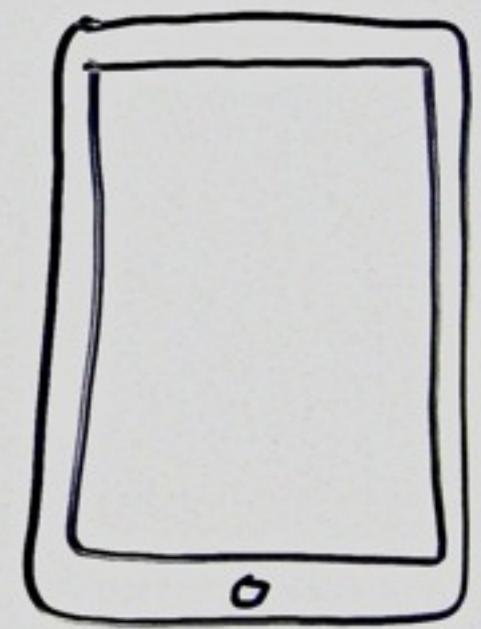
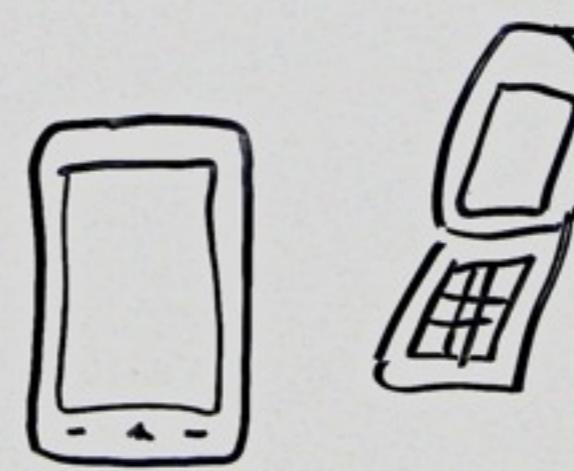




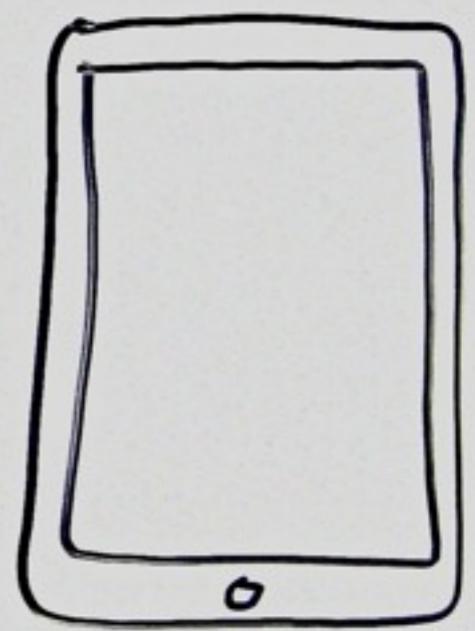
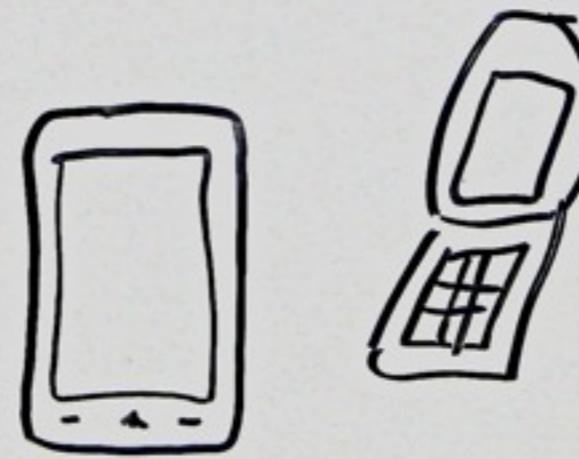


W H Y

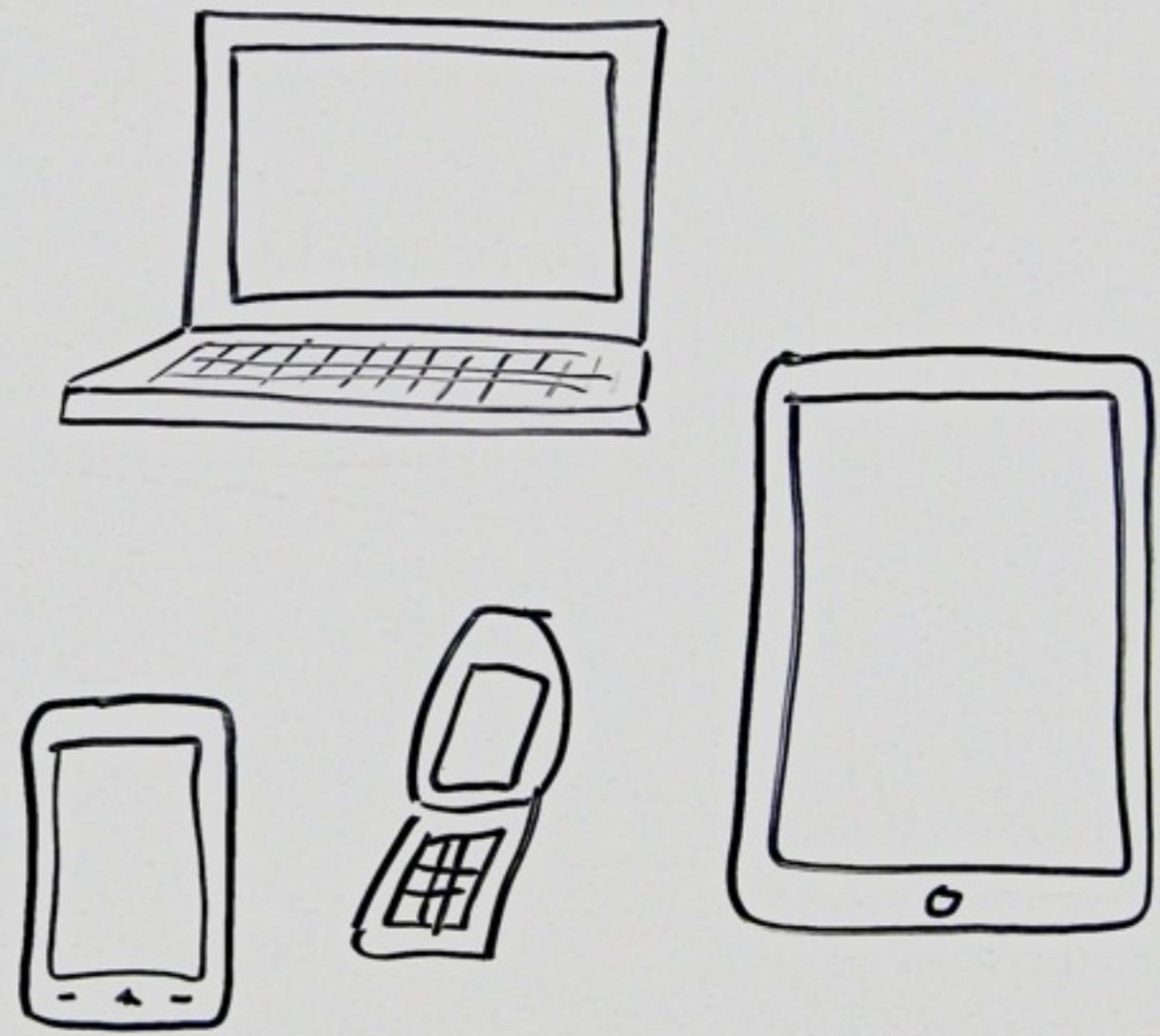
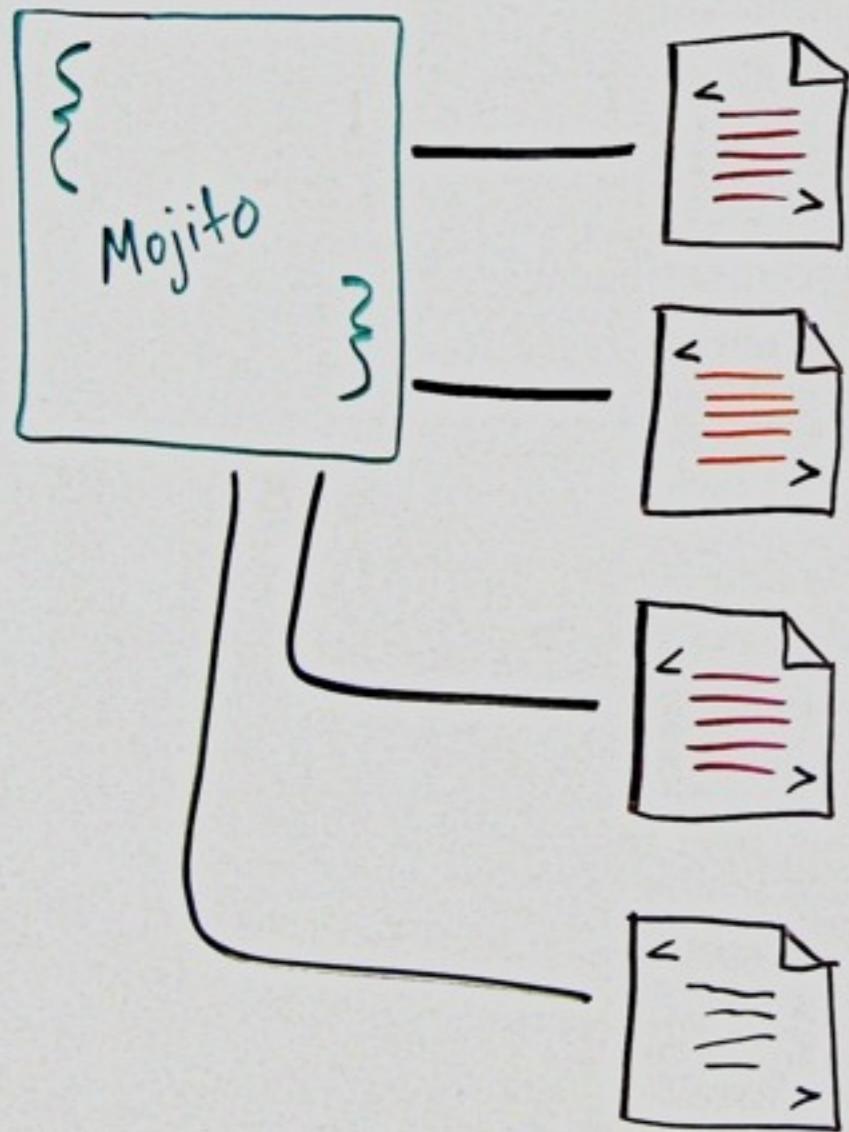
WHY



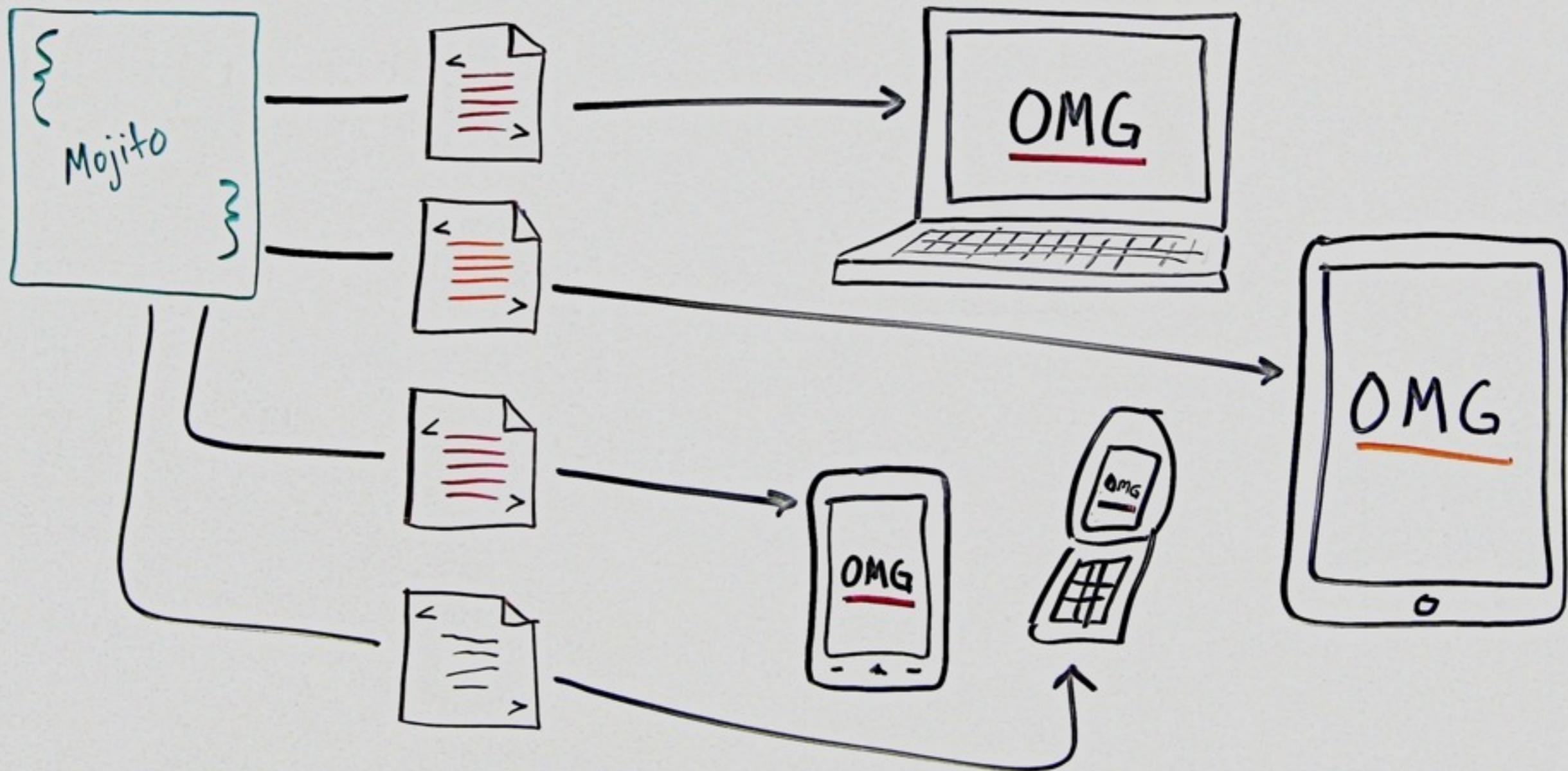
WHY



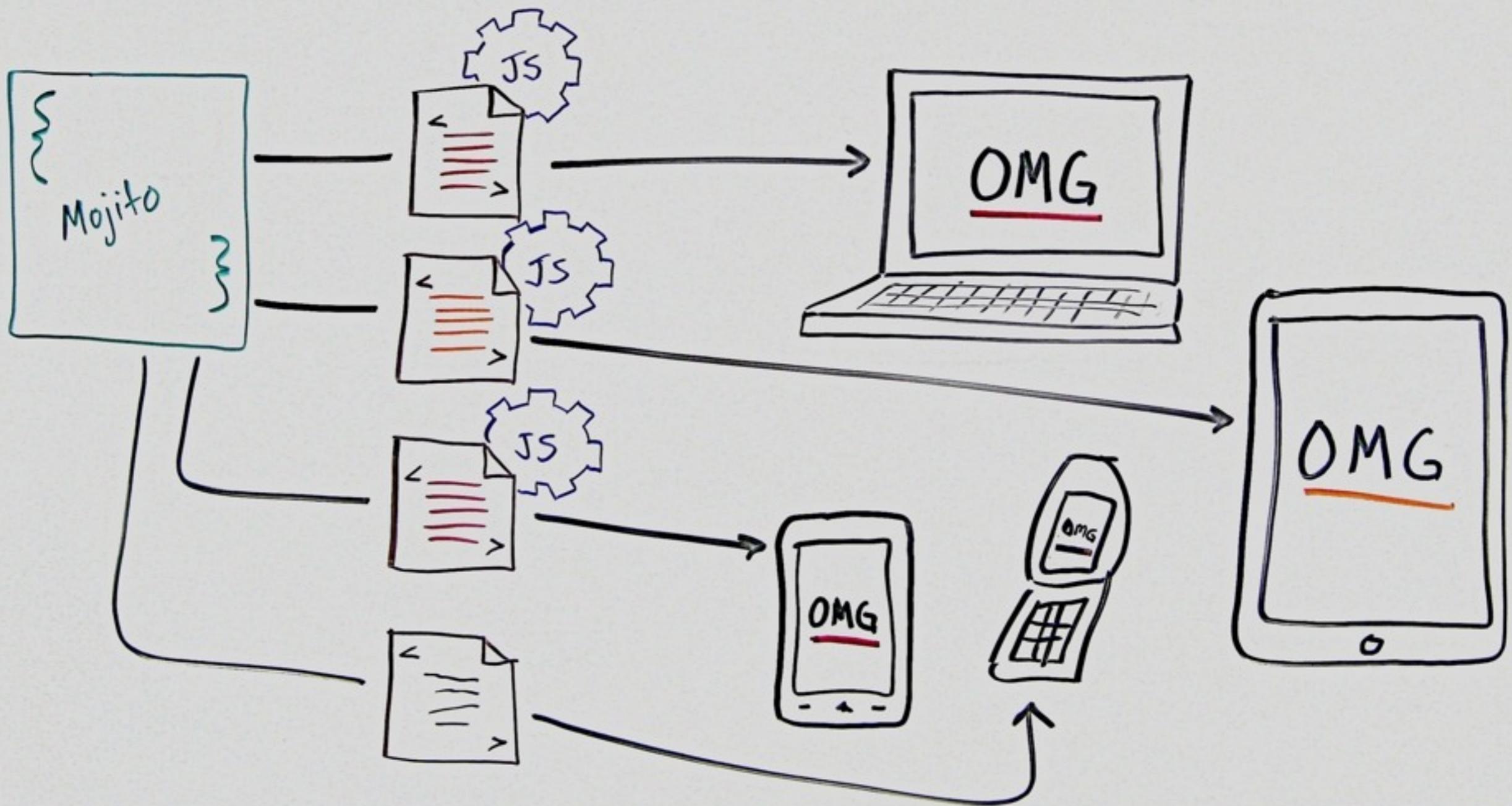
W H Y



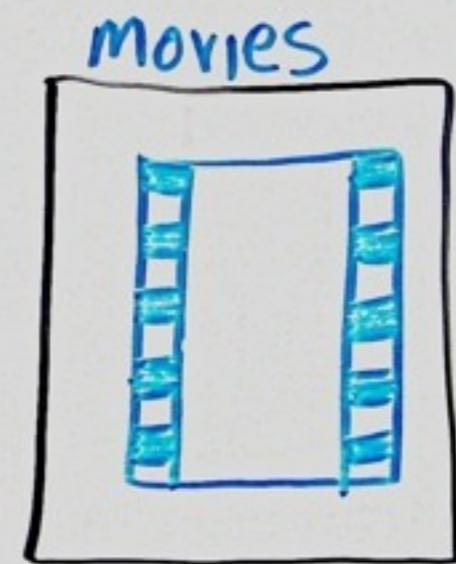
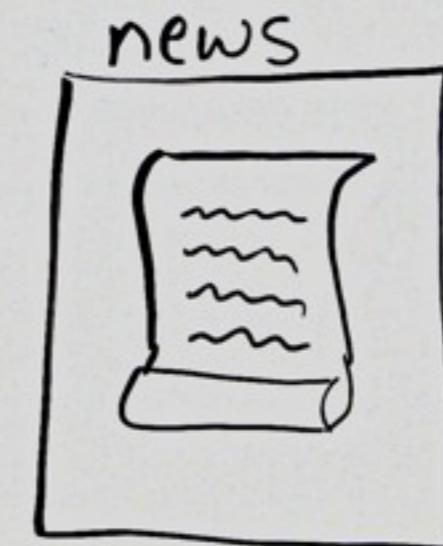
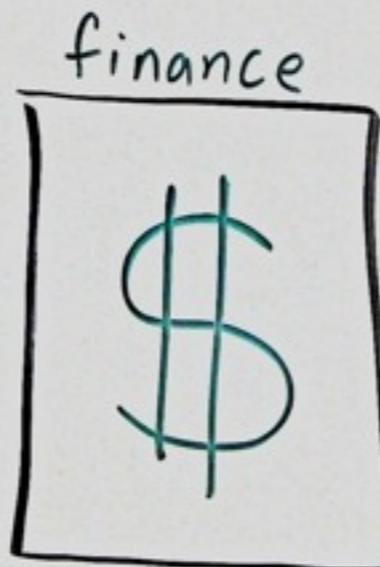
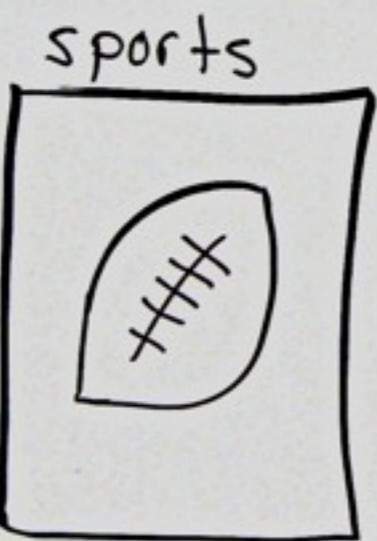
W H Y



