Clojure

Clojure

- A lisp

Clojure

- A lisp
- That run on the JVM

Clojure

- A lisp
- That run on the JVM
- Dynamic

Clojure

- A lisp
- That run on the JVM
- Dynamic
- Functional programming

Clojure syntax

List

```
(1 "two" 3)
```

Clojure syntax

List

```
(1 "two" 3)
```

Vector

```
[1 "two" 3]
```

Clojure syntax

List

```
(1 "two" 3)
```

Vector

```
[1 "two" 3]
```

Map

```
{:first-key 1
:second-key "two"}
```

Clojure syntax

List

```
(1 "two" 3)
```

Vector

```
[1 "two" 3]
```

Map

```
{:first-key 1
:second-key "two"}
```

Function definition

```
(defn my-function [param1 param2]
  (str param1  param2))
```

Clojure syntax

List

```
(1 "two" 3)
```

Vector

```
[1 "two" 3]
```

Map

```
{:first-key 1
:second-key "two"}
```

Function definition

```
(defn my-function [param1 param2]
  (str param1  param2))
```

Function call

```
(my-function 1 "two")  ;"1two"
```

Clojure syntax

Code is data, data is code

Data structures

Immutable data structures

Clojurescript

React.js

React.js

```
new Component(){
    private String localState;

    private void componentWillMount(){
//Setup
    }
    private void componentWillUnmount(){
//TearDown
    }
    private void renderState(){
return <input type="text" value={localState}/>;
    }
}
```

core.async

core.async

```clojure
(go (>! channel {:name "event" :value 3}))
```

```clojure
(go (<! channel))
```

core.async

- Event driven

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- Event driven
- Pub/Sub

core.async

- Event driven
- Pub/Sub
- Multithreading

core.async

Event driven

```
async_call(param, function(result){
   console.log(result);
});
```

core.async

Event driven

```
async_call(param, function(result){
   console.log(result);
});
```

```
async_call(param, new Future());
```

core.async

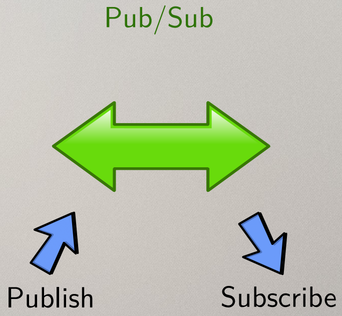
Event driven

```
async_call(param, function(result){
   console.log(result);
});
```

```
async_call(param, new Future());
```

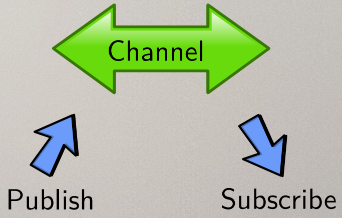
```
async_call(param, channel);
```

core.async



core.async

Pub/Sub



Next

- Web server

Next

- Web server
- core.typed

Next

- Web server
- core.typed
- Datomic?