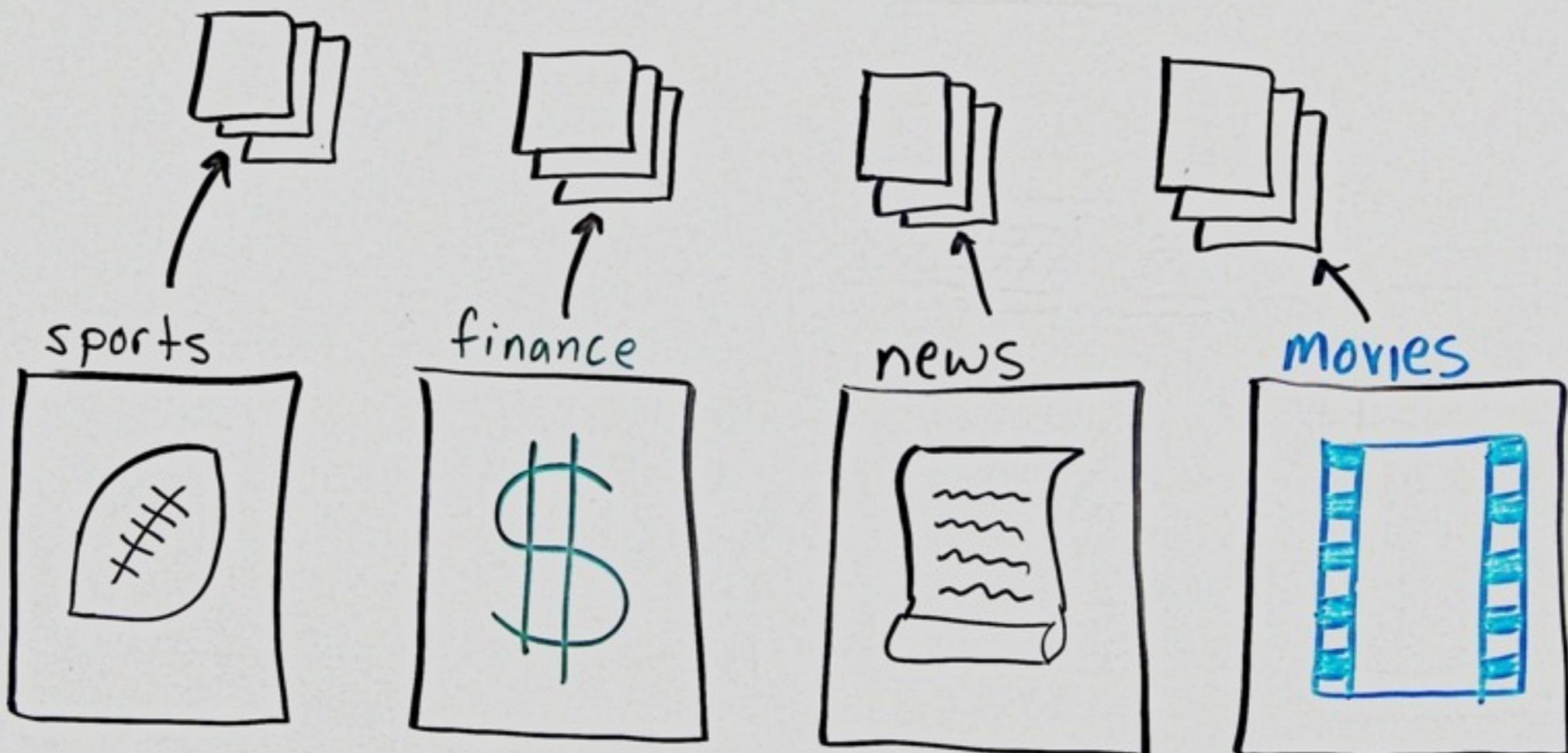
WHY



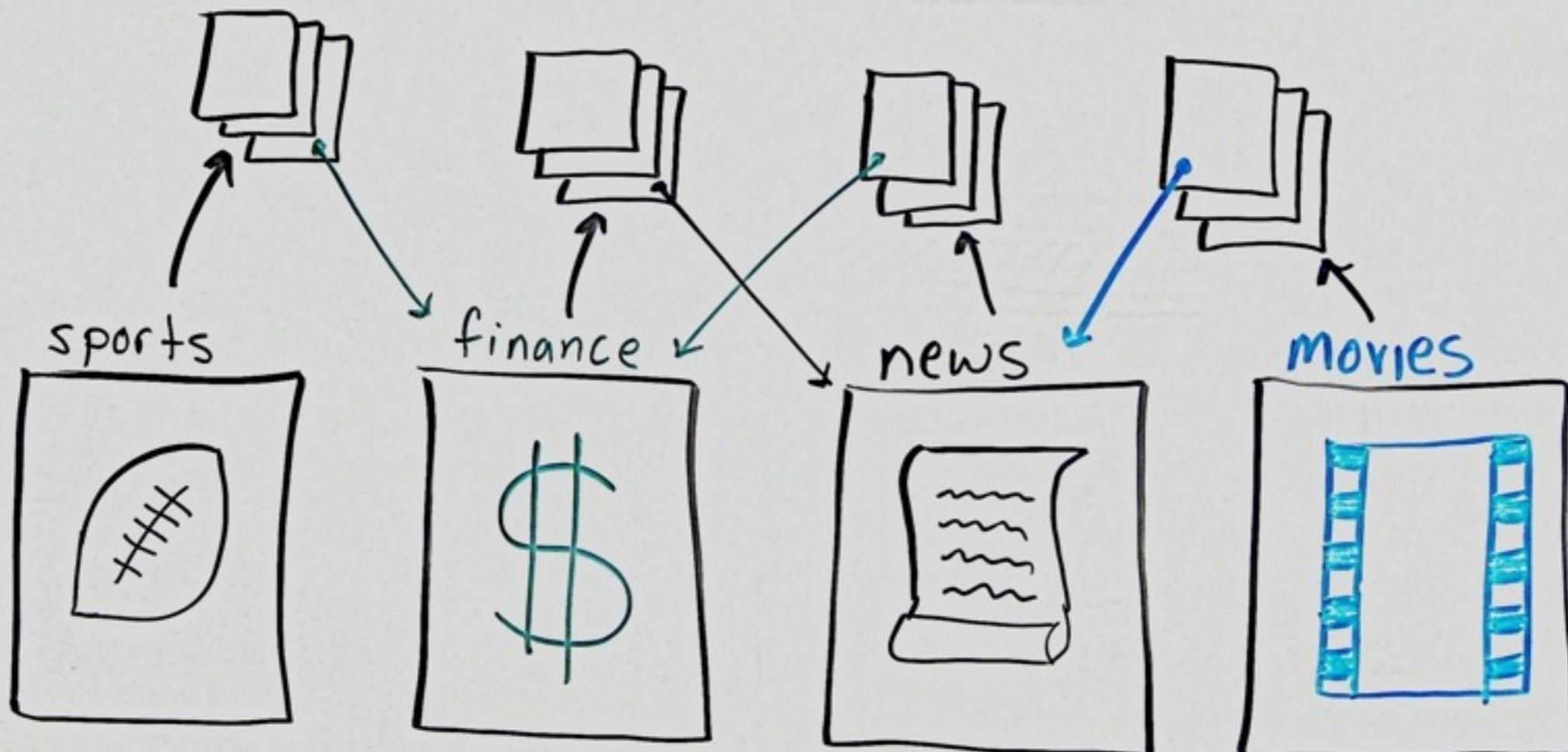
WHY



W H Y



W H Y



WHY

PHP

Server

JS

Client



WHY

JS

Server

JS

Client



WHY

JS

JS

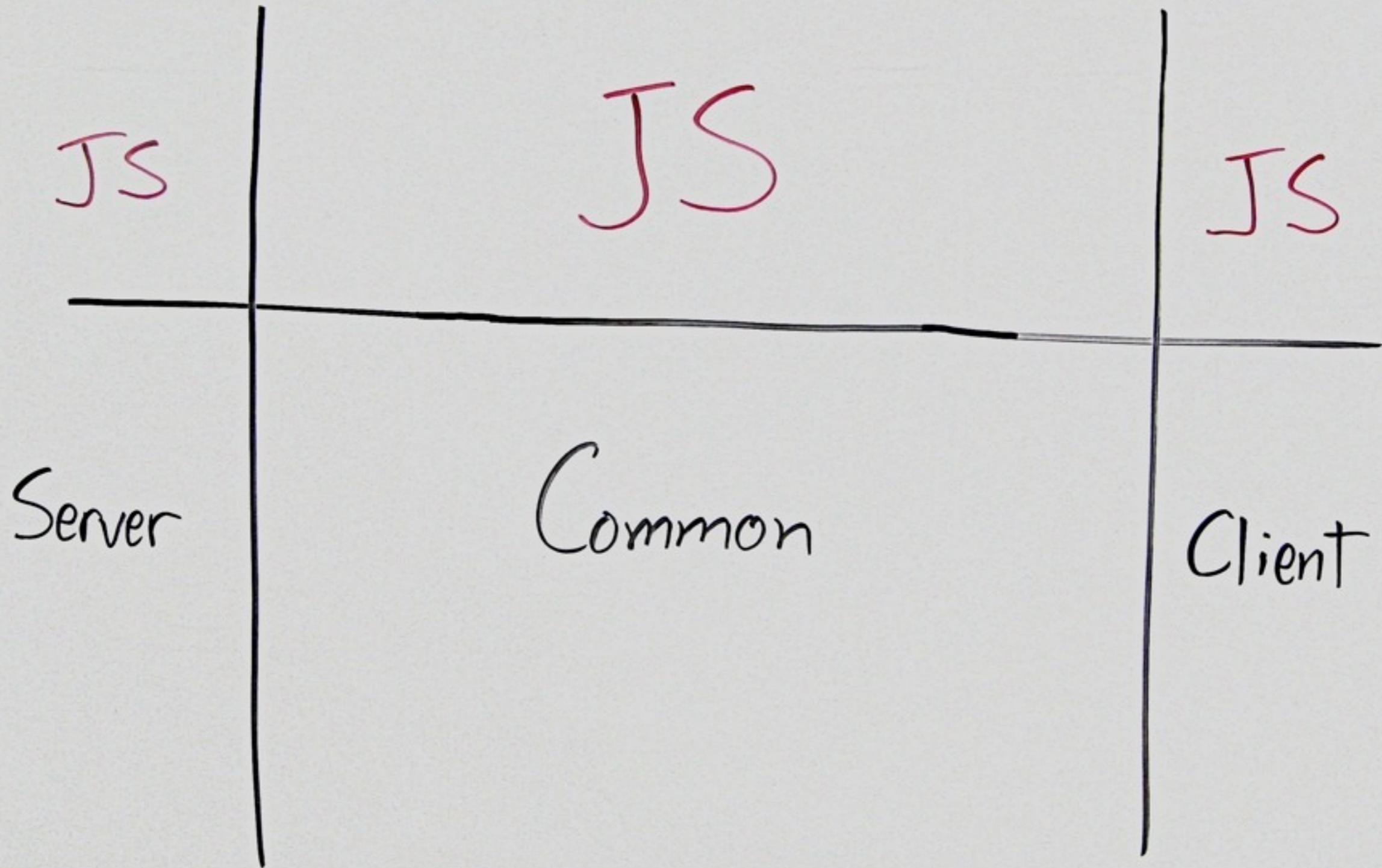
JS

Server

Common

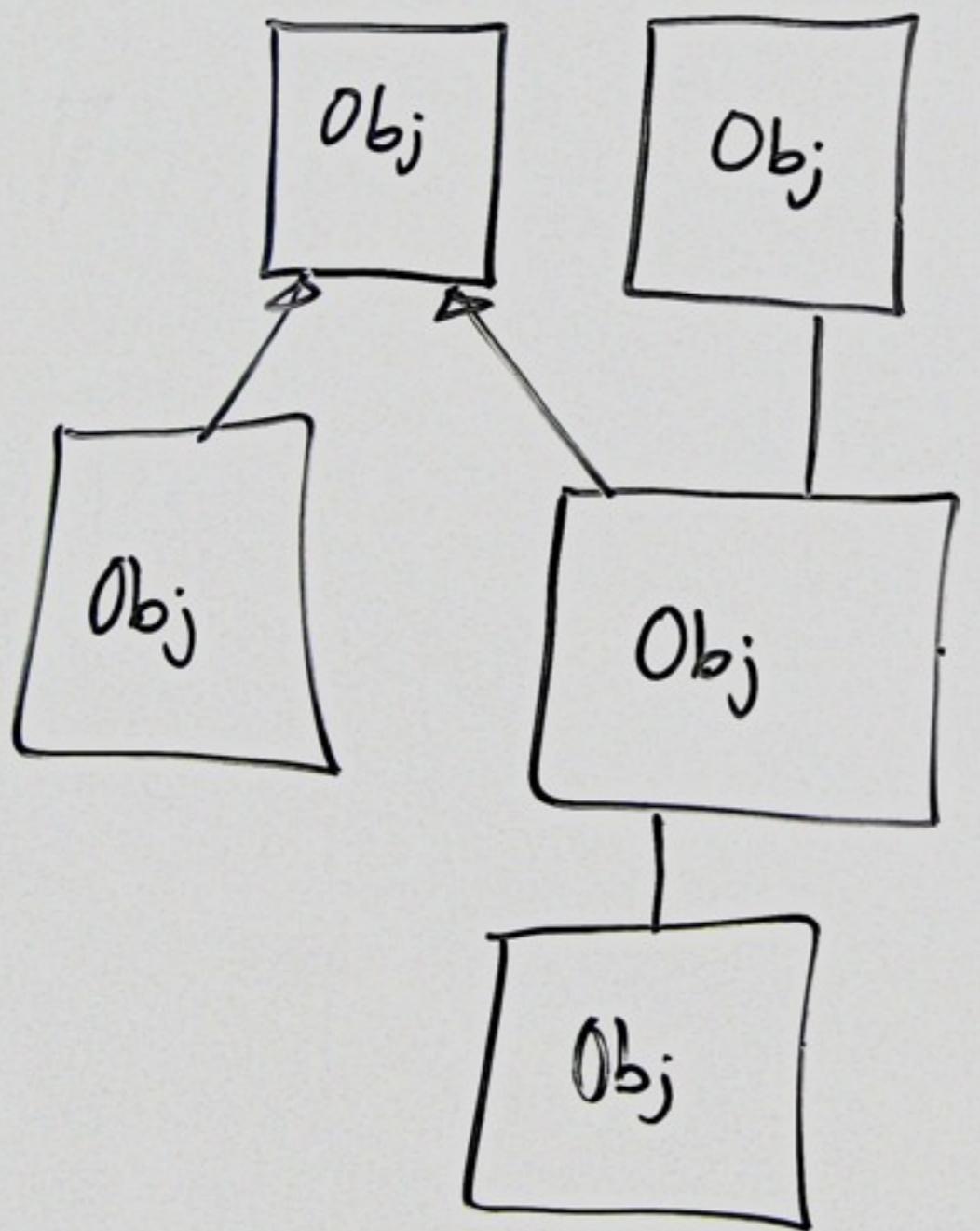
Client

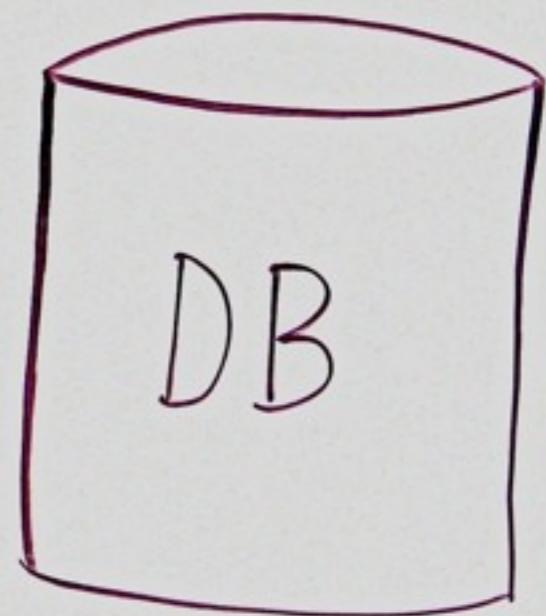
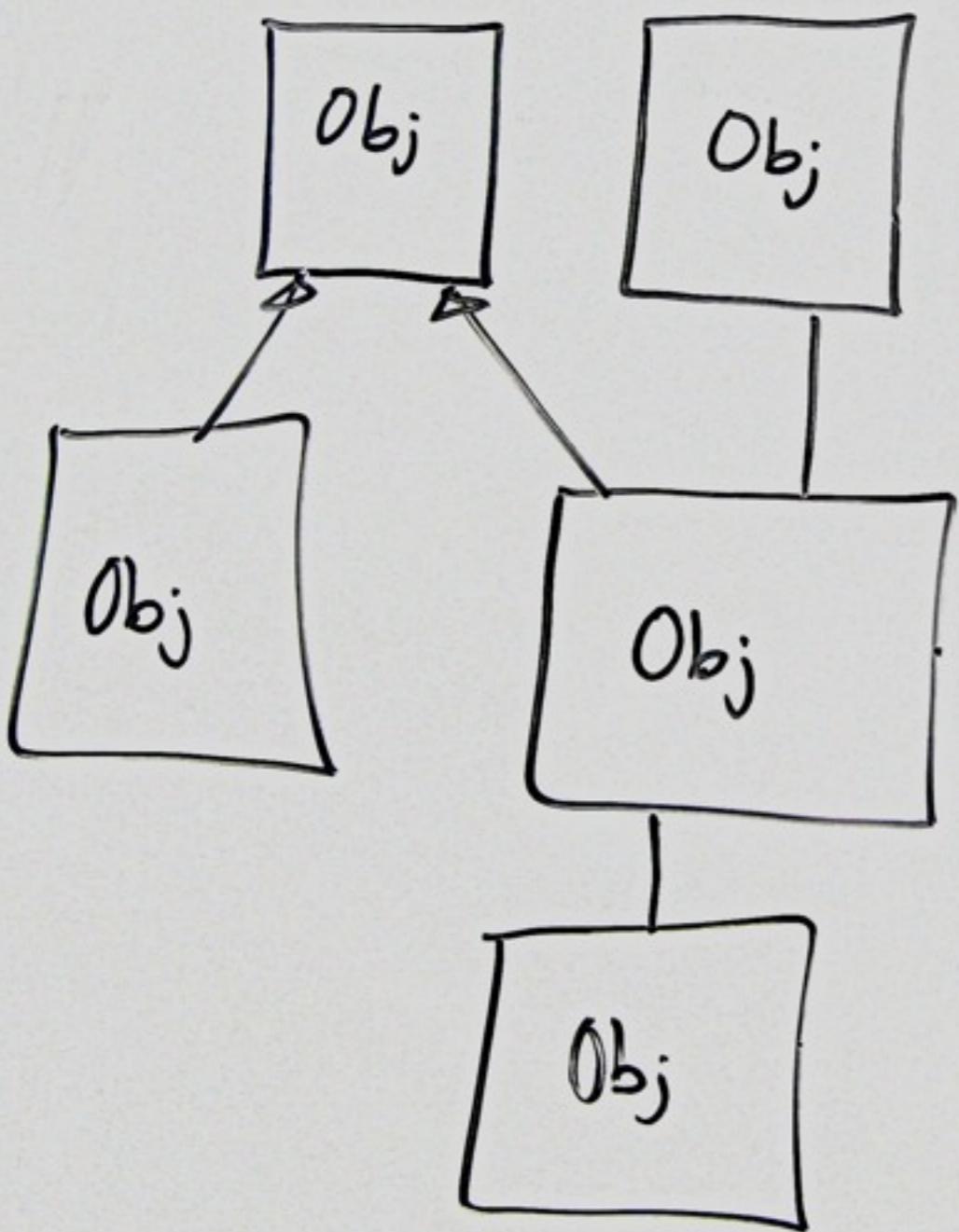
WHY

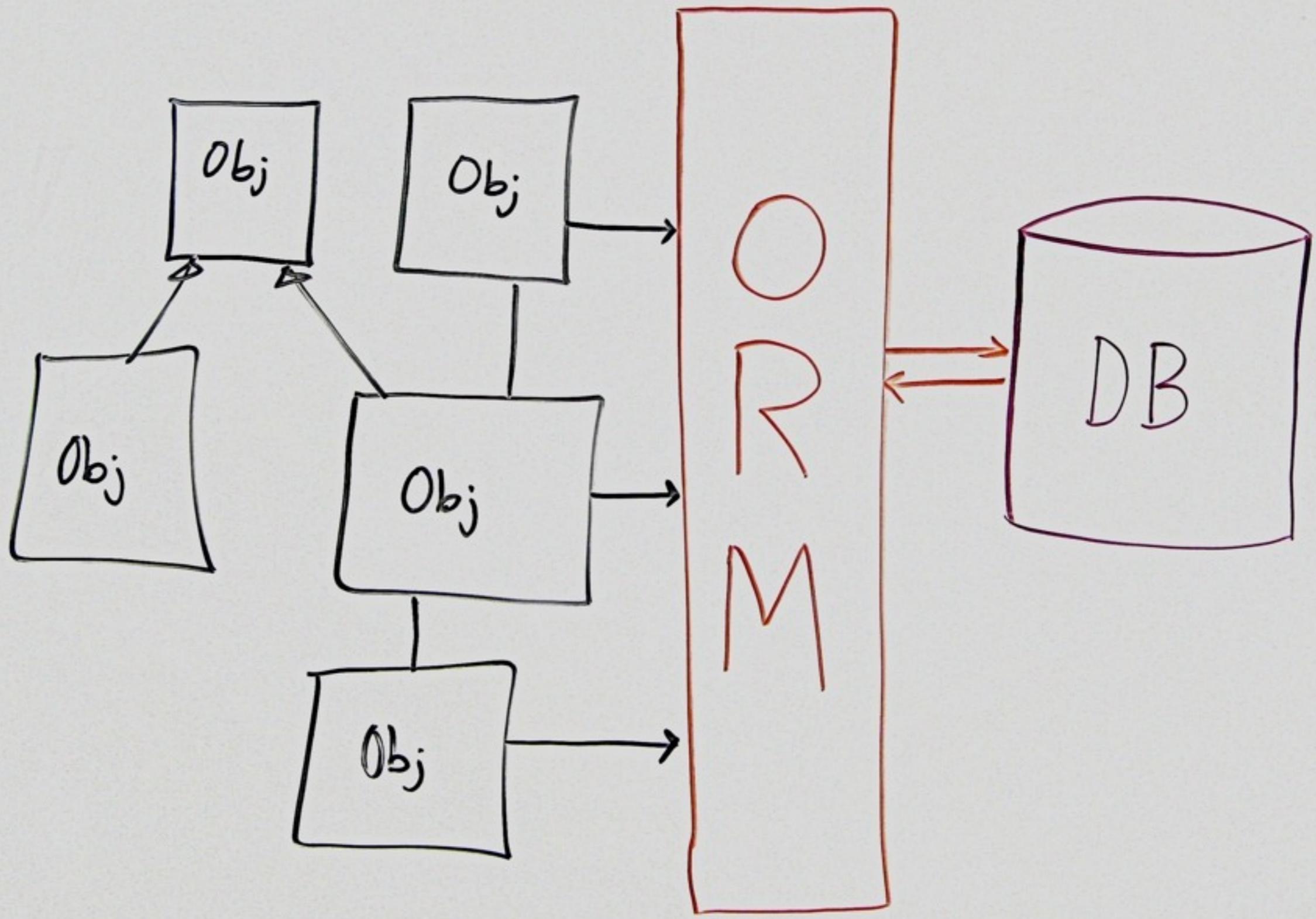


WHY

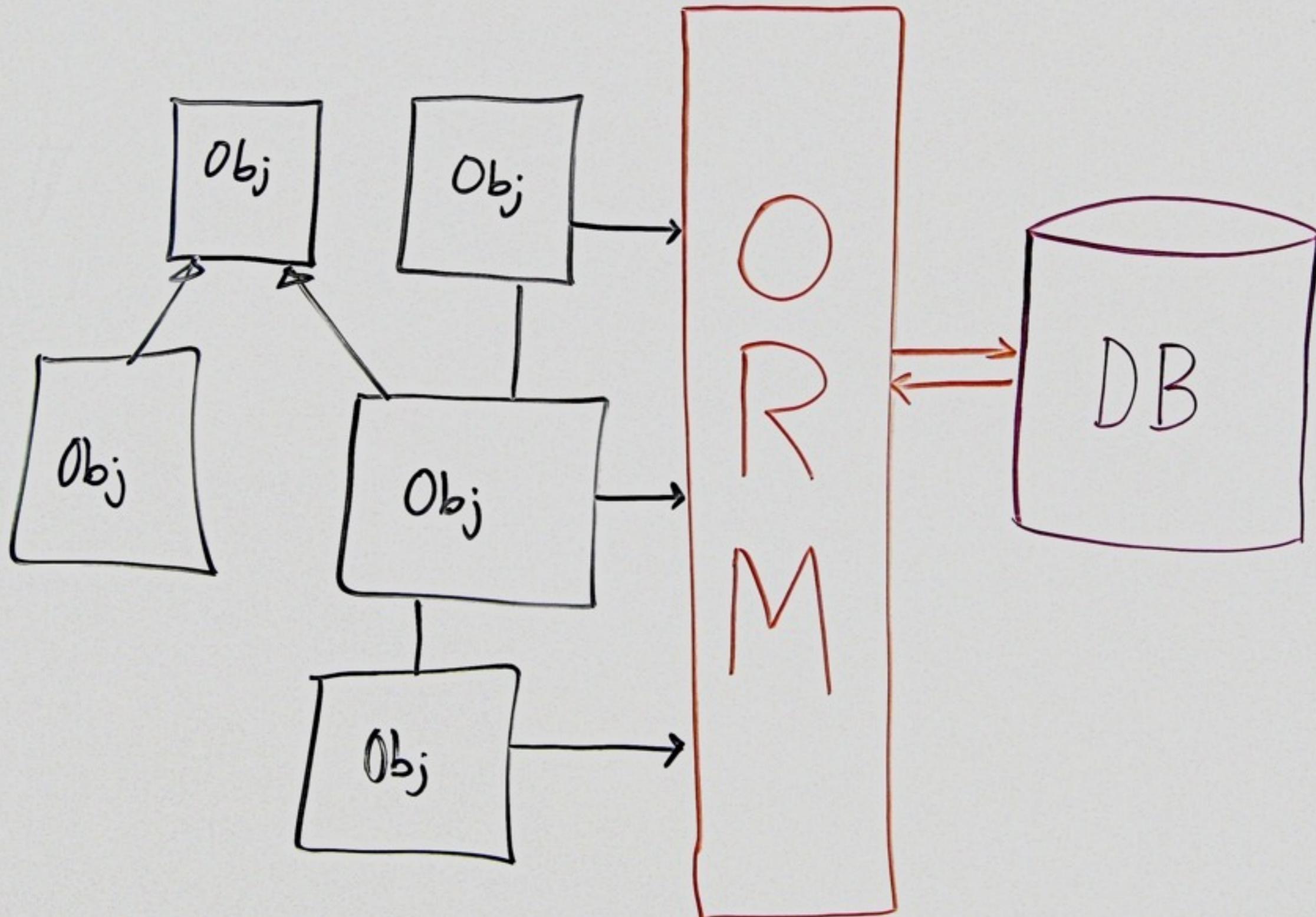
ONE
CODEBASE



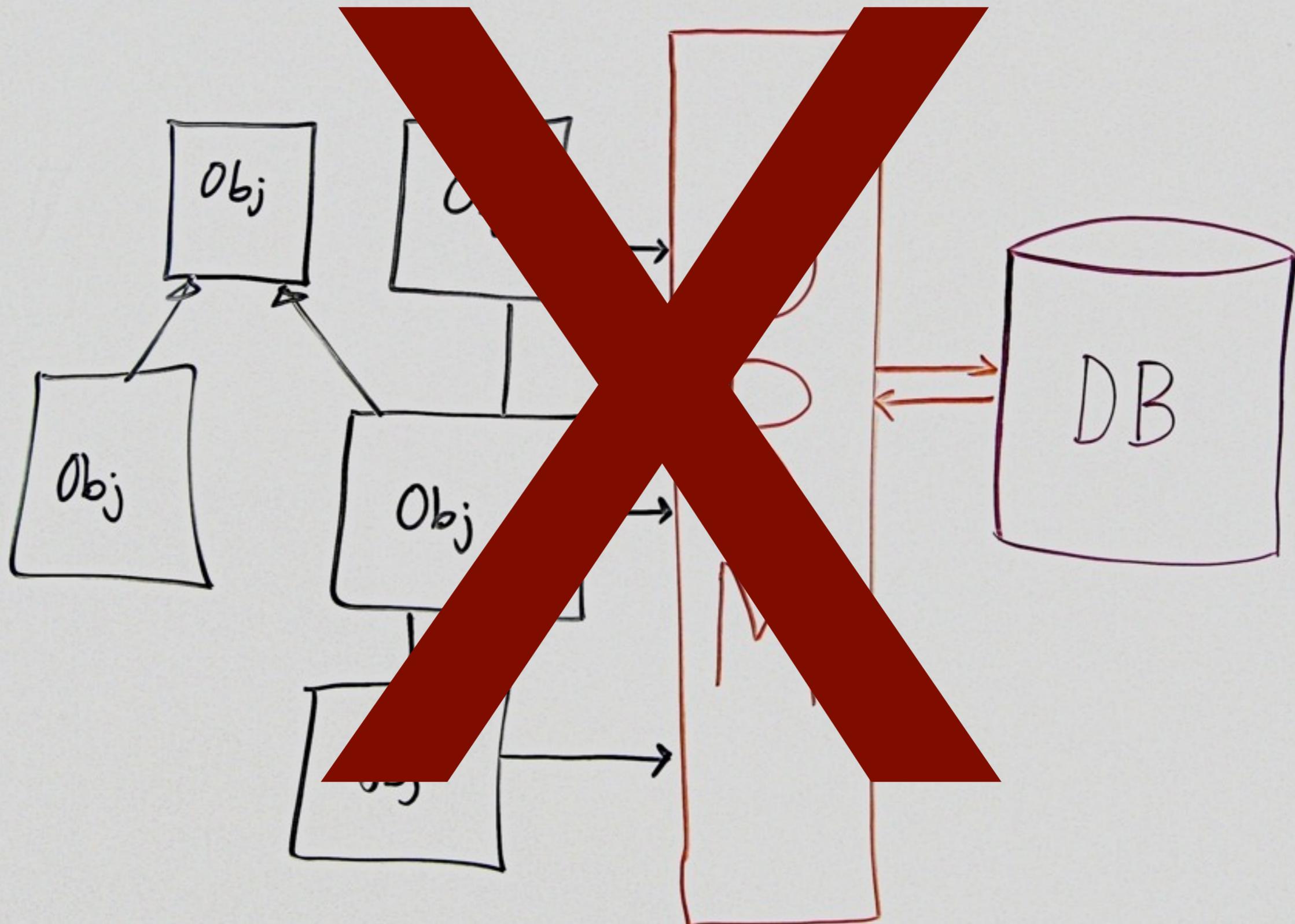




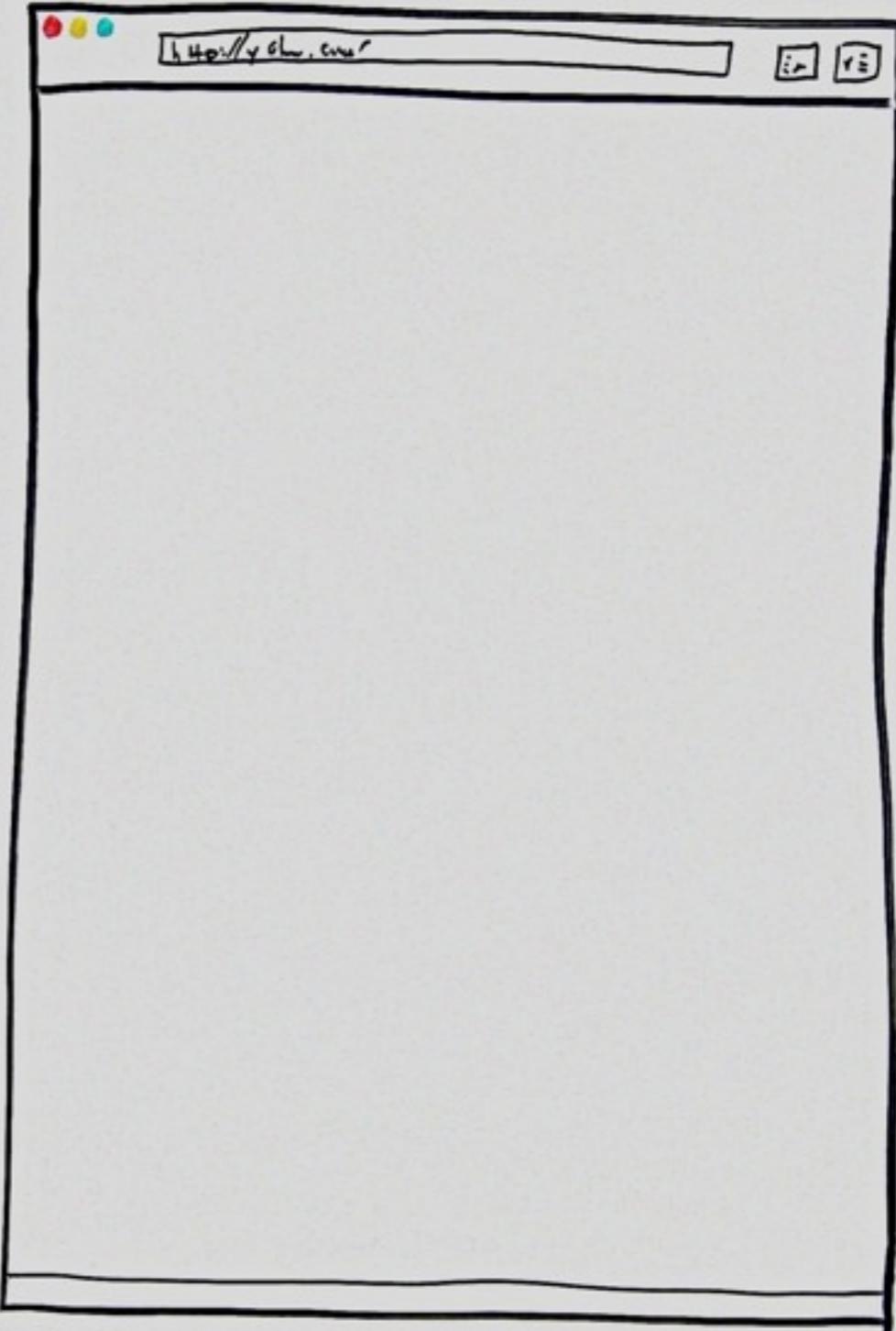
Rails, Grails, Django, etc.

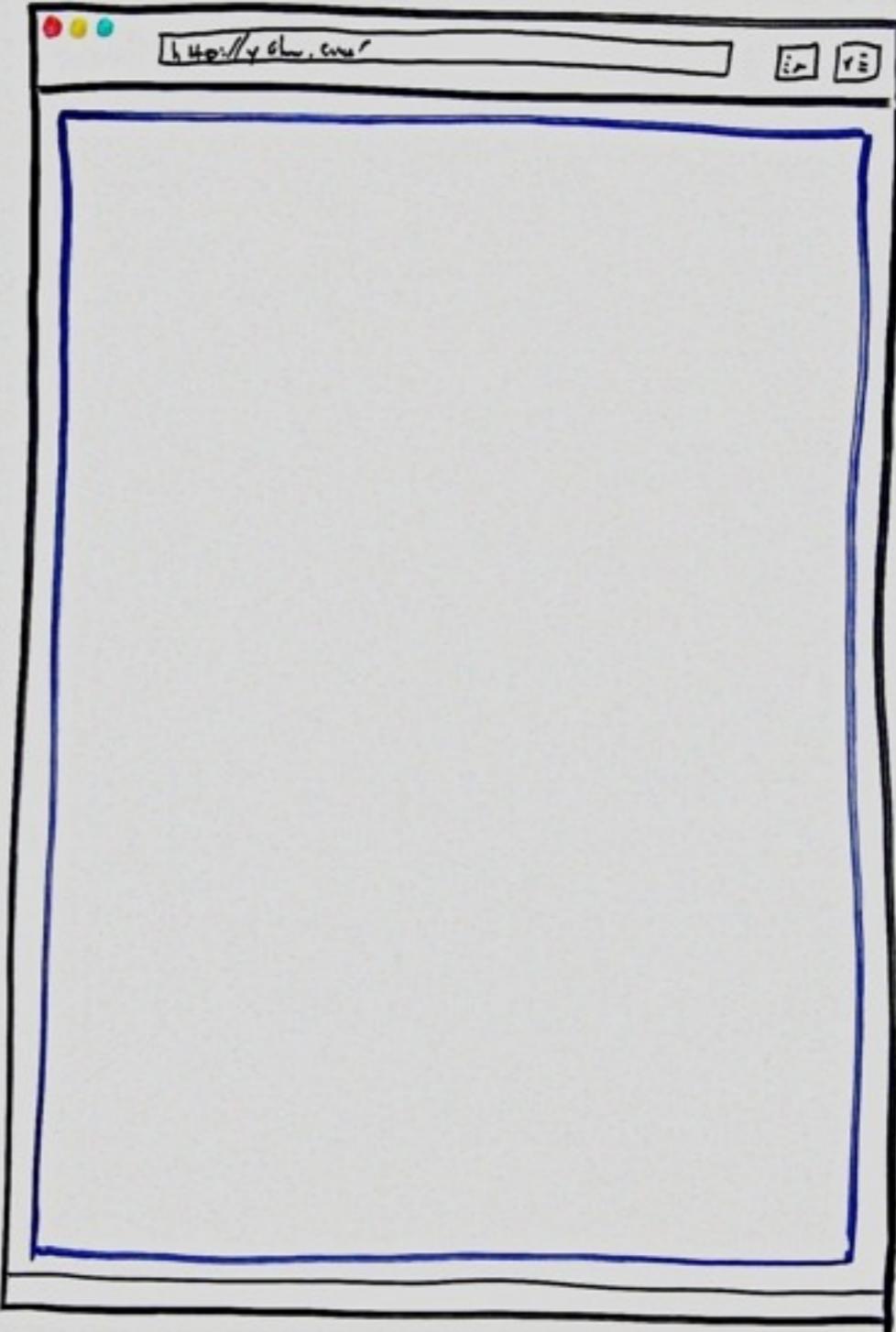


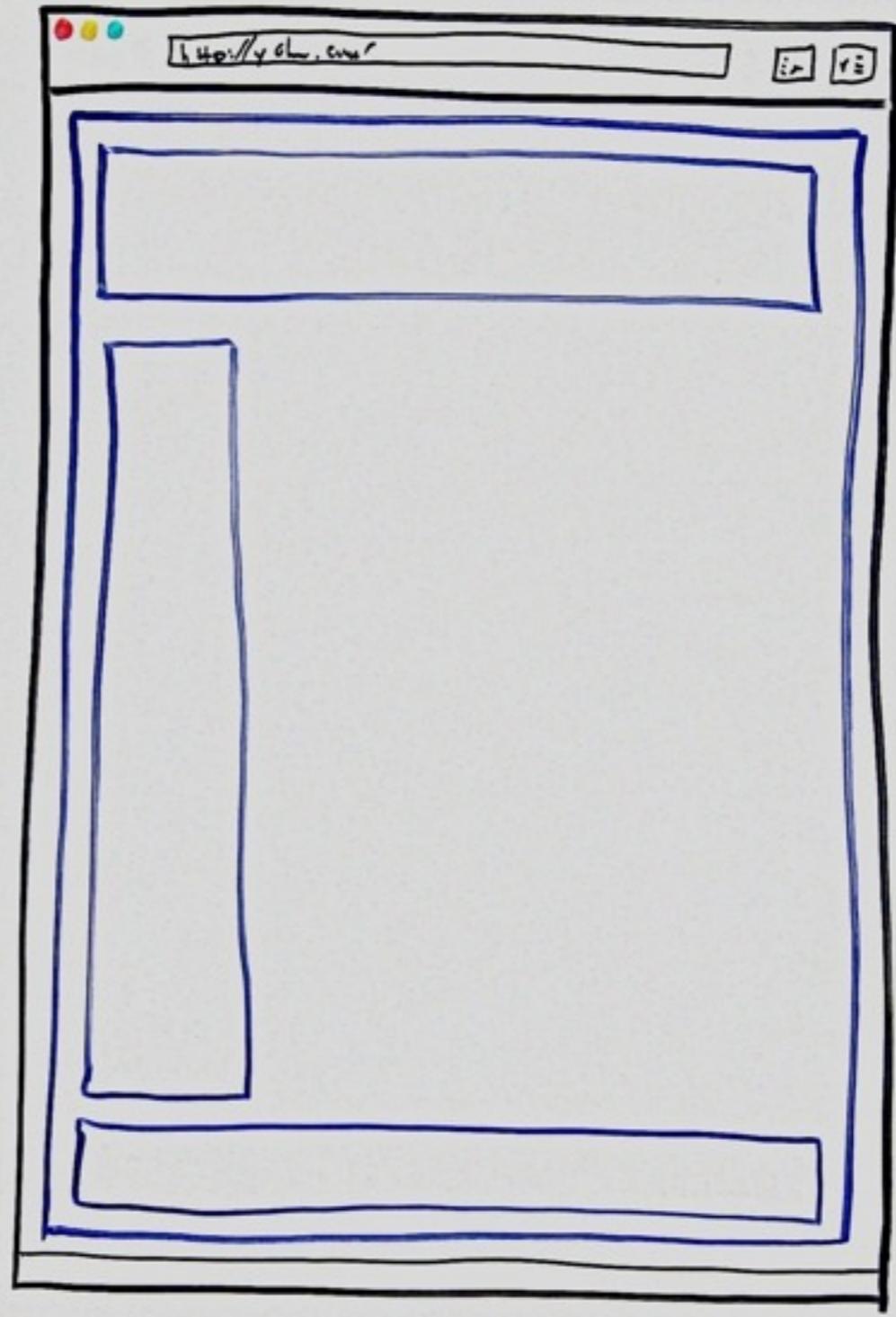
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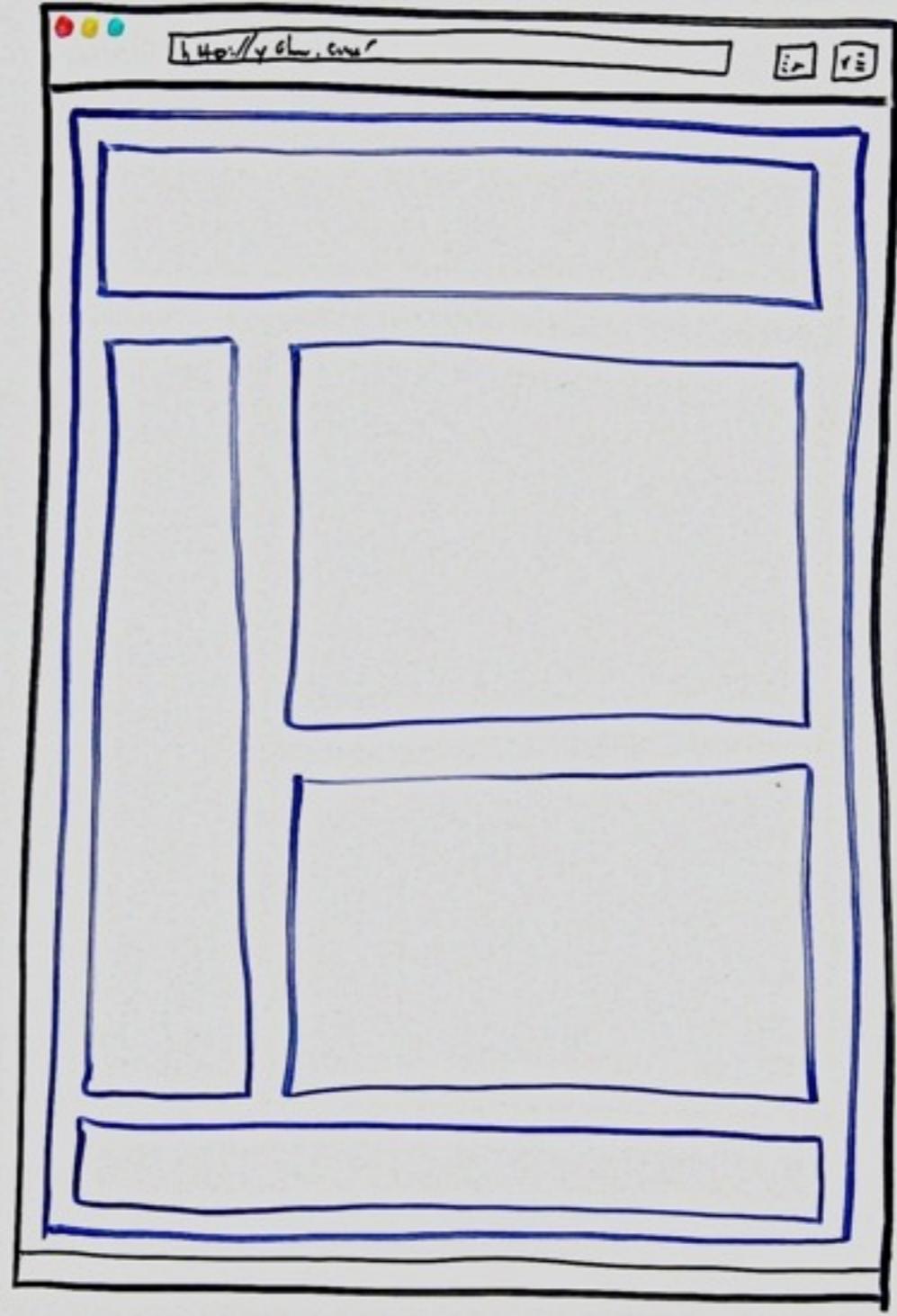


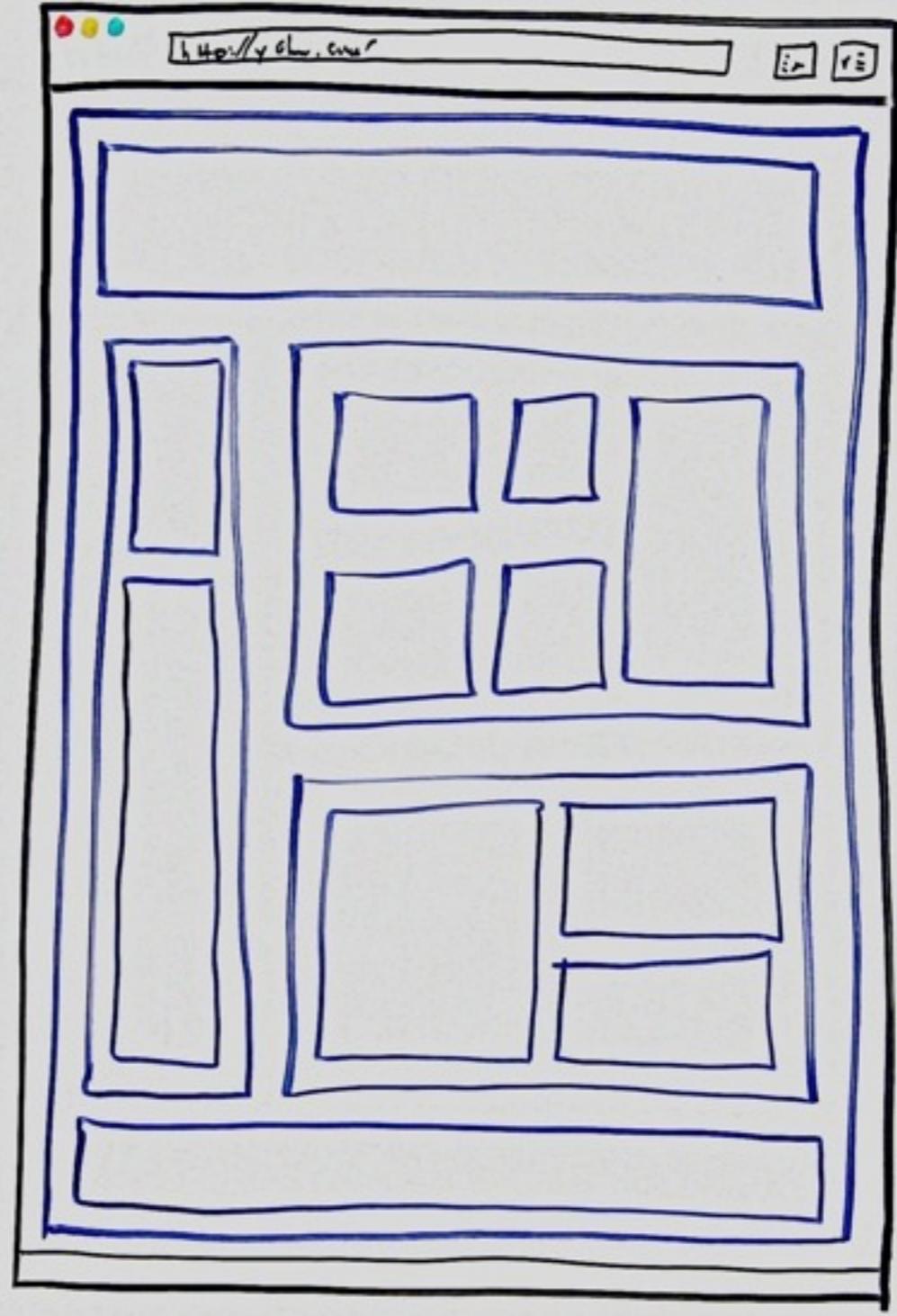
Presentation-Centric











Widgets?

Modules?



~~Widgets?~~

~~Modules?~~

Mojits

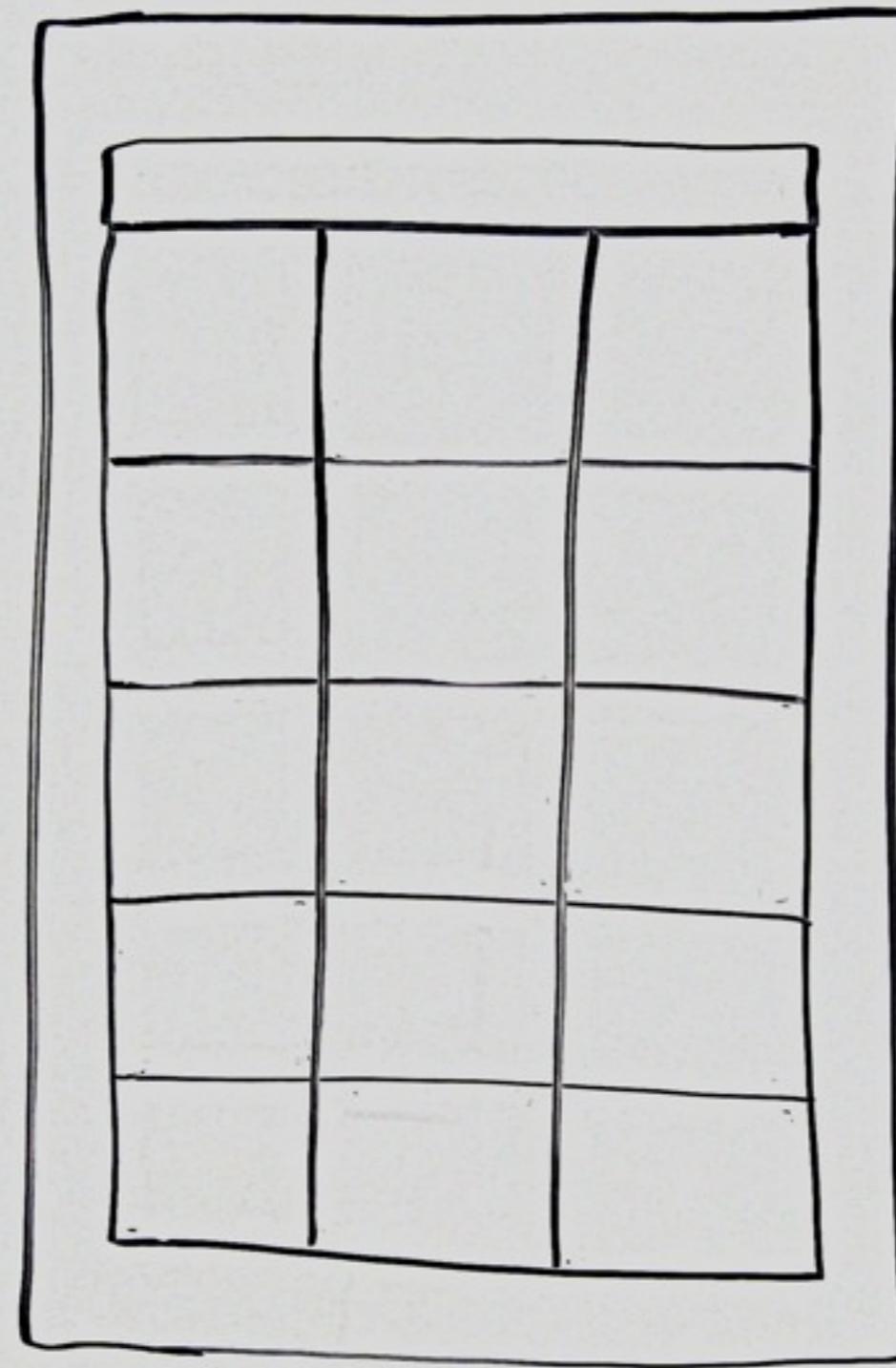


~~Widgets?~~

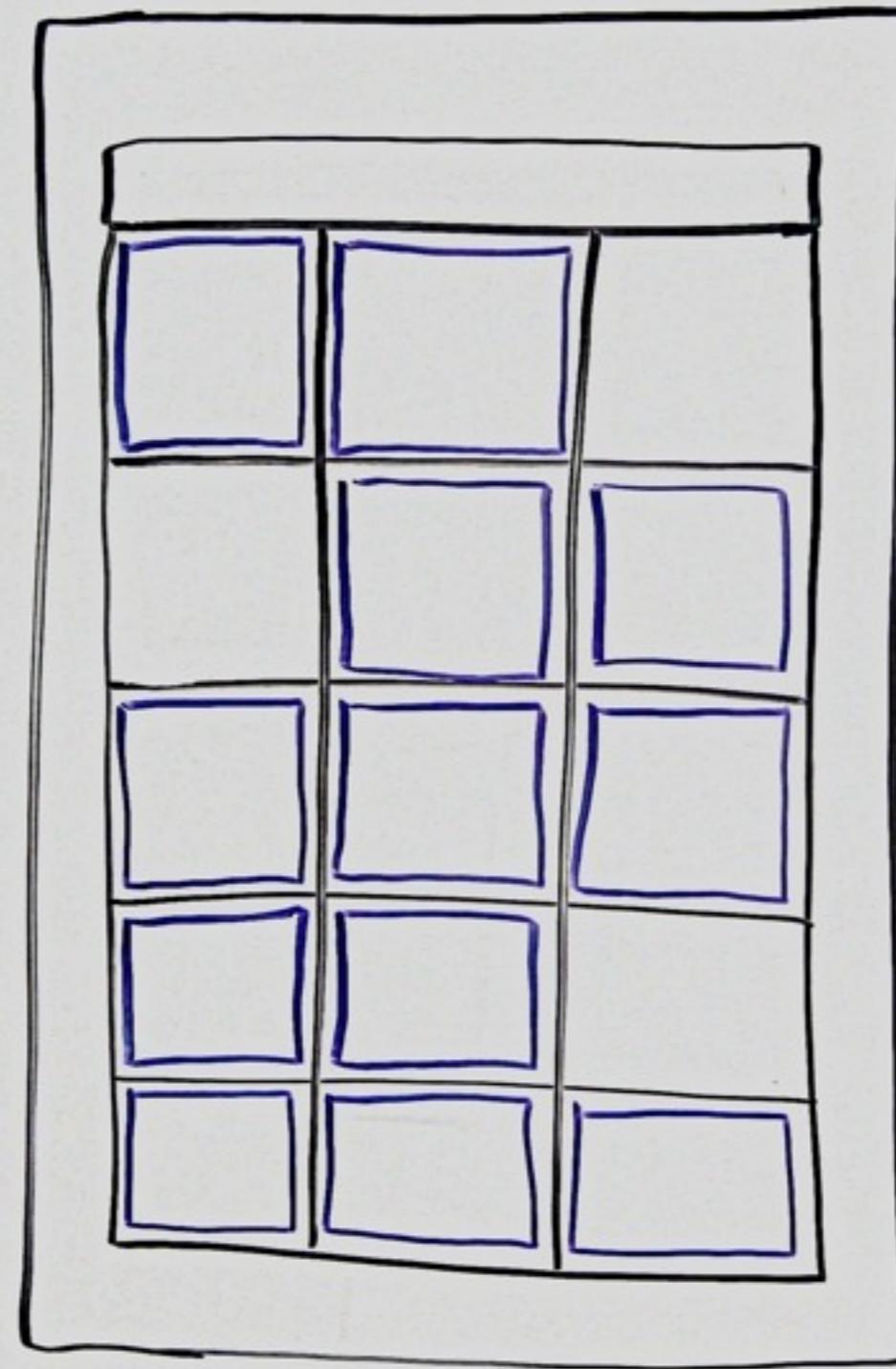
~~Modules?~~

Mojito

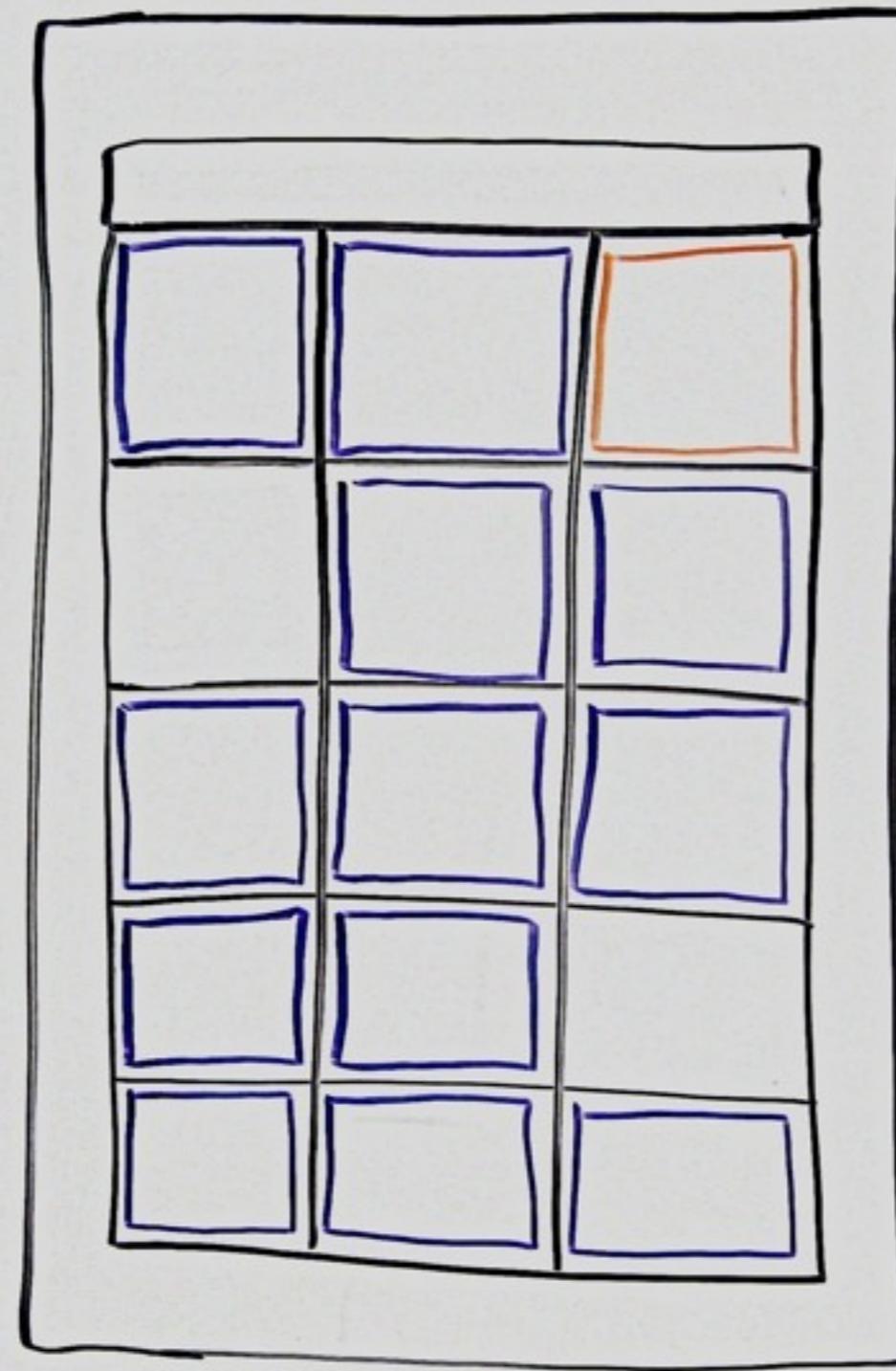




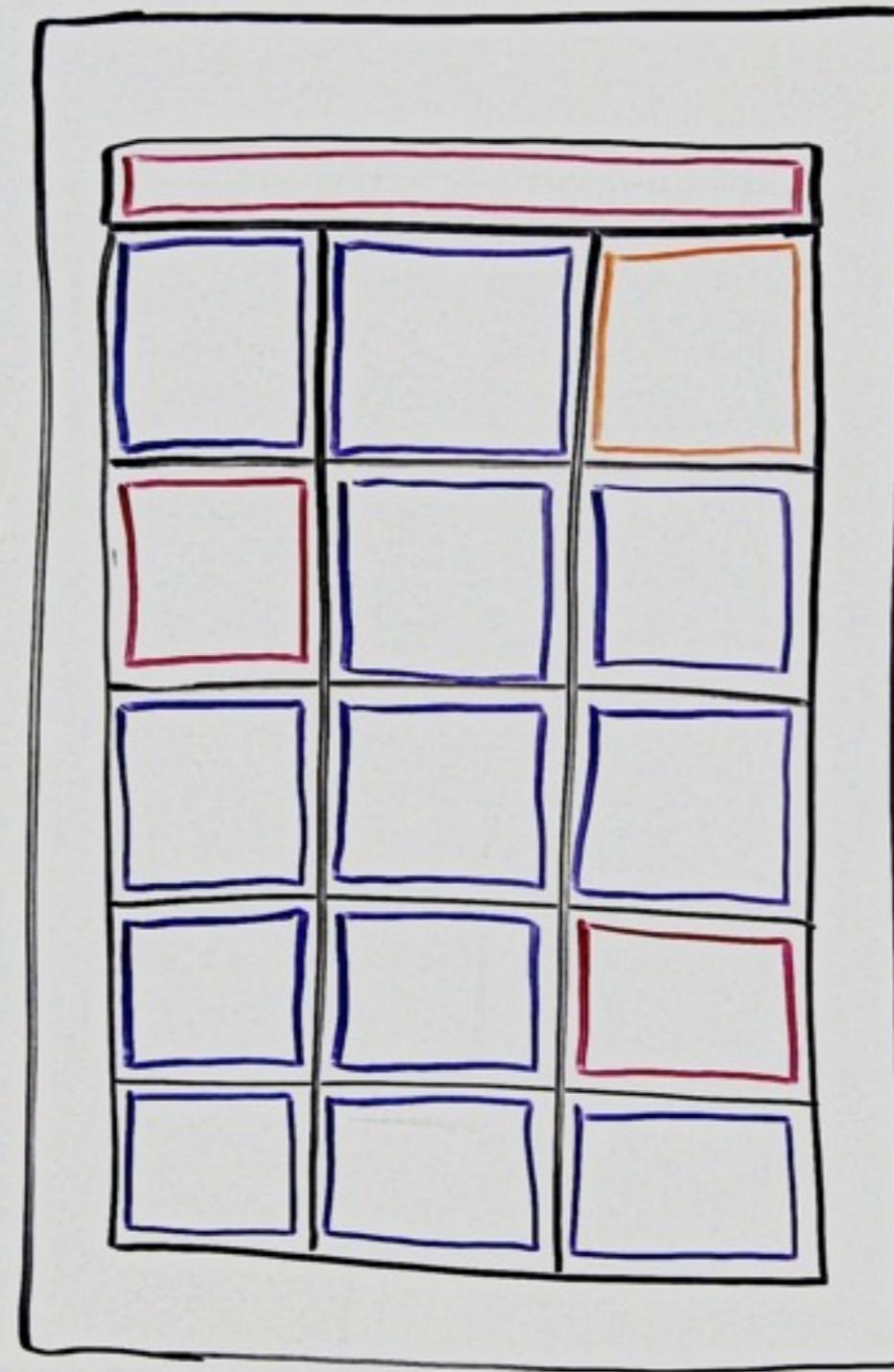
OMG!



OMG!

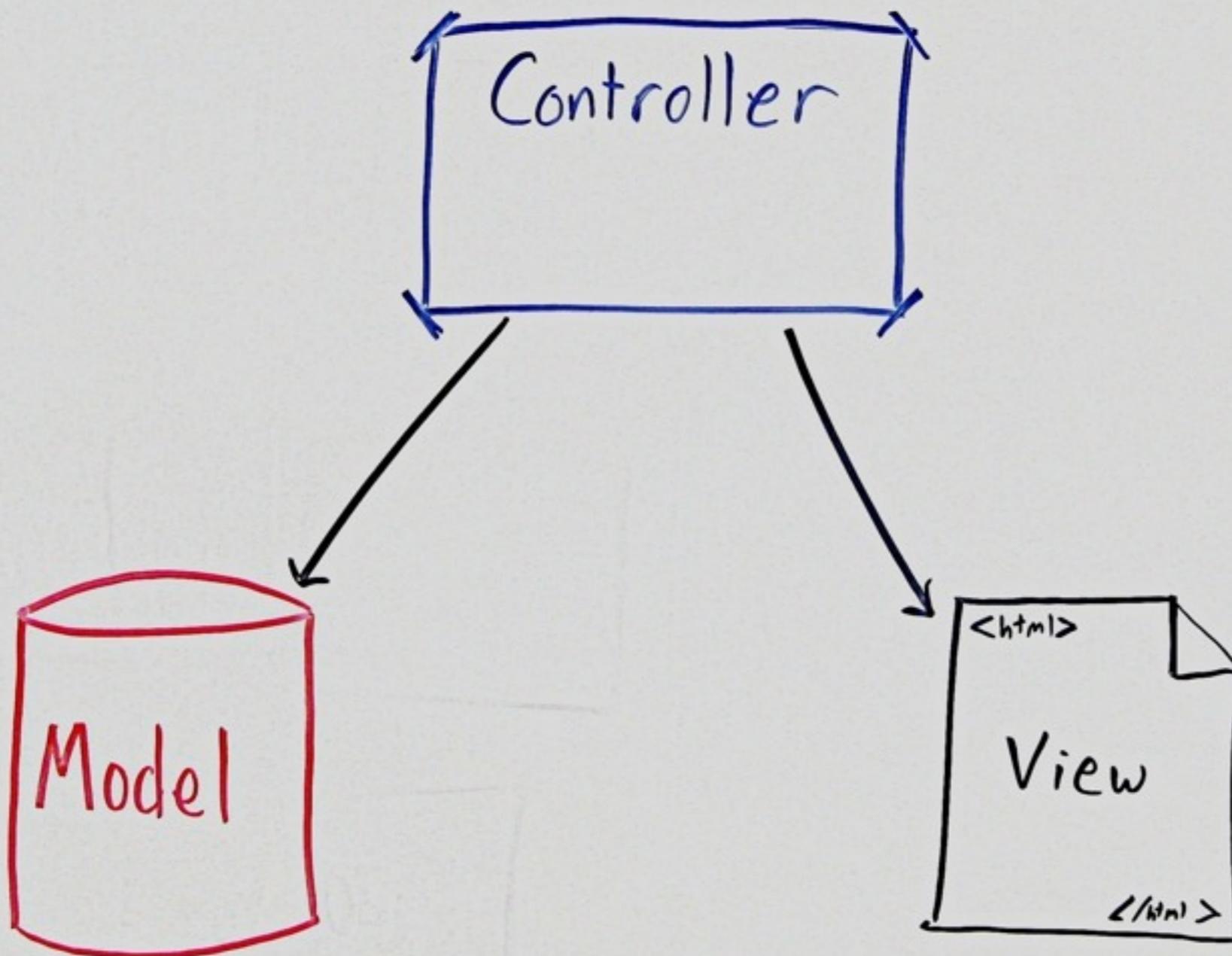


OMG!

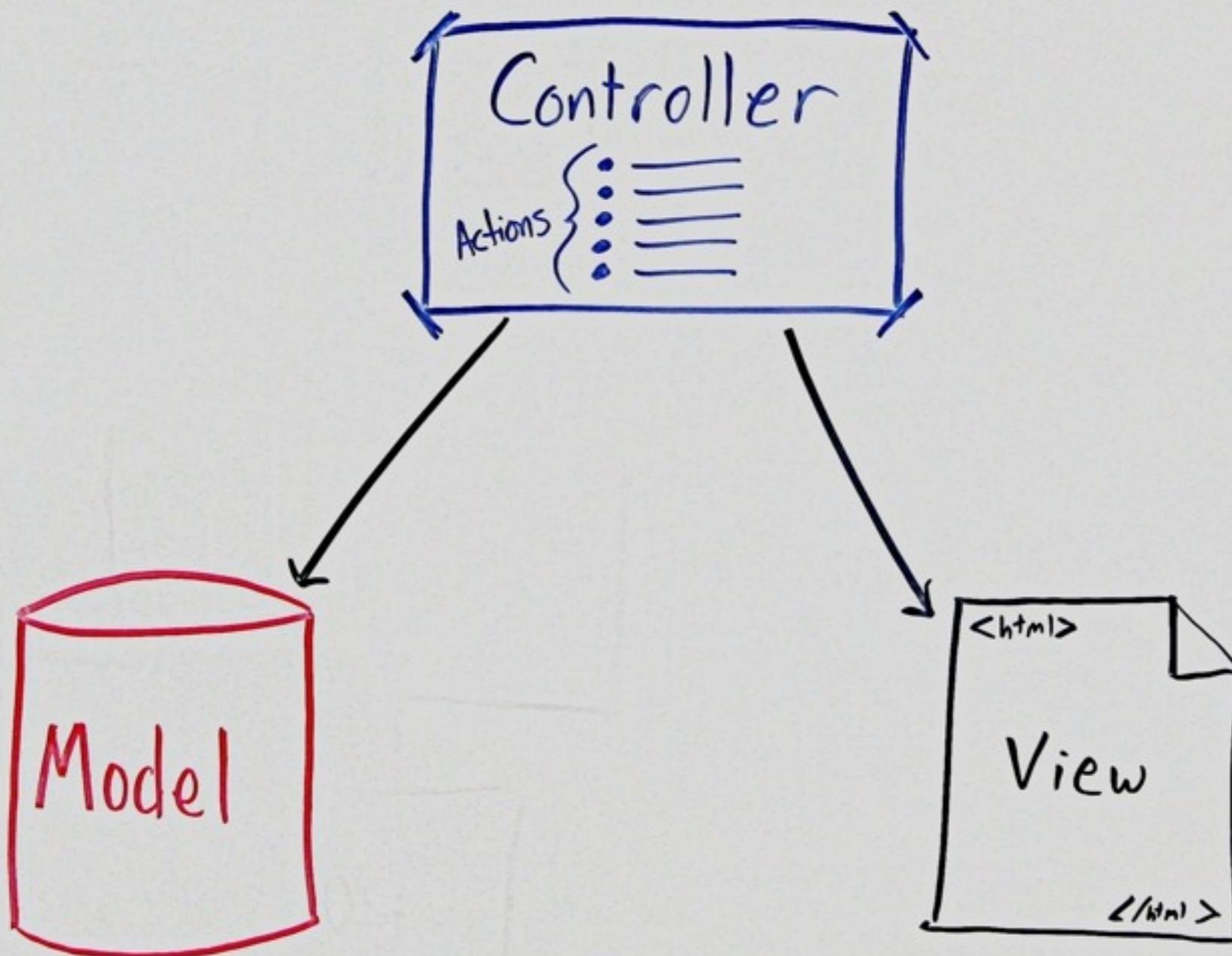


OMG!

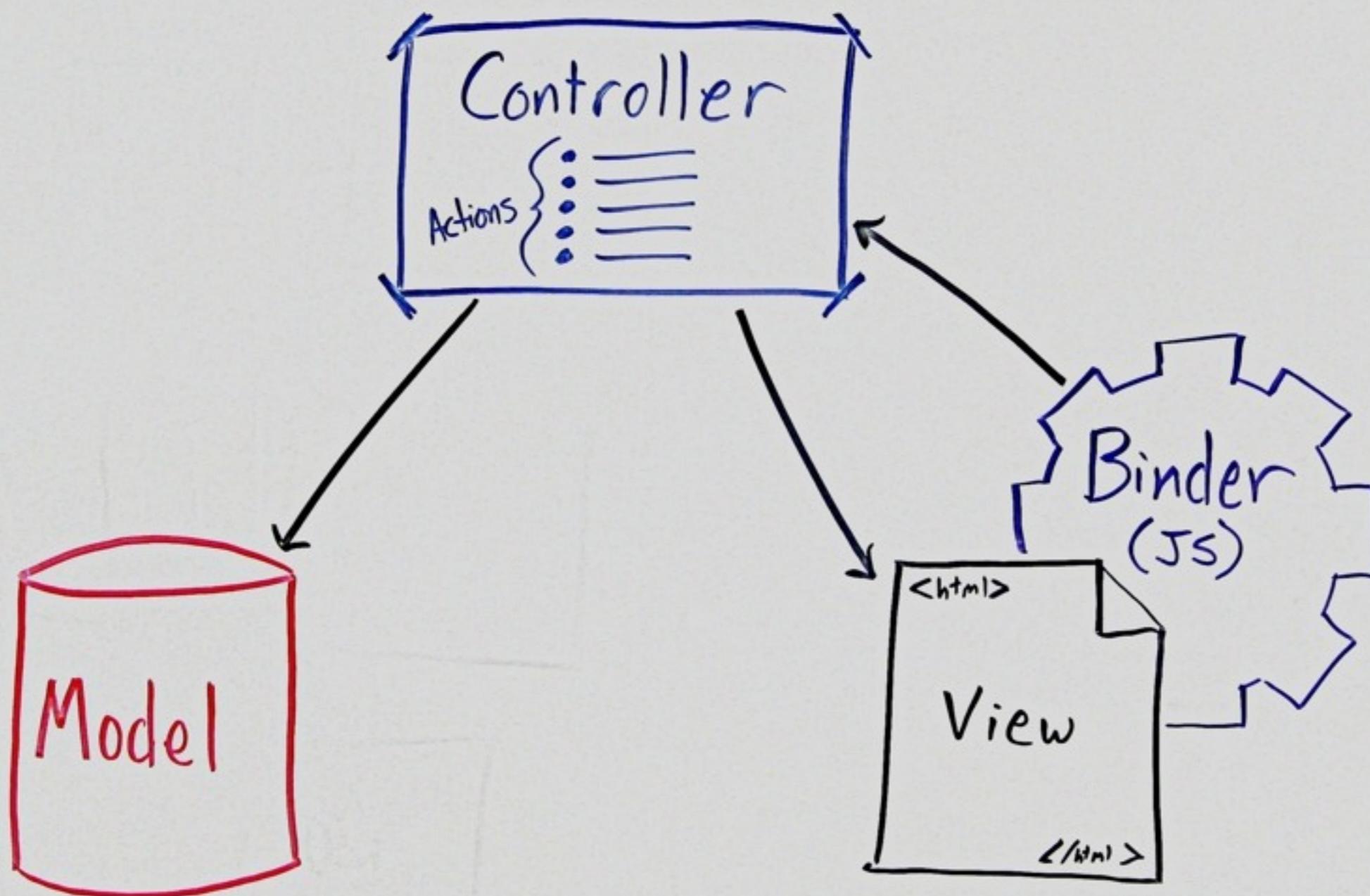
Mojit MVC

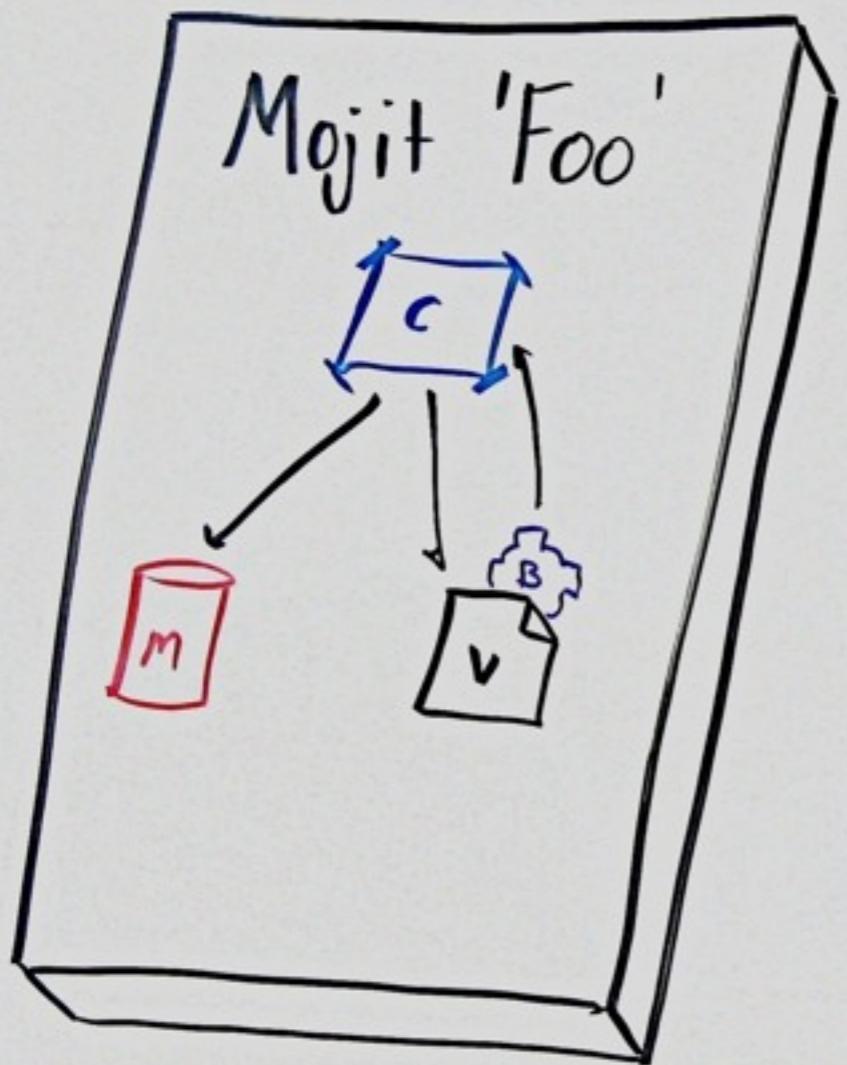


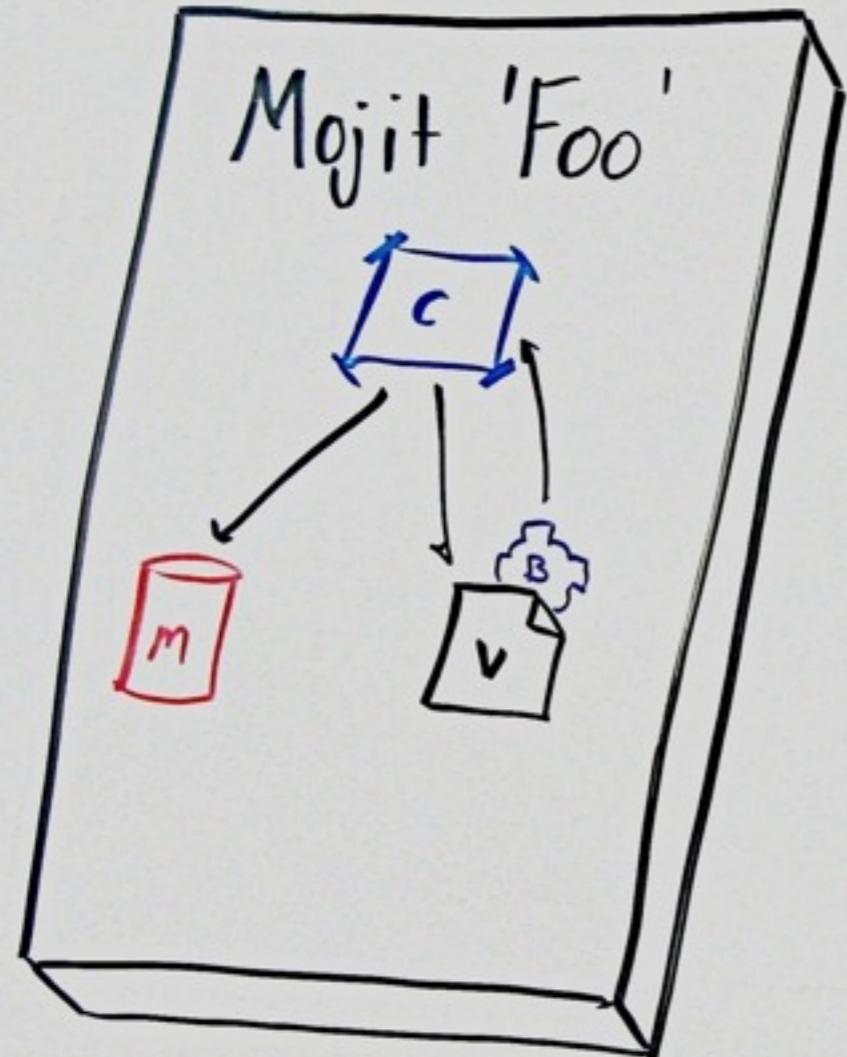
Mojit MVC



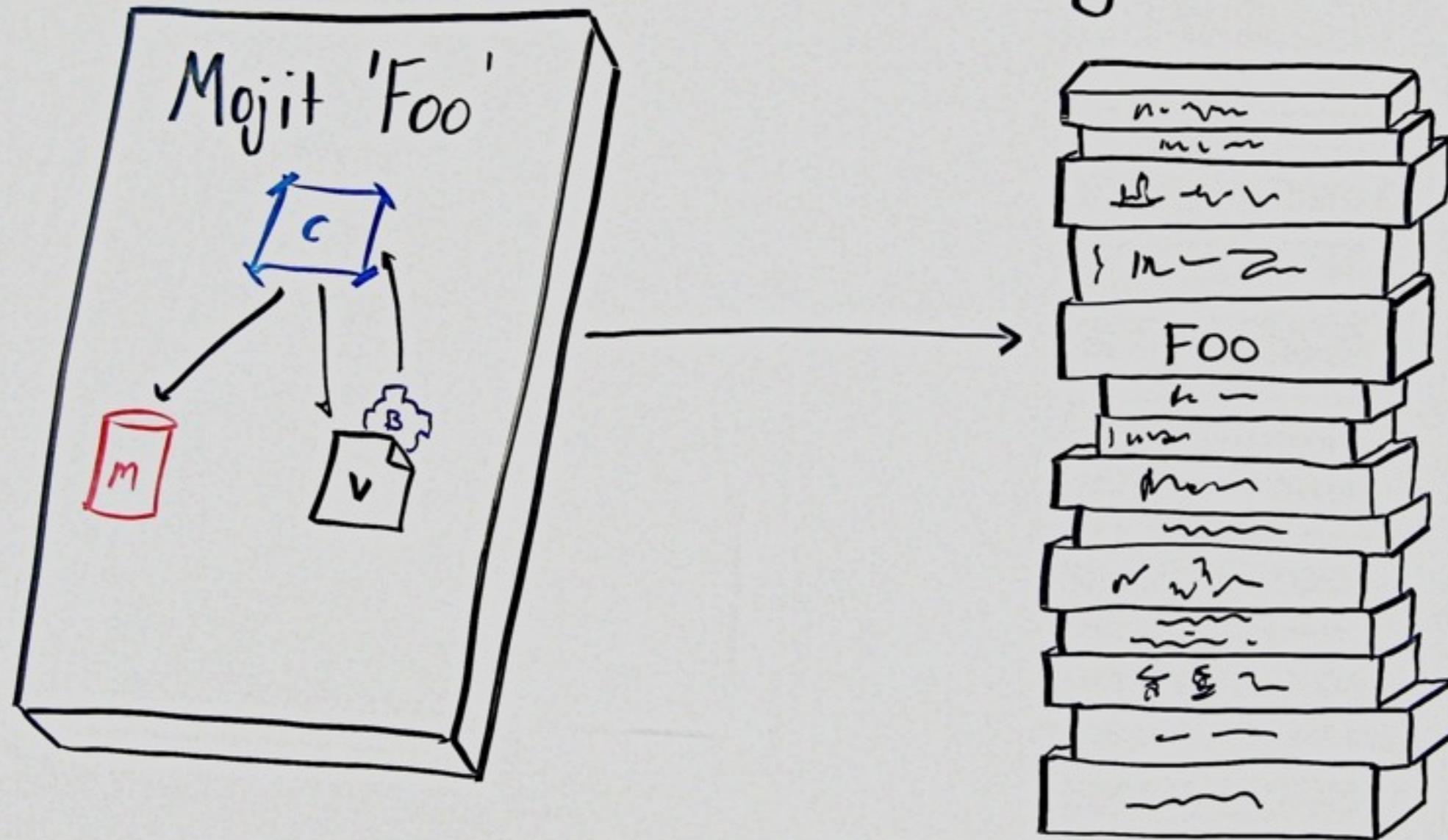
Mojit MVC

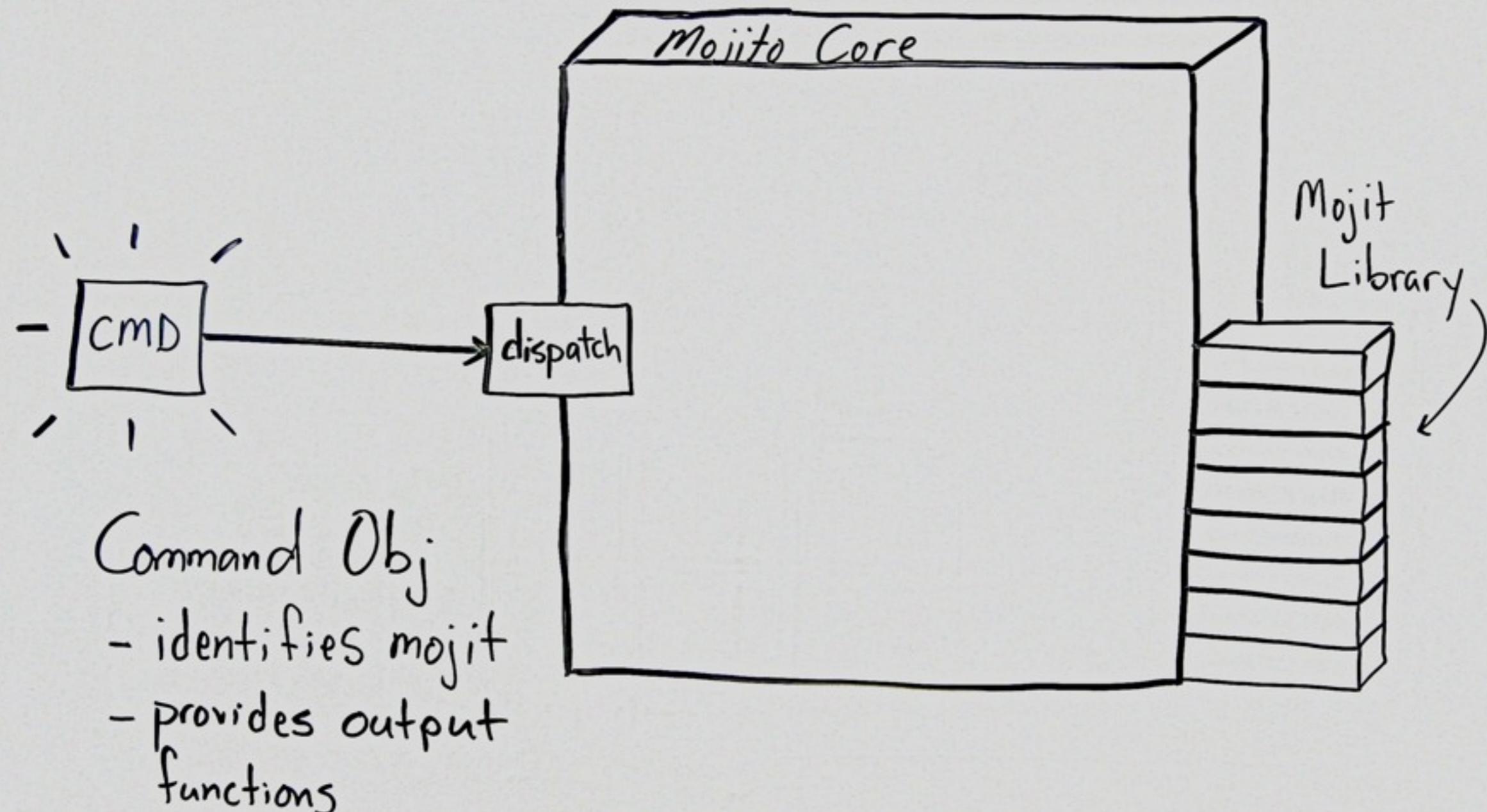


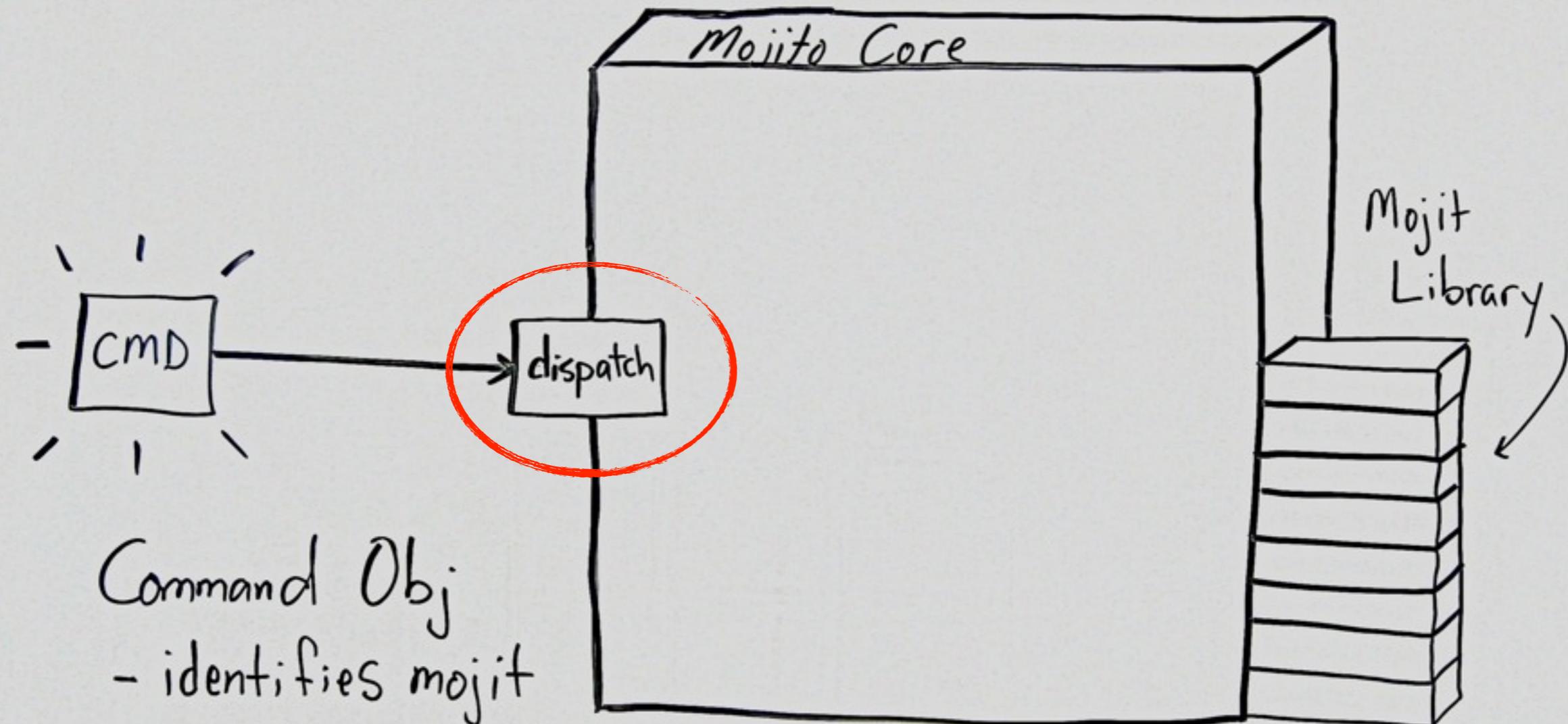




Mojit Library

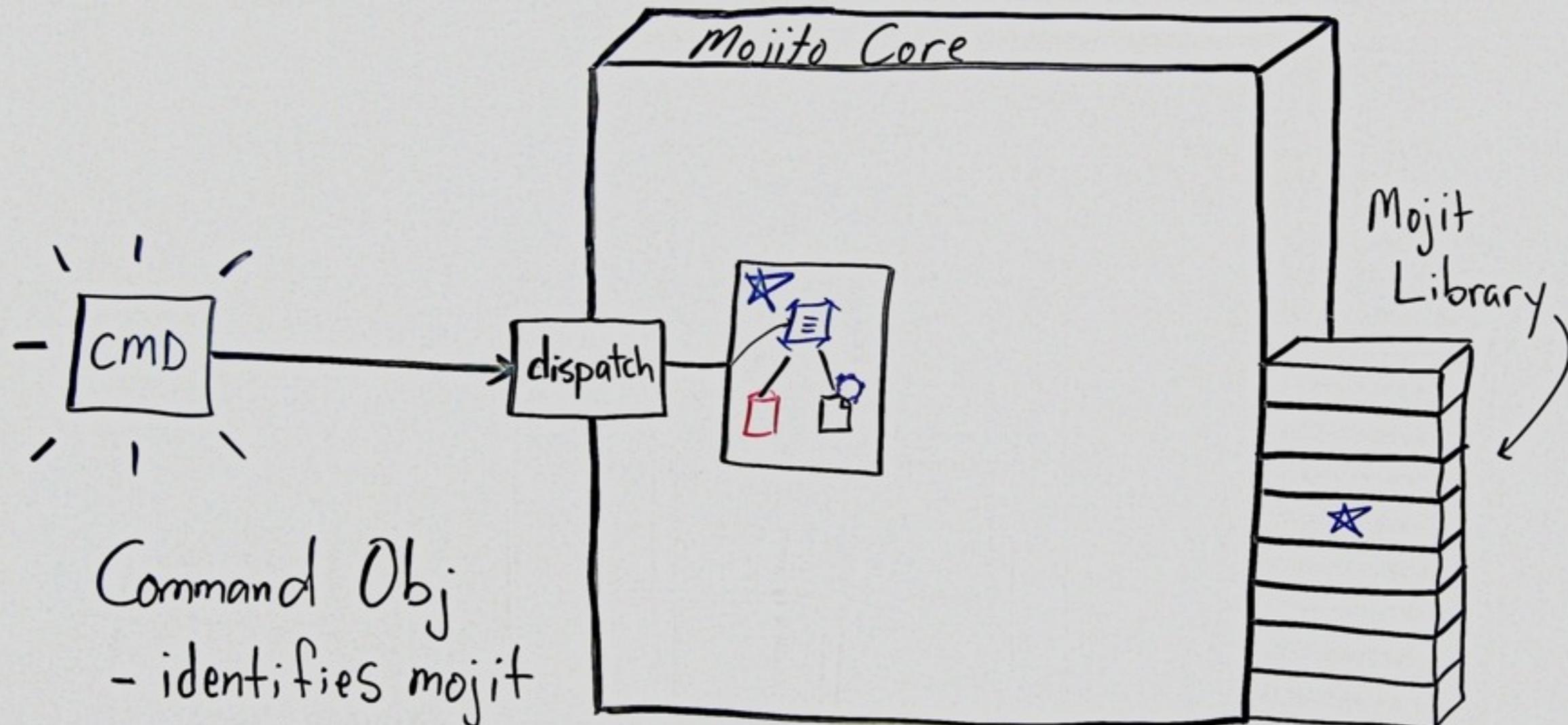






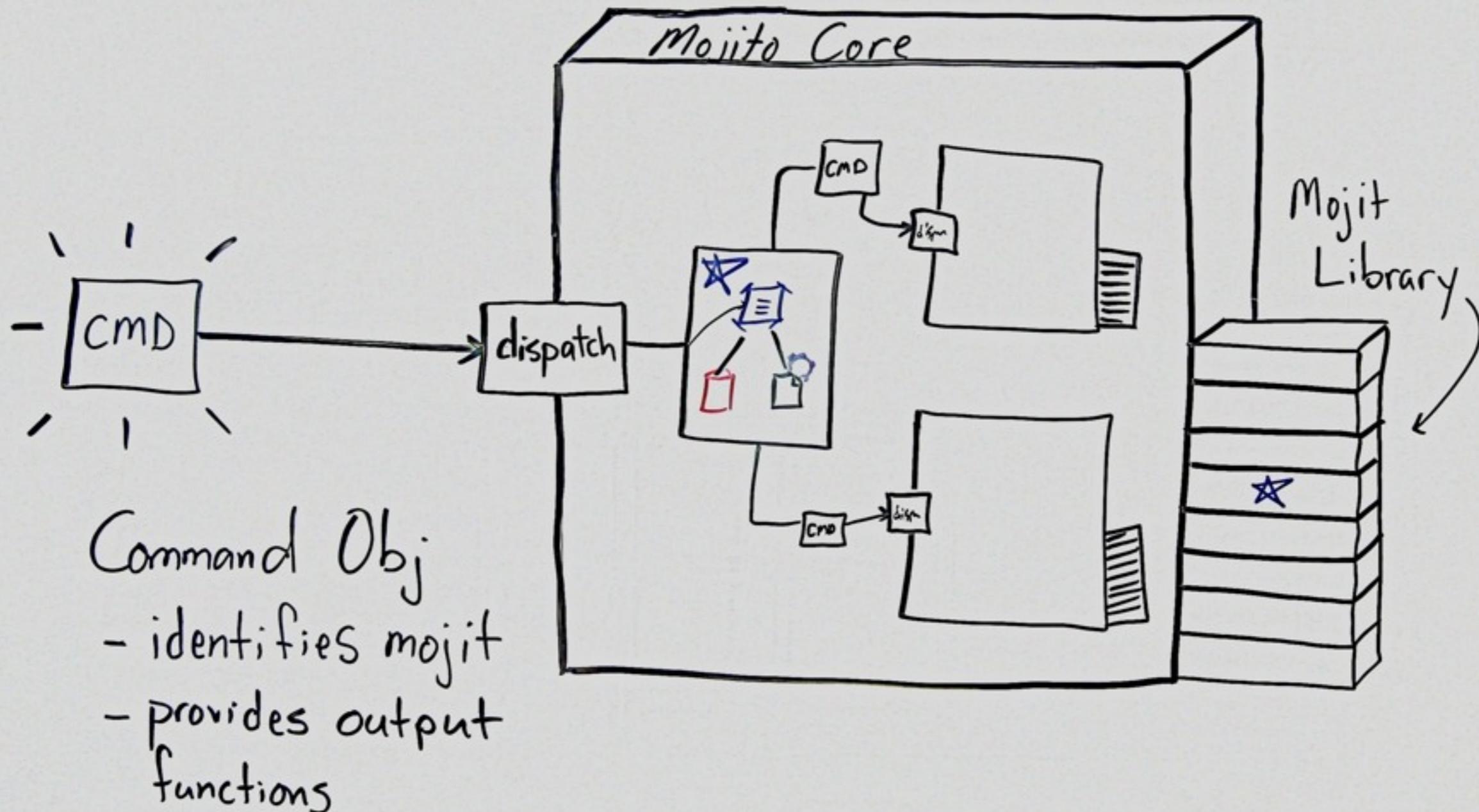
Command Obj

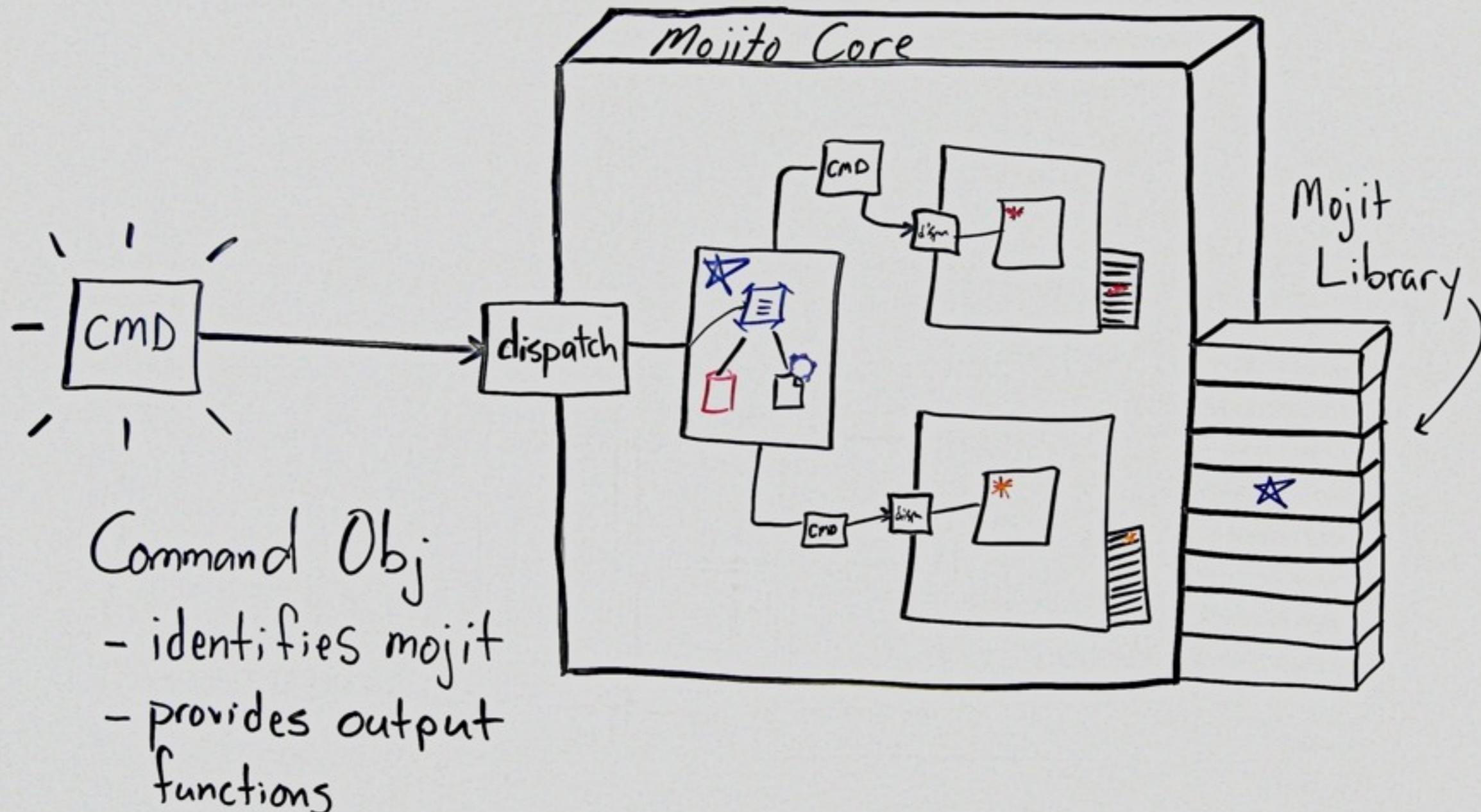
- identifies mojit
- provides output functions

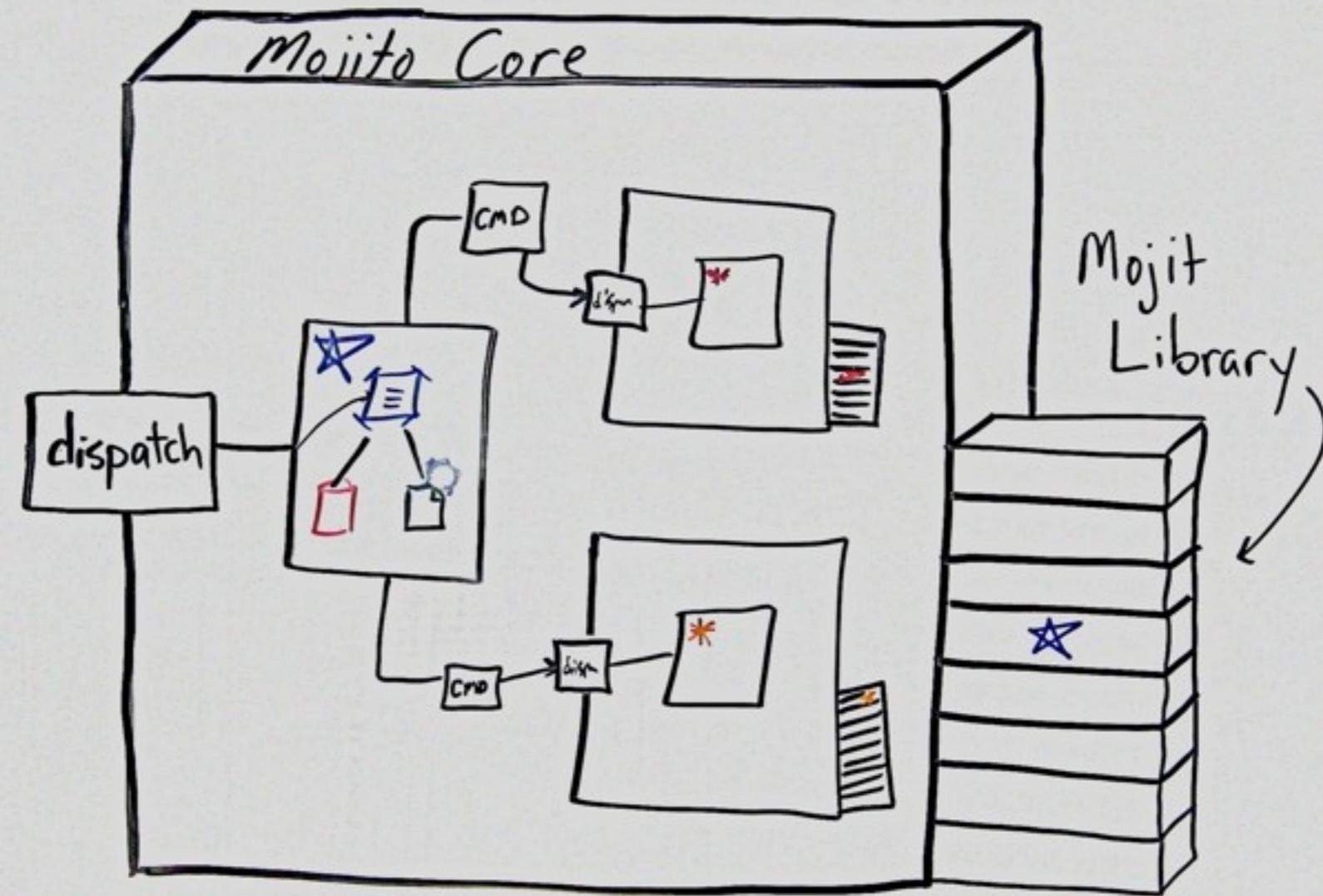


Command Obj

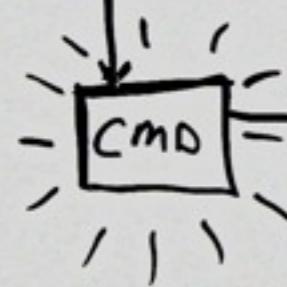
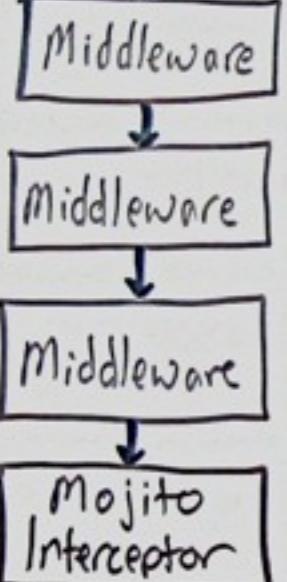
- identifies mojit
- provides output functions





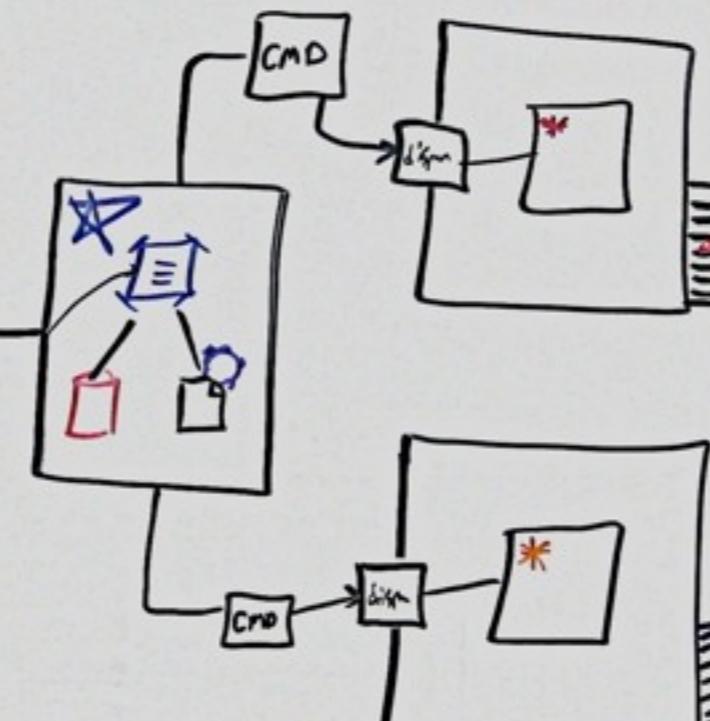


HTTP Request



Mojito Core

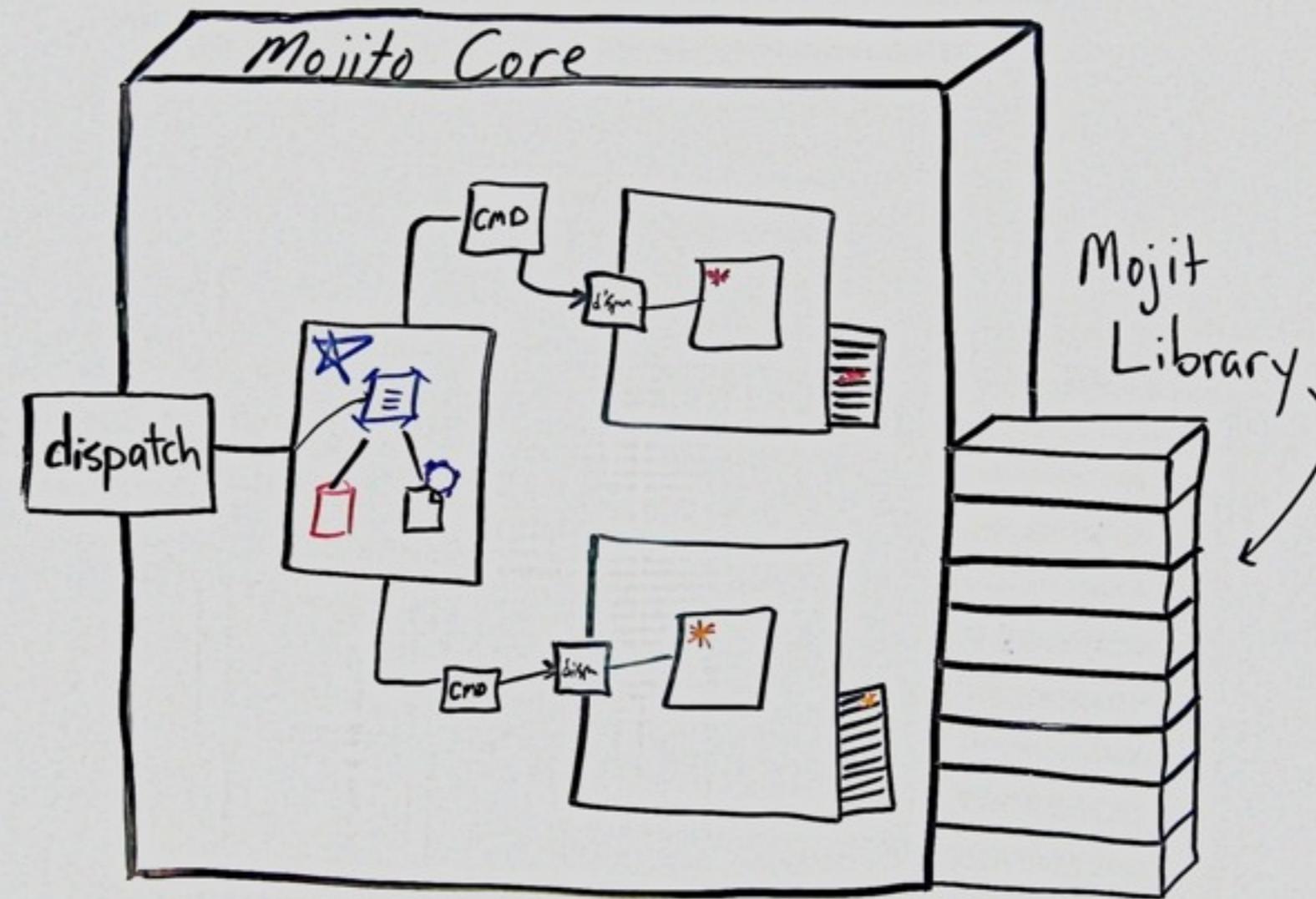
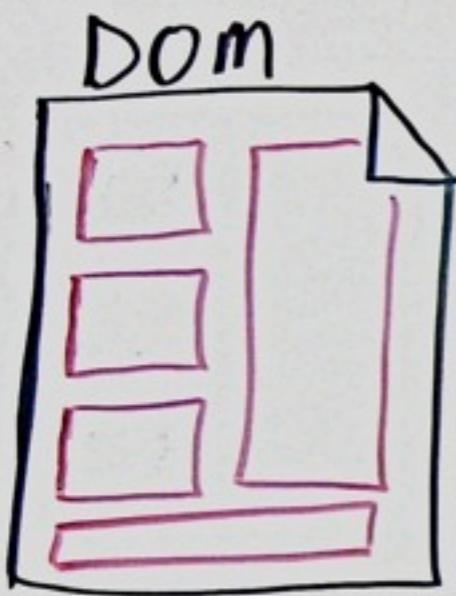
dispatch



Mojit Library

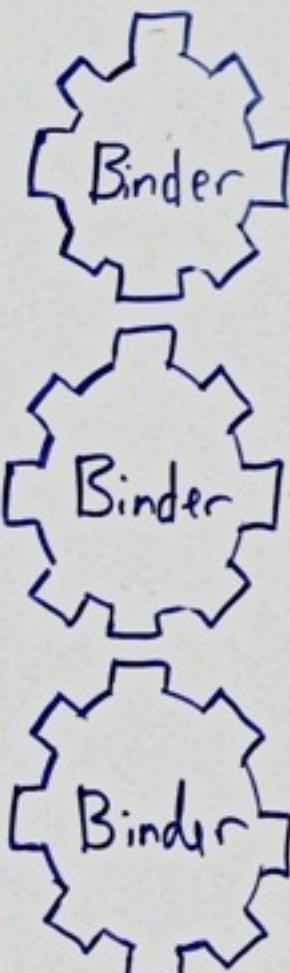
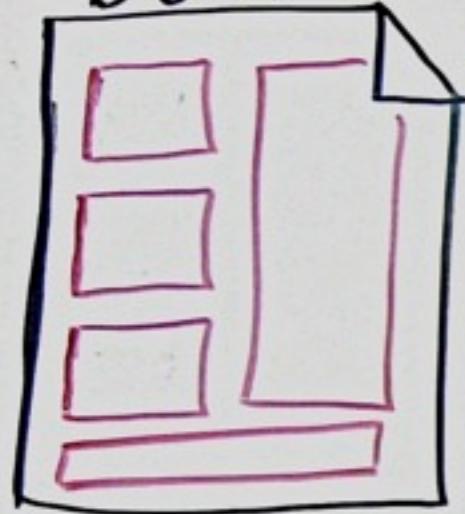


HTTP Server

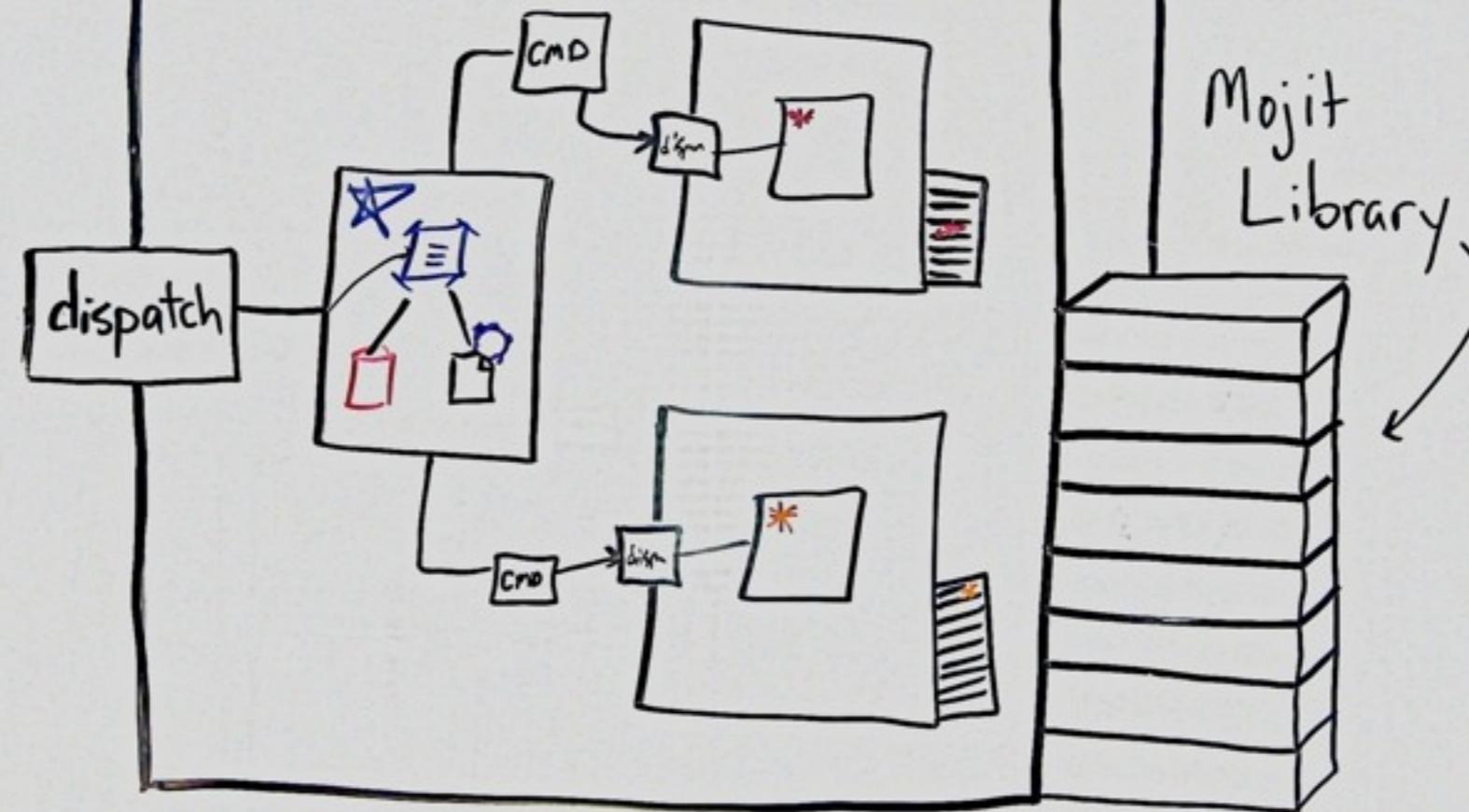


Browser Client

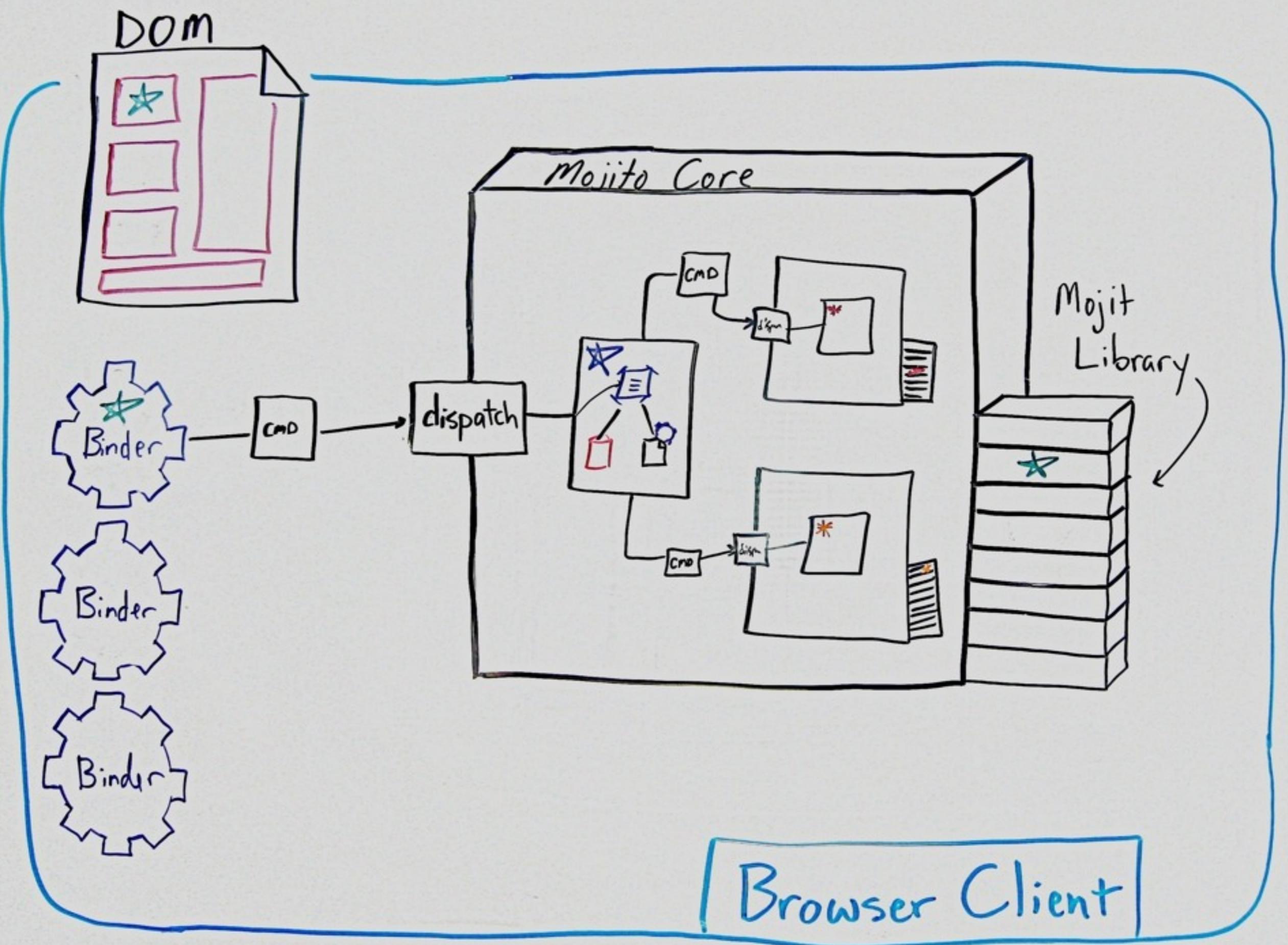
DOM

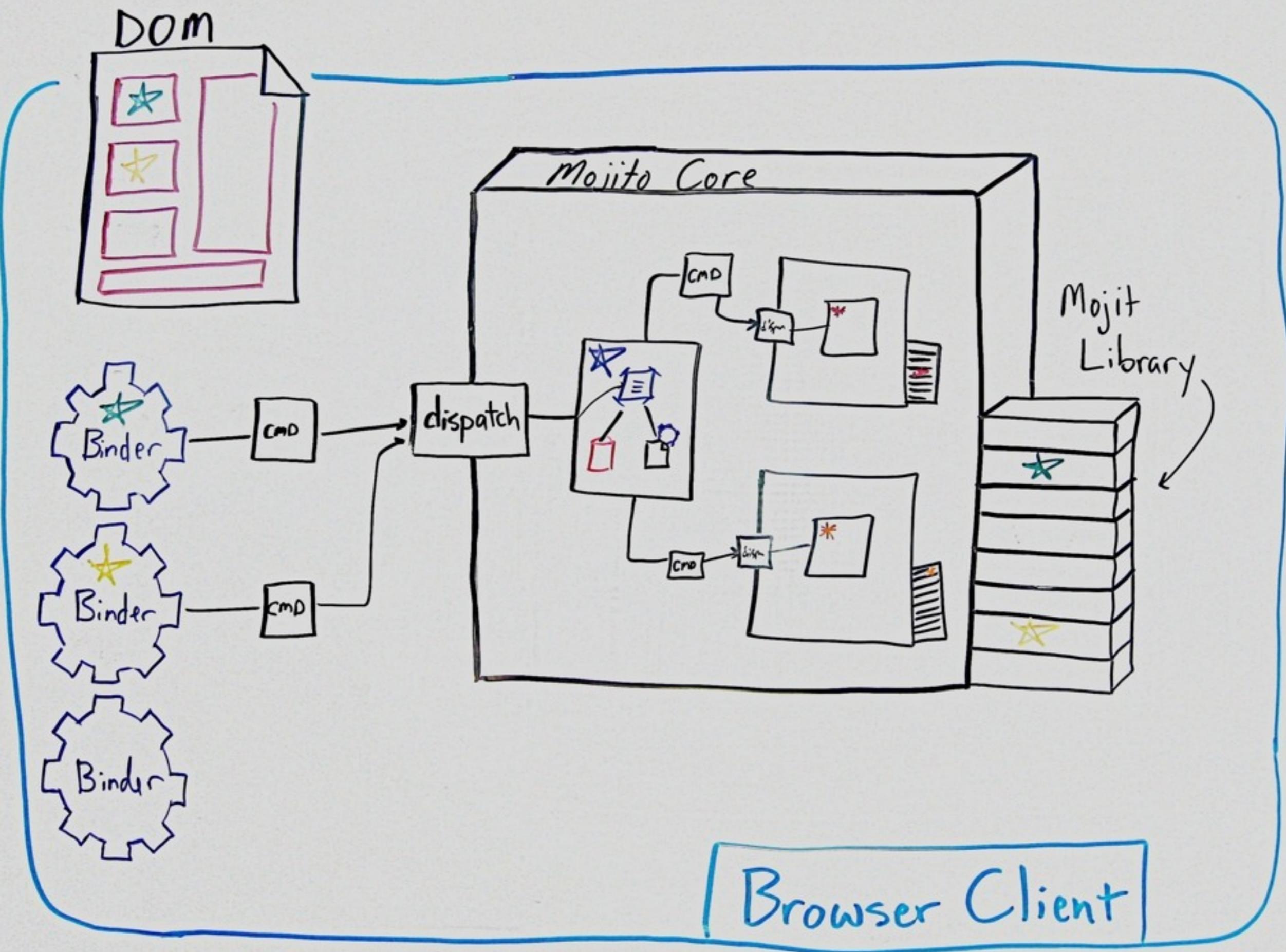


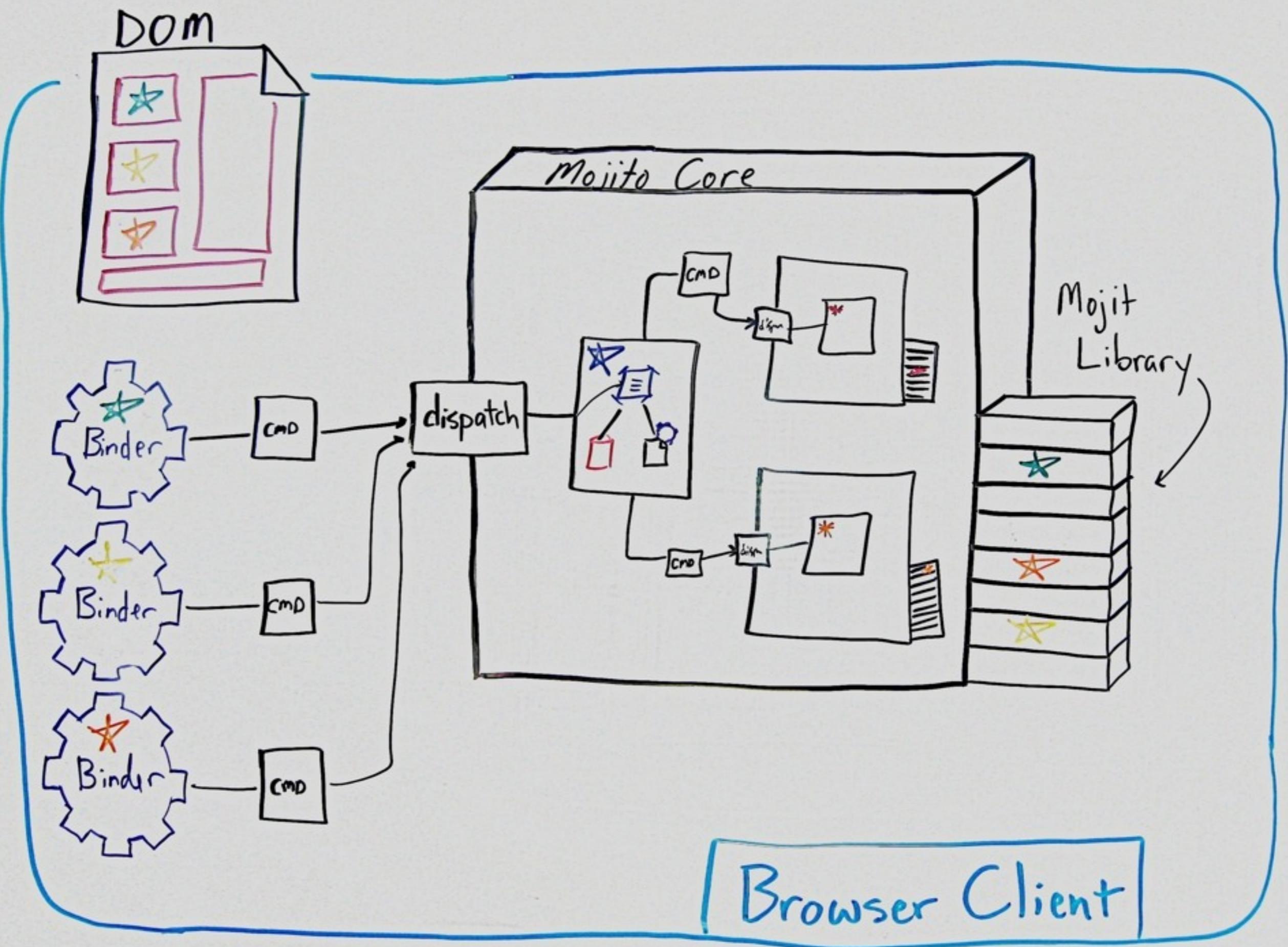
Mojito Core

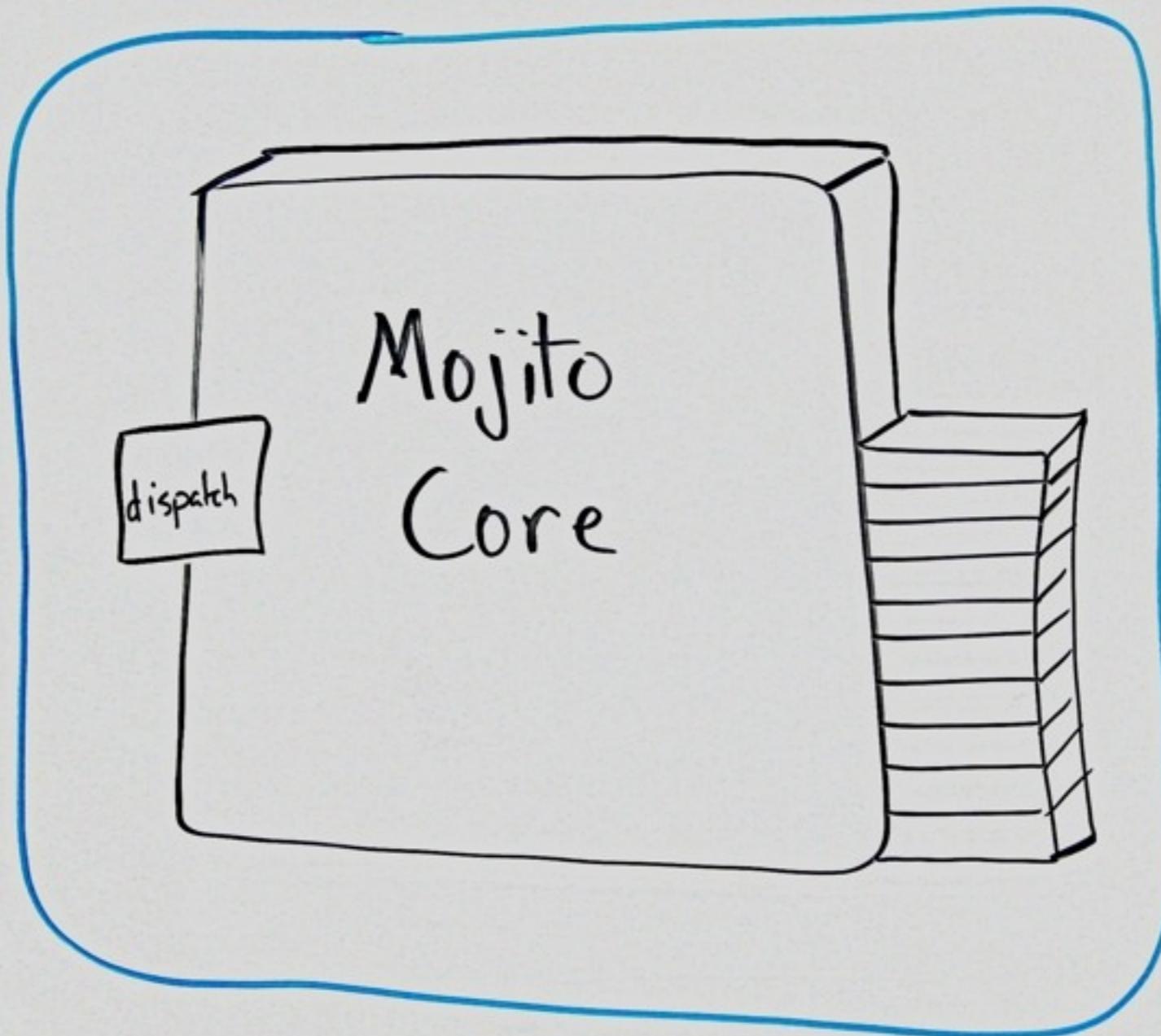


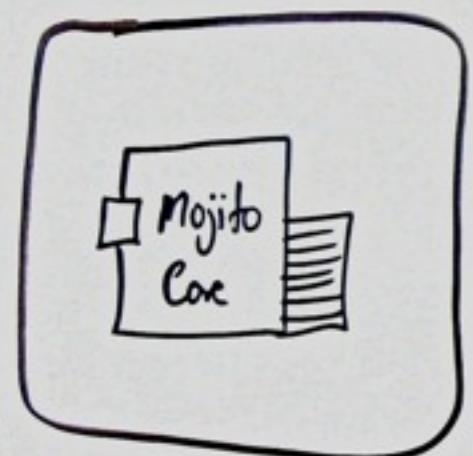
Browser Client



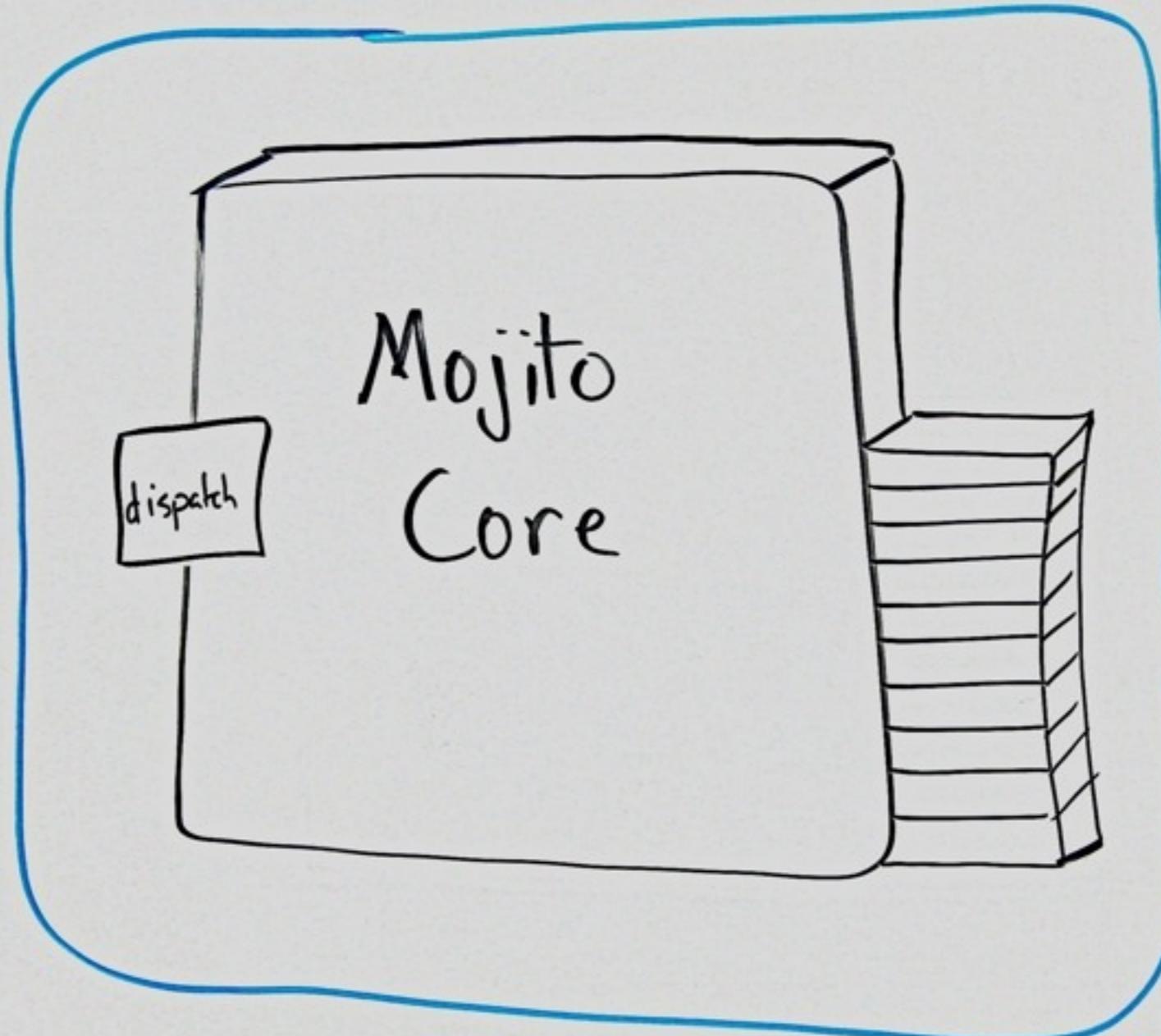




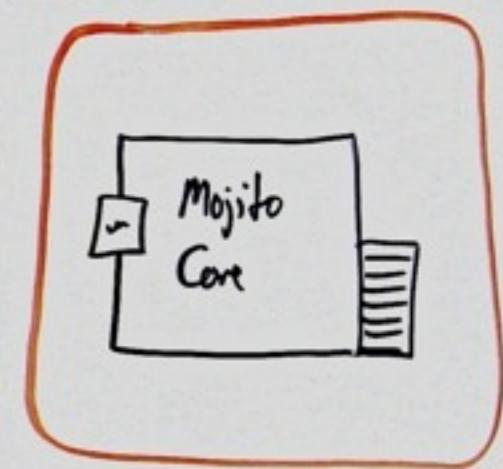




NodeJS



Browser

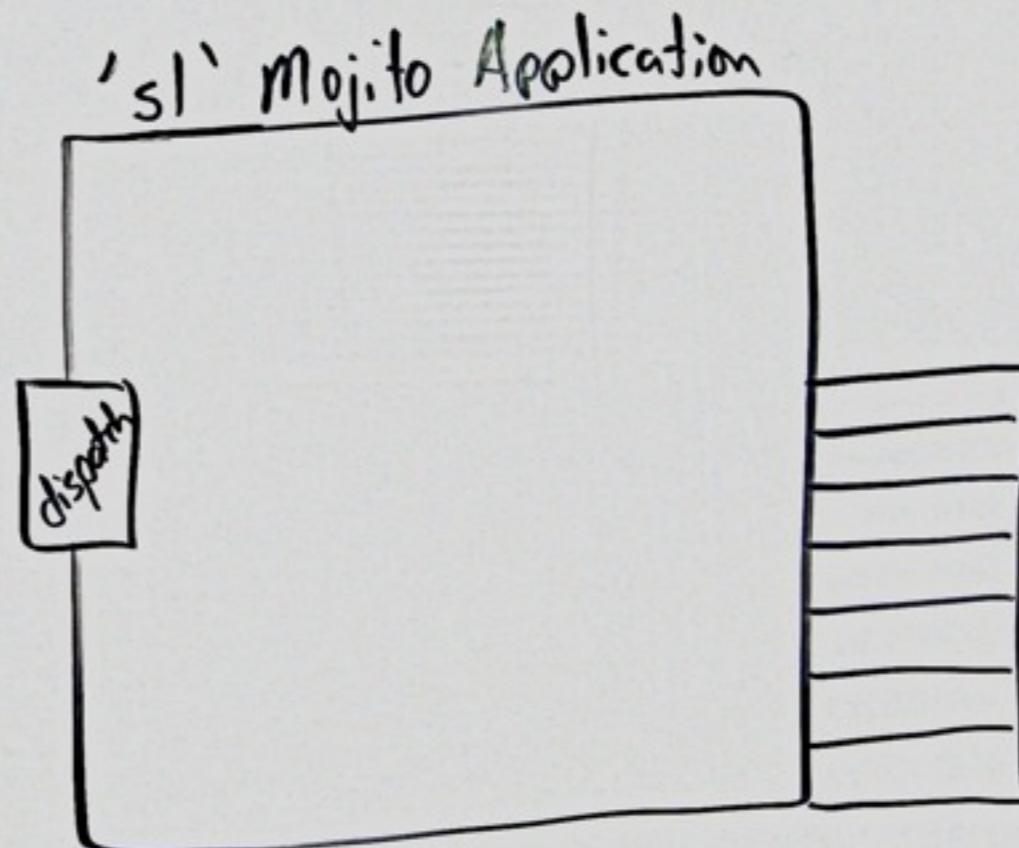


Native
Web view

\$> mojito create app sl

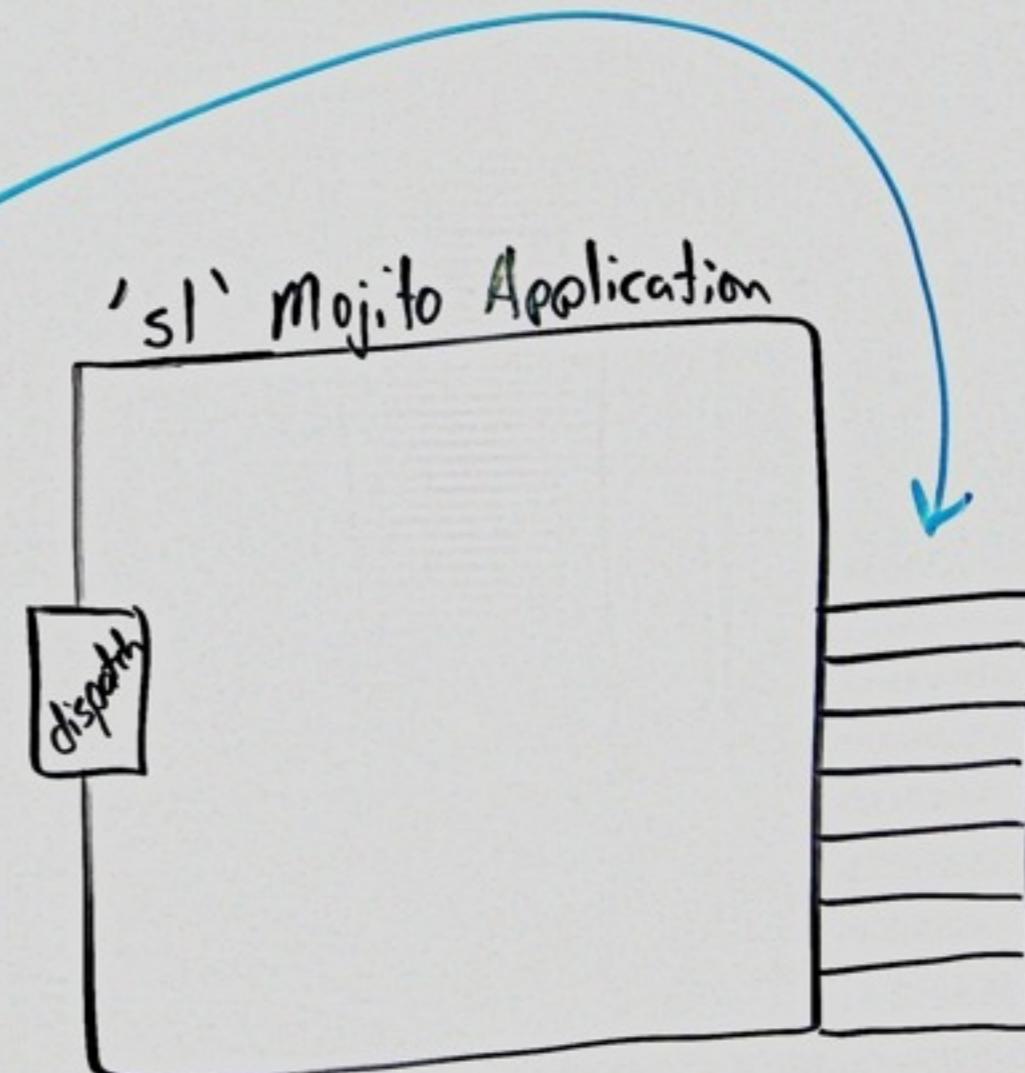
```
$> mojito create app sl
```

sl/
application.json
assets
index.js
mojits
package.json
Server.js



```
$> mojito create app sl
```

sl/
application.json
assets
index.js
mojits
package.json
Server.js



\$> mojito create mojit Foo

src/mojits/Foo

assets

binders

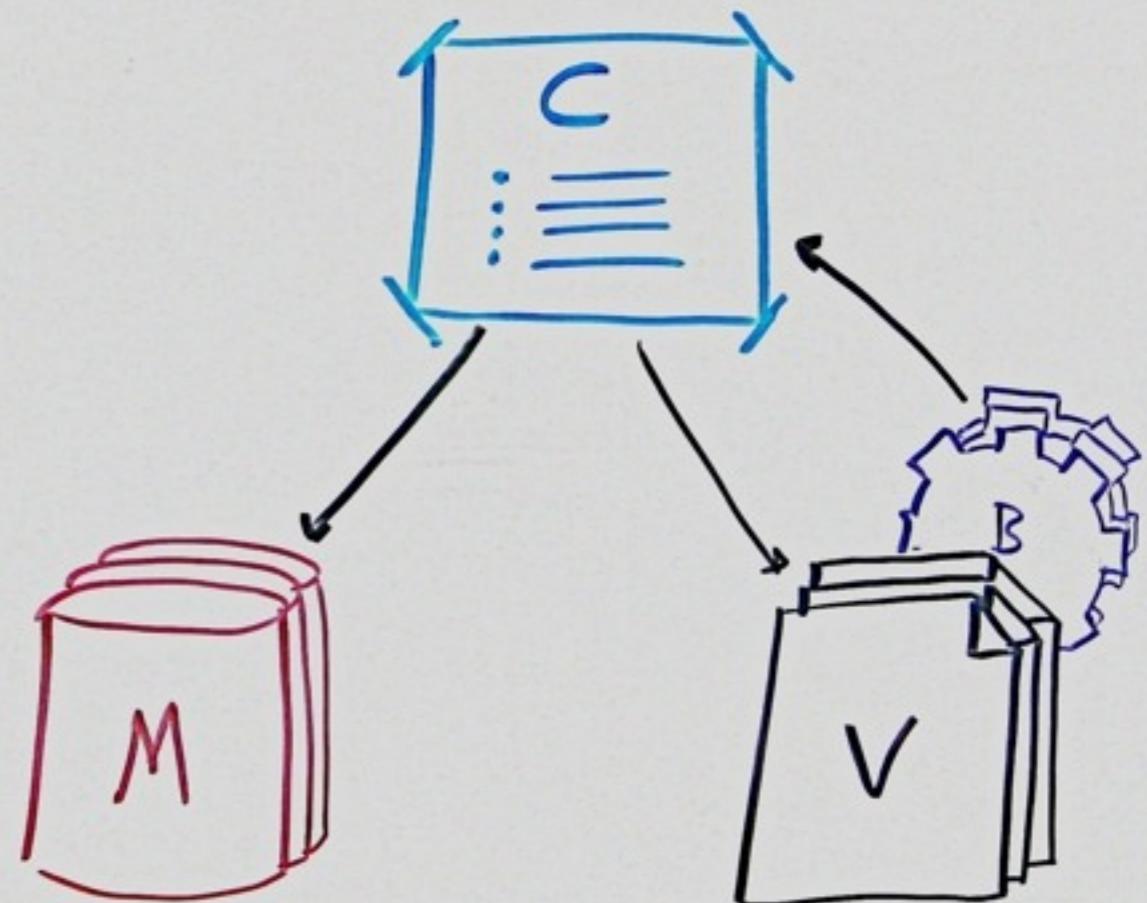
controller.server.js

definition.js

models

tests

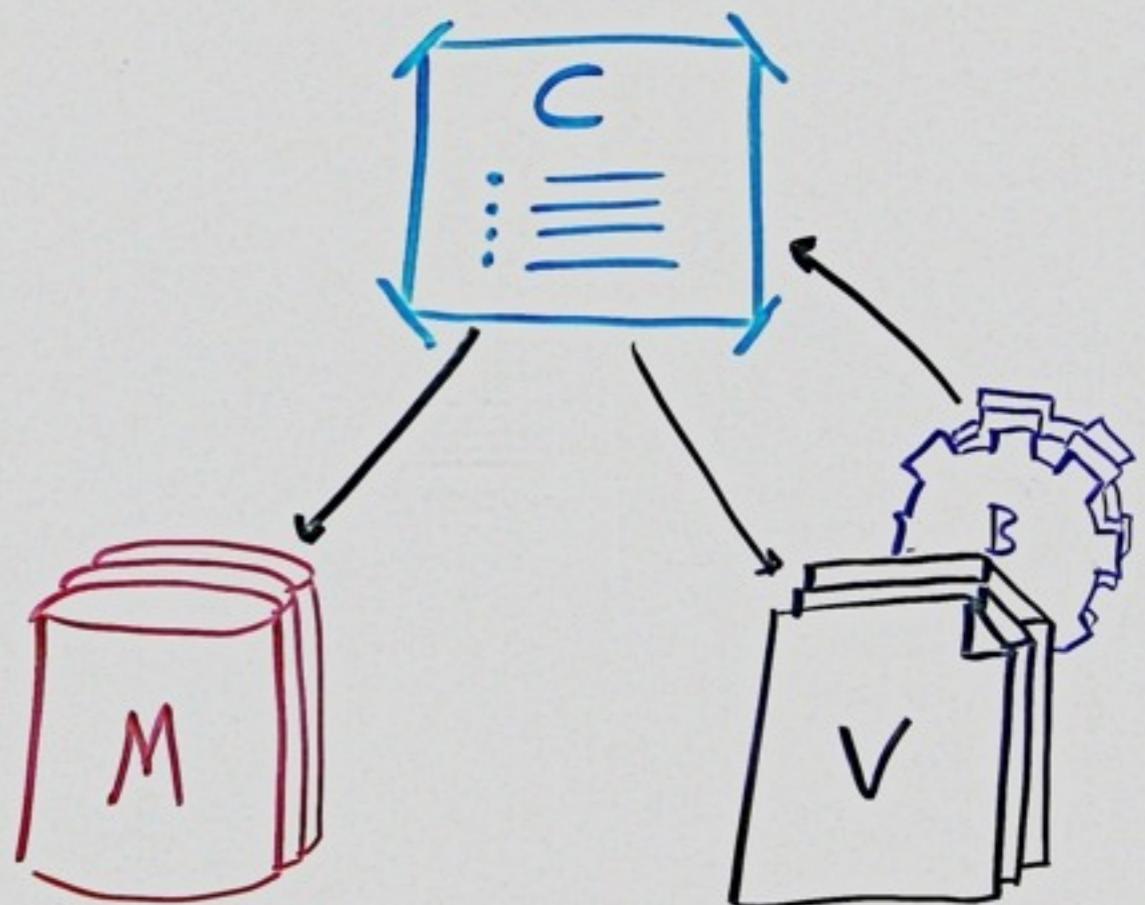
Views



\$> mojito create mojit Foo

sl/mojits/Foo

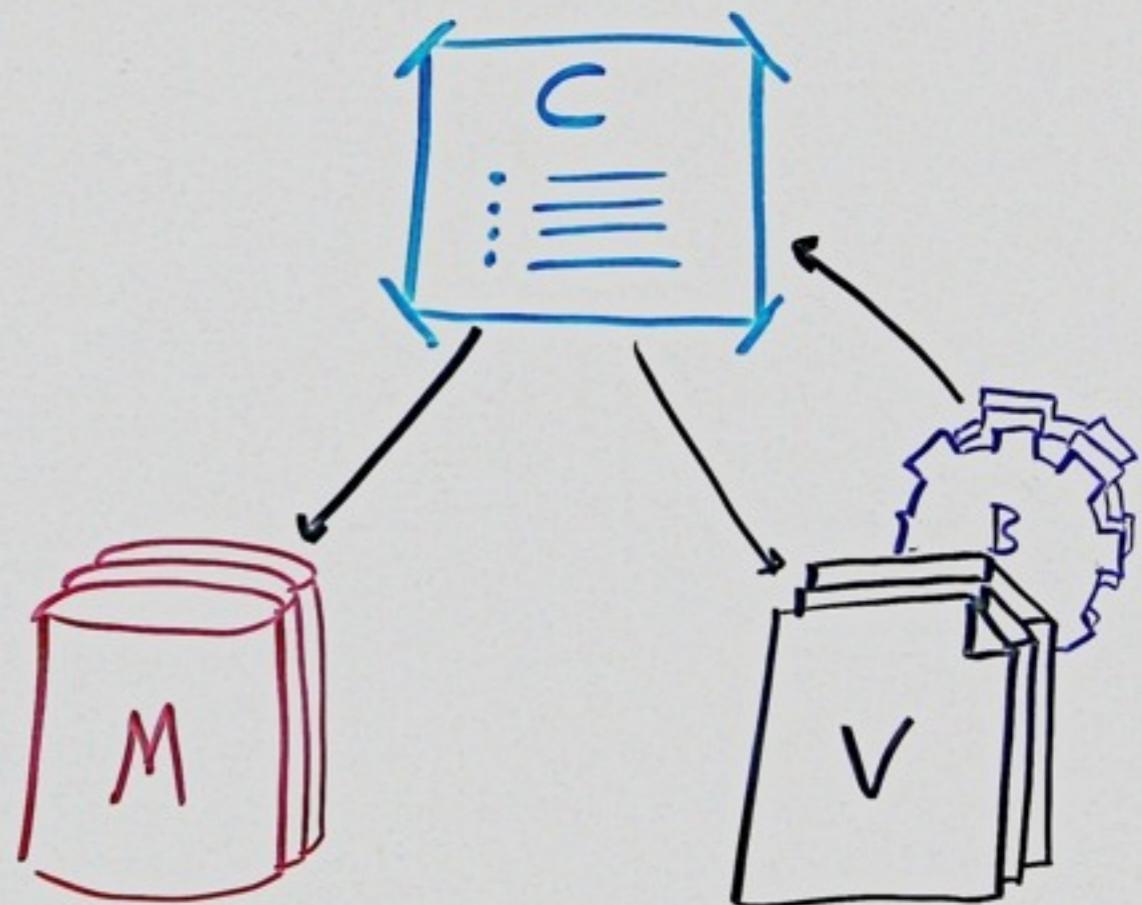
- assets
- binders
- controller.server.js
- definition.js
- models
- tests
- Views

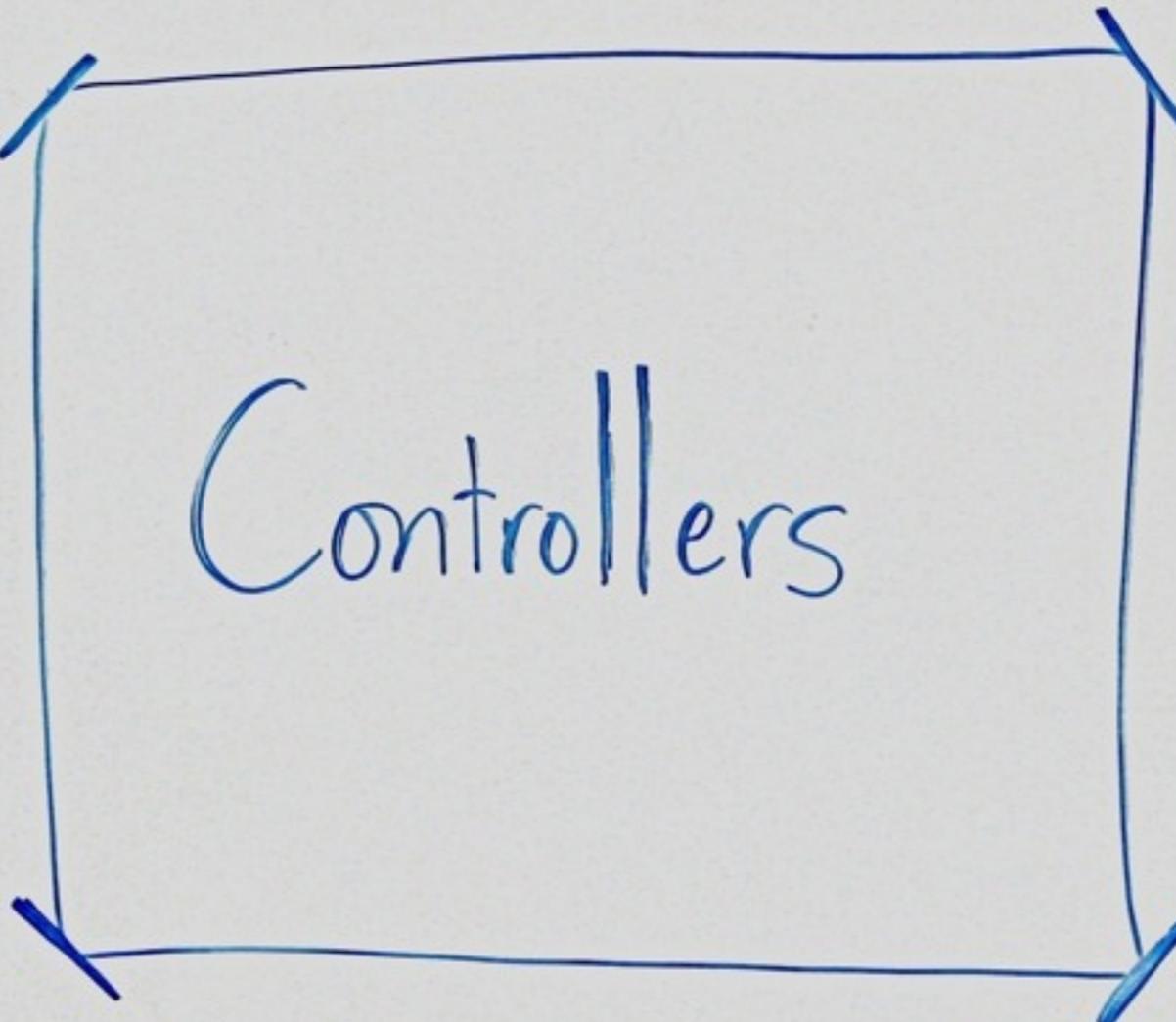


\$> mojito create mojit Foo

sl/mojits/Foo

- assets
- binders
- controller.server.js
- definition.js
- models
- tests
- Views





Controllers

ActionContext

API for Controllers

- GET DATA

- PUSH DATA

Action Context

From:

Models

GET DATA

ac.models.*.getData();

From:

Models

Config

GET DATA

ac.models.*.getData();
ac.config.get('key');

Action Context

From:

Models

Config

Environment

GET DATA

ac.models.*.getData();

ac.config.get('key');

ac.device.get('make');

Action Context

From:

Models

```
ac.models.*.getData();
```

Config

```
ac.config.get('key');
```

Environment

```
ac.device.get('Make');
```

Command

```
ac.params.body('key');
```

Action Context

PUSH DATA

Assets

ac.assets.addCss('./style.css');

Action Context

PUSH DATA

Assets

```
ac.assets.addCss('./style.css');
```

Response
Meta

```
ac.cookie.set('flavor', 'choco-chip');
```

```
ac.http.addHeader('x-foo', 'val');
```

Action Context

PUSH DATA

Assets

```
ac.assets.addCss('./style.css');
```

Response
Meta

```
ac.cookie.set('flavor', 'choco-chip');  
ac.http.addHeader('x-foo', 'val');
```

Response
Body

```
ac.done('Write this string!');  
ac.error('Shit happened :-(');
```

ADD ONS

ac.params.

- config.
- http.
- cookie.
- composite
- assets.

ADD ONS

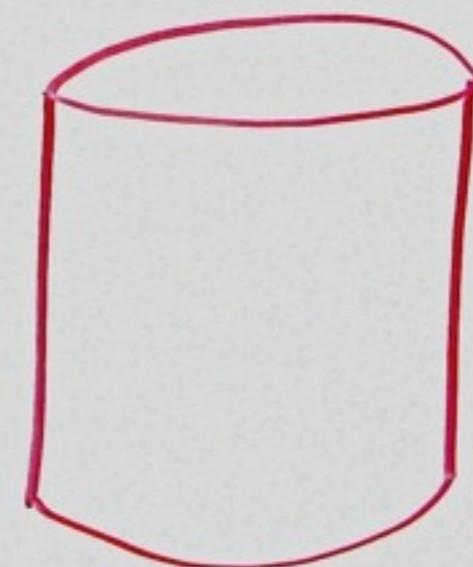
- ac.params.
- .config.
- .http.
- .cookie.
- .composite.
- .assets.

These are already
framework extensions.

You can make your own!

Models

- Simple static functions
- MUST NOT BLOCK
EVENT LOOP



VIEWS

sl/mojits/Foo/views
index.mu.html

Controller....

```
index: function(ac) {  
    ac.models.bar.getData(function(err, data){  
        ac.done(data);  
    });  
}
```

VIEWS

sl/mojits/Foo/views

index.mu.html

Controller....

```
[index]: function(ac) {
    ac.models.bar.getData(function(err, data){
        ac.done(data);
    });
}
```

VIEWS

sl/mojits/Foo/views

index.mu.html

Other.mu.html

Controller...

```
index: function(ac) {  
    ac.models.bar.getData(function(err,data){  
        ac.done(data,{  
            view: {name: 'other'}  
        });  
    });  
};
```

meta

VIEWS

sl/mojits/Foo/views

index.mu.html

Other.mu.html

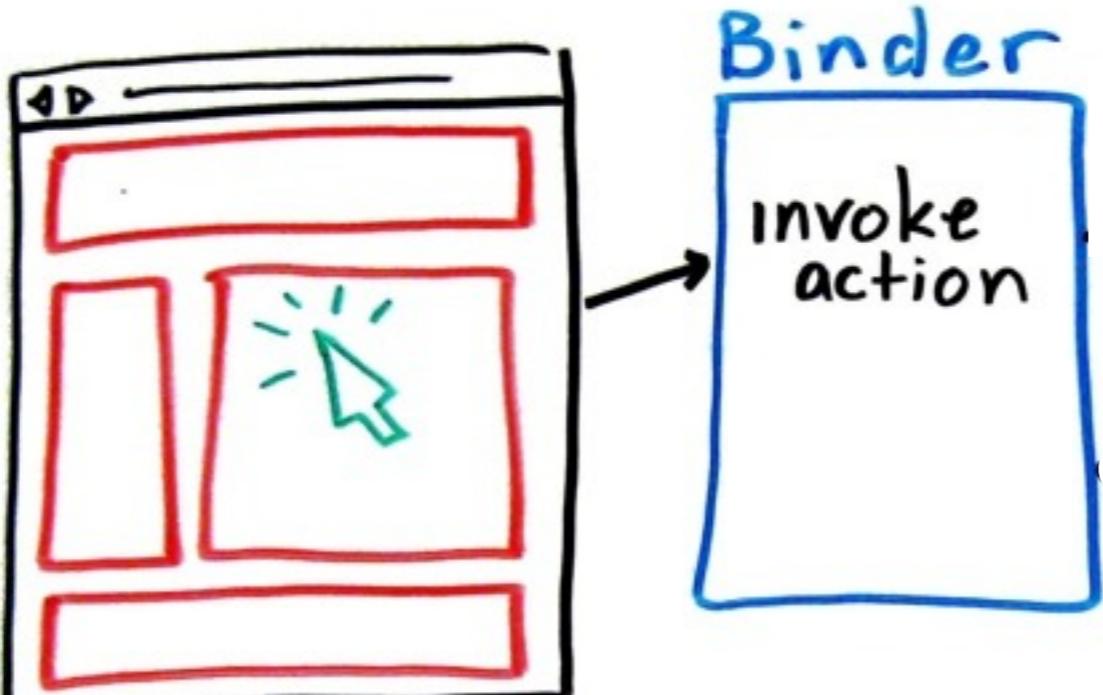
Controller...

```
[index]: function(ac) {  
    ac.models.bar.getData(function(err,data){  
        ac.done(data,{  
            view: {name: "Other"}  
        });  
    });  
};
```

meta

BINDERS

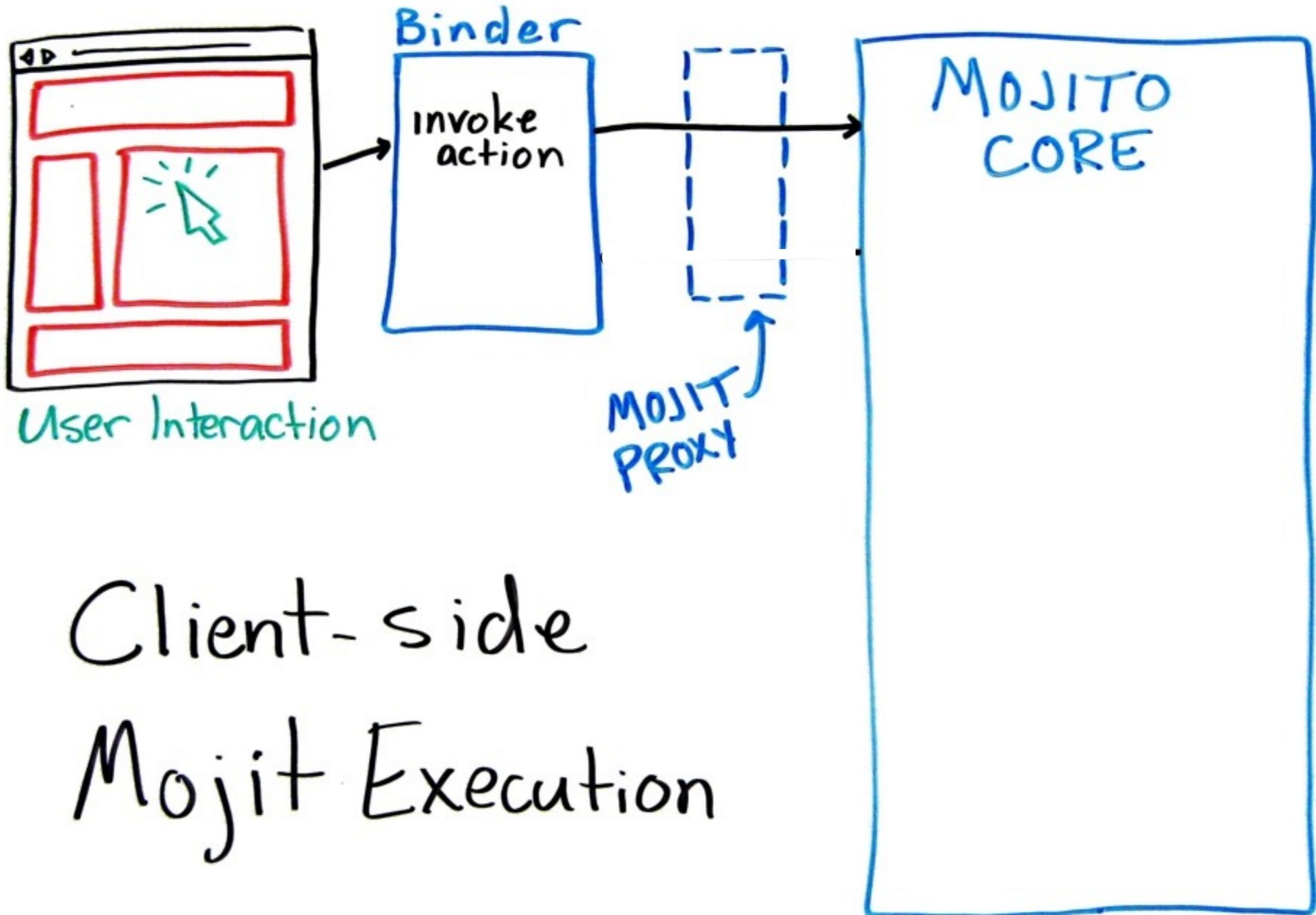
- each view has its own binder
- given a DOM node to apply UI event listeners
- interacts with Mojito Client runtime through a proxy

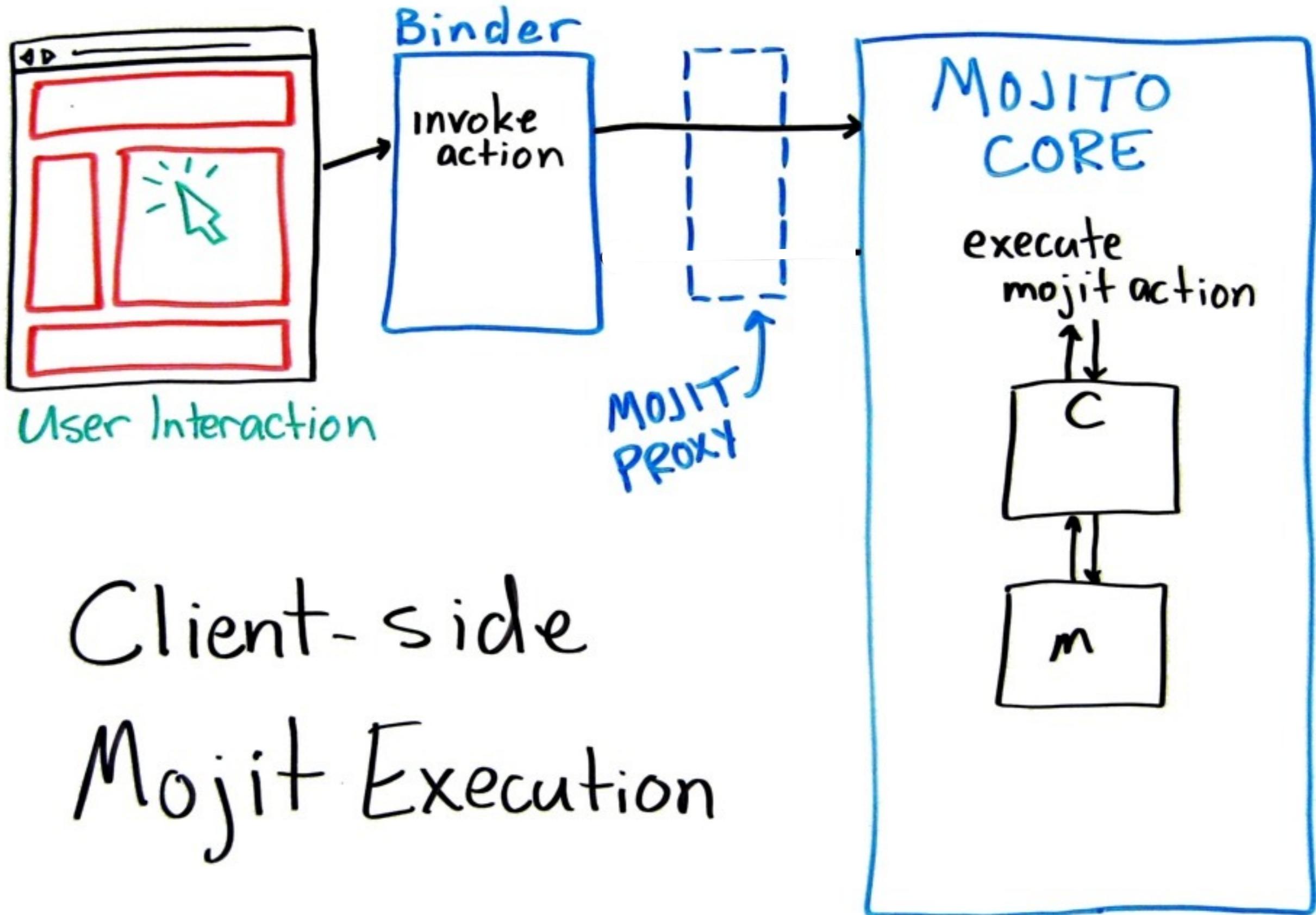


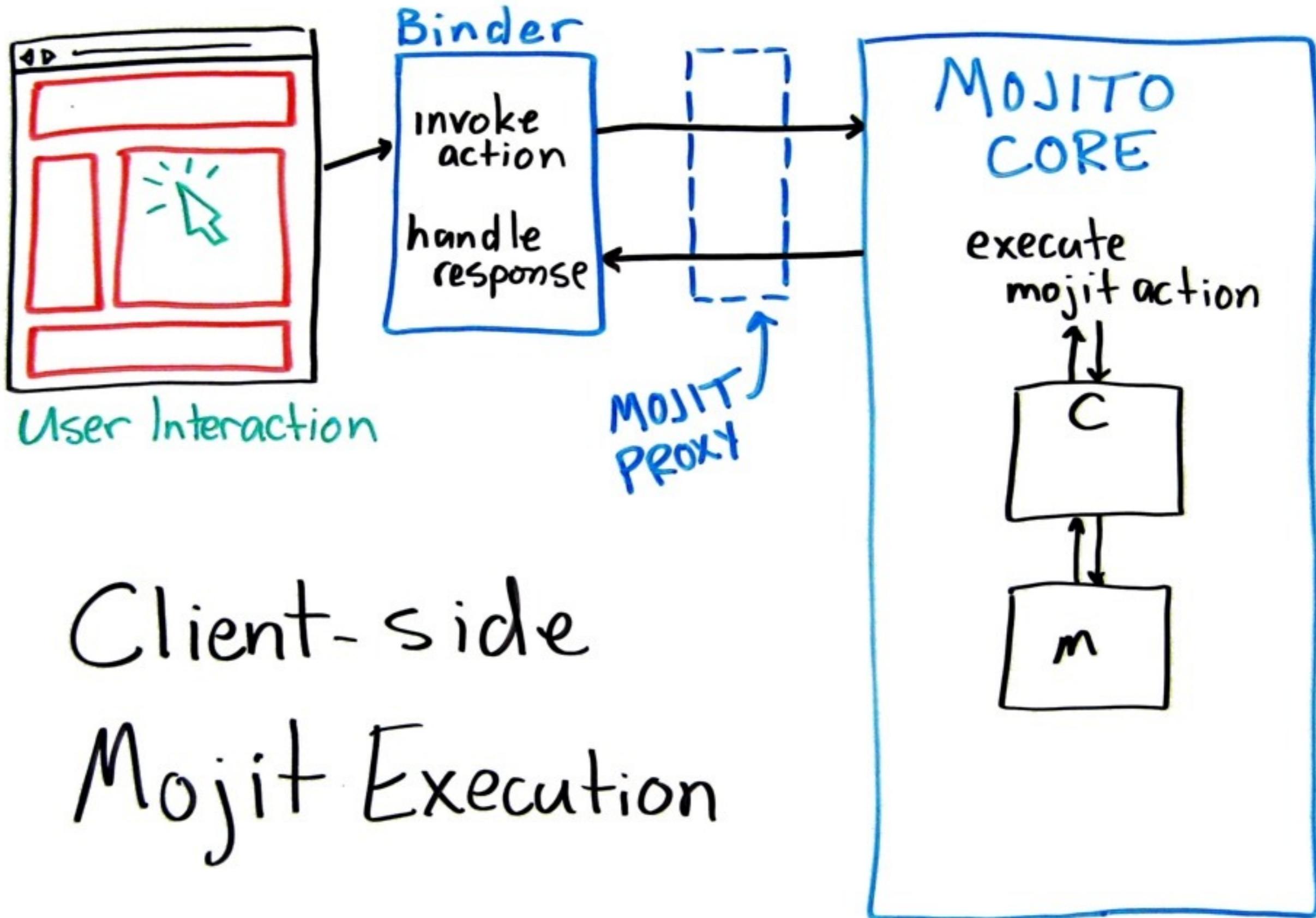
User Interaction

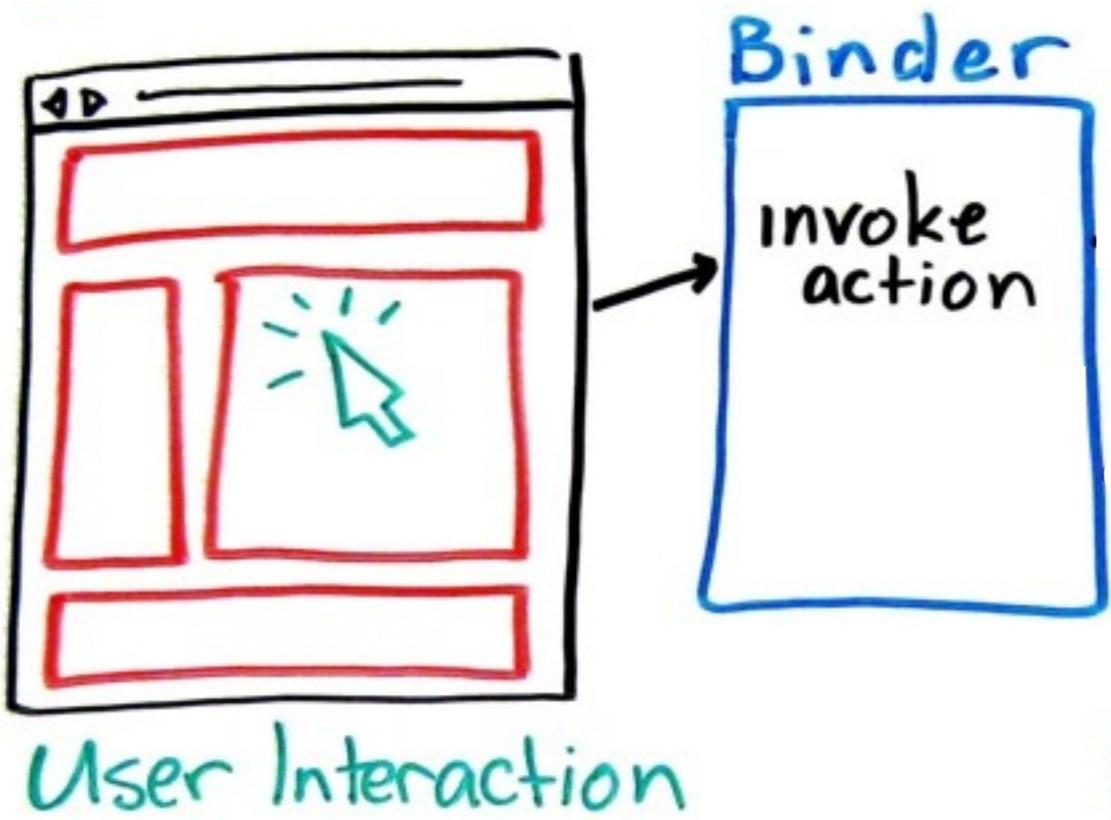
Client-side

Mojit Execution



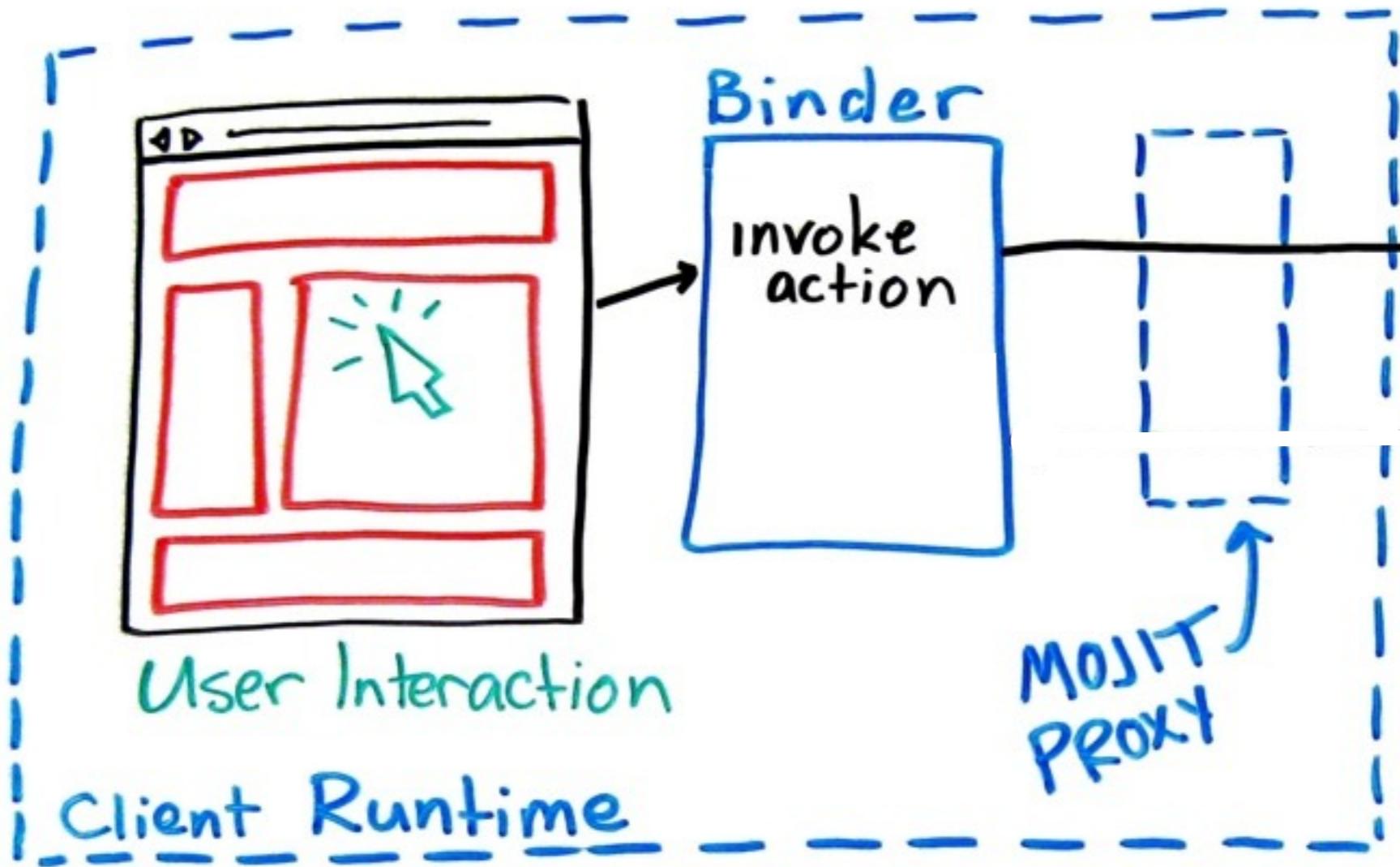






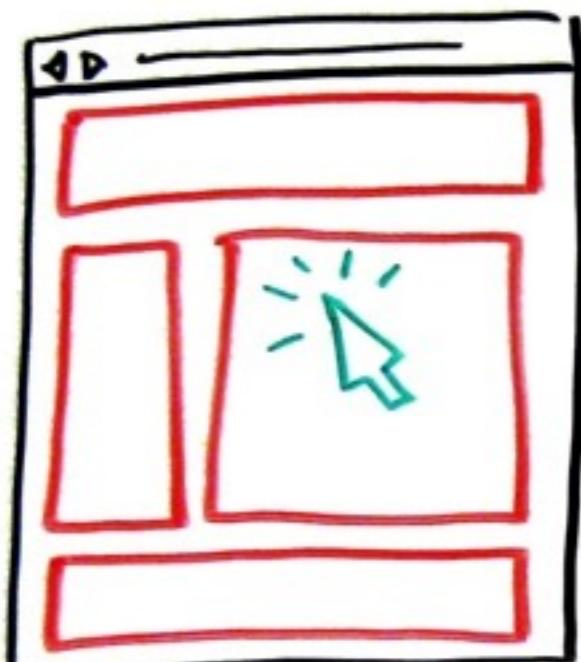
Server-side

Mojit Execution



Server-side

Mojit Execution



XHR



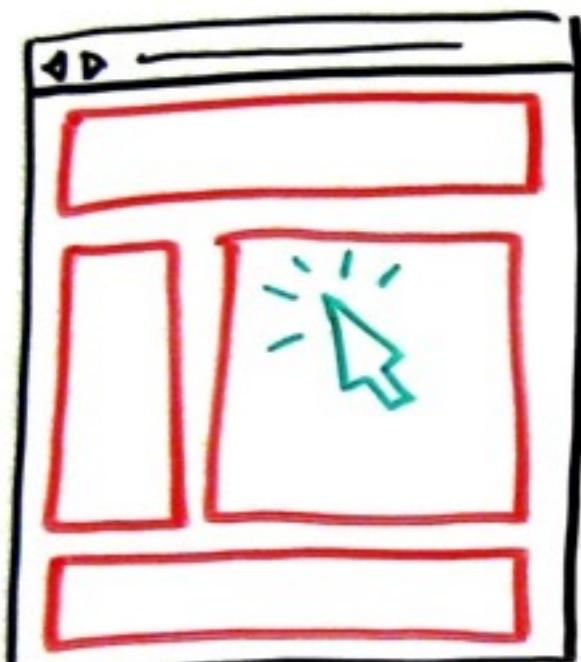
MOJIT
PROXY

Client Runtime

Server-side

Mojit Execution

Server Runtime



User Interaction

Client Runtime

Server-side

Mojit Execution

Binder

invoke action

MOJIT PROXY

XHR



- Mojit Action Executed

Server Runtime



User Interaction

Client Runtime

Server-side

Mojit Execution

Binder

invoke action

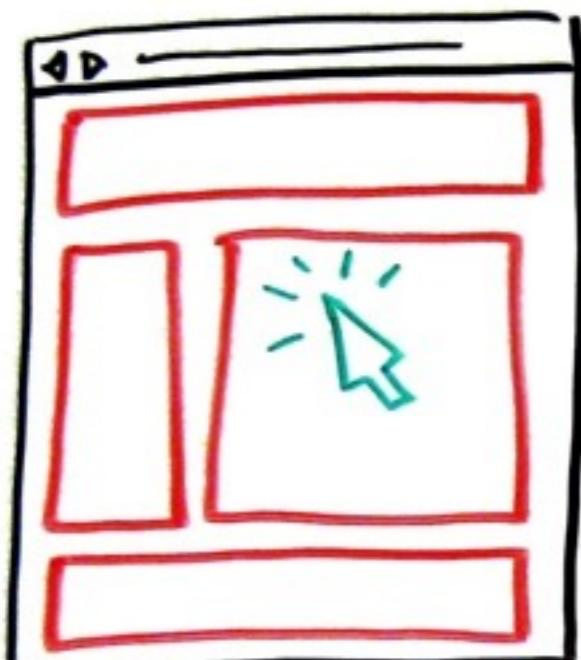
MOJIT PROXY

XHR



- Mojit Action Executed
- Data Returned (Json, XML, HTML...)

Server Runtime



User Interaction

Client Runtime

Binder

invoke
action

handle
response

MOJIT
PROXY

XHR



Server - Side

Mojit Execution

- Mojit Action Executed

- Data Returned (Json, XML, HTML...)

Server Runtime



@Fabian_Frank

Fabian Frank

This week our node.js stack beat PHP on all scales. No prototype, production quality and soon to be seen in the wild.
#hooray

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2. Default (node)

```
/autoload/rest.common.js
[YUI-INFO] (1316322583095) get: Loaded: /Users/mtaylor/dev/yahoo/cocktails/mojito/trunk/source/lib/app/autoload/rest.common.js
[YUI-INFO] (1316322583095) loader: attempting to load ycb, /Users/mtaylor/.node_libraries/.npm/yui3-core/3.3.0/package/build/
[YUI-INFO] (1316322583095) get: URL: /Users/mtaylor/dev/yahoo/cocktails/mojito/trunk/source/lib/app/autoload/ycb.common.js
[YUI-INFO] (1316322583098) get: Loaded: /Users/mtaylor/dev/yahoo/cocktails/mojito/trunk/source/lib/app/autoload/ycb.common.js
[YUI-INFO] (1316322583098) loader: loader finishing: success, yui_3_3_0_1_13163225819981, mojito-perf,mojito,mojito-util,yui-base,querystring-stringify-simple,array-extras,querystring-parse,mojito-route-maker,mojito-view-renderer,json-stringify,oop,parallel,event-custom,mojito-output-adapter-addon,mojito-meta-addon,mojito-analytics-addon,mojito-assets-addon,mojito-params-addon,mojito-composite-addon,mojito-config-addon,mojito-http-addon,mojito-cookie-addon,get,mojito-loader,mojito-deploy-addon,intl-base,intl,lang/datatype-date,datatype-date,mojito-intl-addon,mojito-partial-addon,mojito-url-addon,mojito-carrier-addon,mojito-device-addon,mojito-i13n-addon,mojito-yca-addon,mojito-yck-addon,mojito-yiv-addon,mojito-mu,mojito-action-context,mojito-controller-context,mojito-resource-store-adapter,mojito-dispatcher,mojito-logger,mojito-test,nodejs-dom,event-base,dom,node-base,dom-style-ie,node-style,queue-promote,datatype-xml,io,io-nodejs,mojito-rest-lib,ycb
[WARN] (1316322583171) mojito-yca-addon: YCA was not found
[INFO] (1316322583171) mojito-yca-addon: SKIPPED ActionContext addon "yca"
[WARN] (1316322583180) mojito-yck-addon: YCK was not found
[INFO] (1316322583180) mojito-yck-addon: SKIPPED ActionContext addon "yck"
[DEBUG] (1316322583371) Mojito HTTP Server initialized in 1597ms.
```

✓ Mojito started "strangeloop" on http://localhost:8666/

In Summary

- One codebase, Two runtimes
- 100% JavaScript

In Summary

- One codebase, Two runtimes
- 100% Java Script
- Soon to be OPEN SOURCE!

Contact Info

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