Event-Sourcing your React-Redux applications

HolyJS

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Who am I?

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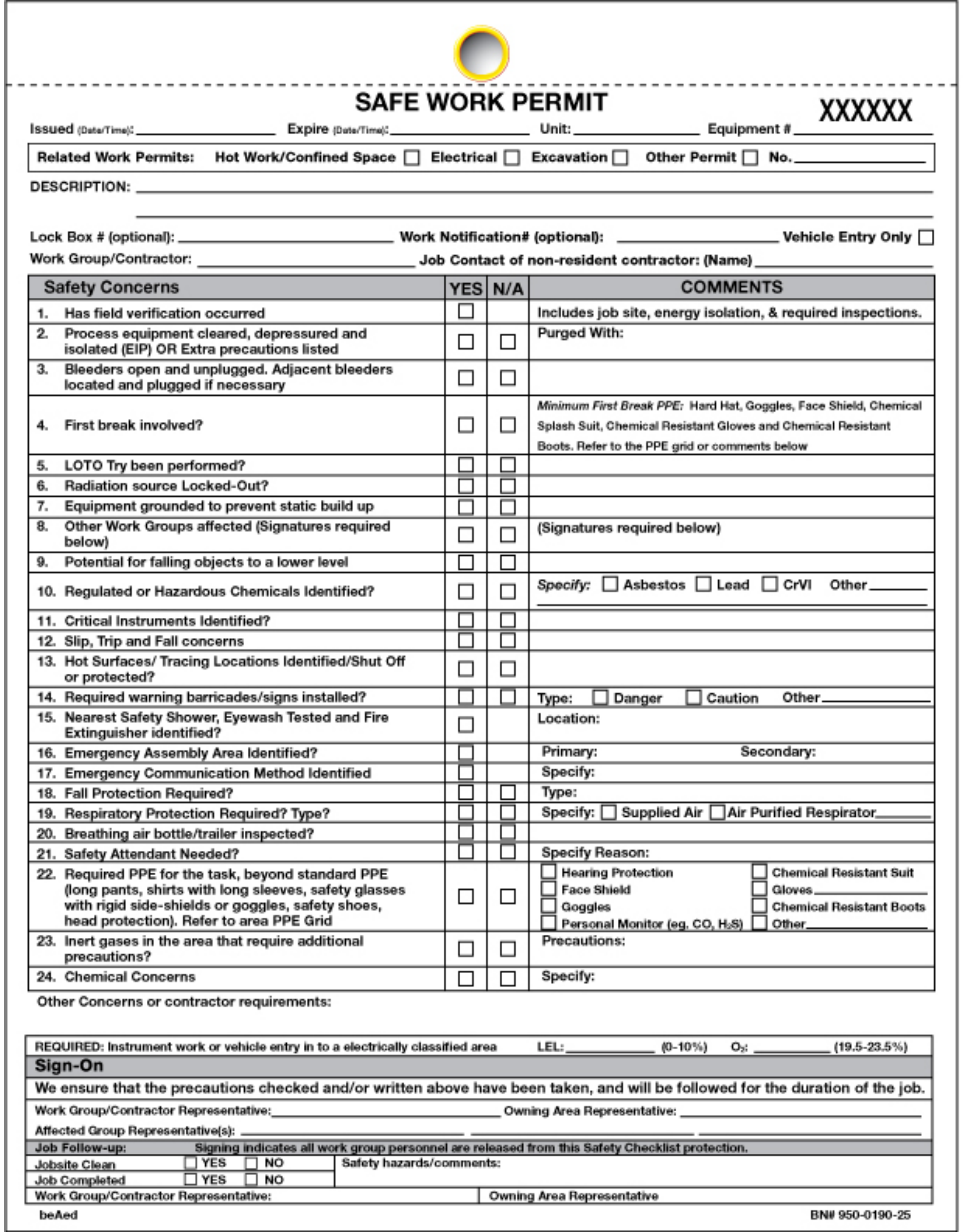
MIYATA

“The biggest room in the world is the **room for improvement**.”

~ Anonymous



SAFE WORK PERMIT

XXXXXX

Issued (Date/Time): ______________ Expire (Date/Time): ______________ Unit: ______________ Equipment # ______________

Related Work Permits: Hot Work/Confined Space □ Electrical □ Excavation □ Other Permit □ No. ______________

DESCRIPTION: ______________

Lock Box # (optional): ______________ Work Notification# (optional): ______________ Vehicle Entry Only □

Work Group/Contractor: ______________ Job Contact of non-resident contractor: (Name) ______________

Safety Concerns	YES	N/A	COMMENTS
1. Has field verification occurred	□		Includes job site, energy isolation, & required inspections.
2. Process equipment cleared, depressured and isolated (EIP) OR Extra precautions listed	□	□	Purged With:
3. Bleeders open and unplugged. Adjacent bleeders located and plugged if necessary	□	□	
4. First break involved?	□	□	*Minimum First Break PPE:* Hard Hat, Goggles, Face Shield, Chemical Splash Suit, Chemical Resistant Gloves and Chemical Resistant Boots. Refer to the PPE grid or comments below
5. LOTO Try been performed?	□	□	
6. Radiation source Locked-Out?	□	□	
7. Equipment grounded to prevent static build up	□	□	
8. Other Work Groups affected (Signatures required below)	□	□	(Signatures required below)
9. Potential for falling objects to a lower level	□	□	
10. Regulated or Hazardous Chemicals Identified?	□	□	*Specify:* □ Asbestos □ Lead □ CrVI Other ______
11. Critical Instruments Identified?	□	□	
12. Slip, Trip and Fall concerns	□	□	
13. Hot Surfaces/ Tracing Locations Identified/Shut Off or protected?	□	□	
14. Required warning barricades/signs installed?	□	□	Type: □ Danger □ Caution Other ______
15. Nearest Safety Shower, Eyewash Tested and Fire Extinguisher identified?	□		Location:
16. Emergency Assembly Area Identified?	□		Primary: Secondary:
17. Emergency Communication Method Identified	□		Specify:
18. Fall Protection Required?	□	□	Type:
19. Respiratory Protection Required? Type?	□	□	Specify: □ Supplied Air □ Air Purified Respirator ______
20. Breathing air bottle/trailer inspected?	□	□	
21. Safety Attendant Needed?	□	□	Specify Reason:
22. Required PPE for the task, beyond standard PPE (long pants, shirts with long sleeves, safety glasses with rigid side-shields or goggles, safety shoes, head protection). Refer to area PPE Grid	□	□	□ Hearing Protection □ Chemical Resistant Suit □ Face Shield □ Gloves ______ □ Goggles □ Chemical Resistant Boots □ Personal Monitor (eg. CO, H_2S) □ Other ______
23. Inert gases in the area that require additional precautions?	□	□	Precautions:
24. Chemical Concerns	□	□	Specify:

Other Concerns or contractor requirements:

REQUIRED: Instrument work or vehicle entry in to a electrically classified area LEL: ______ (0-10%) O_2: ______ (19.5-23.5%)

Sign-On

We ensure that the precautions checked and/or written above have been taken, and will be followed for the duration of the job.

Work Group/Contractor Representative: ______________ Owning Area Representative: ______________

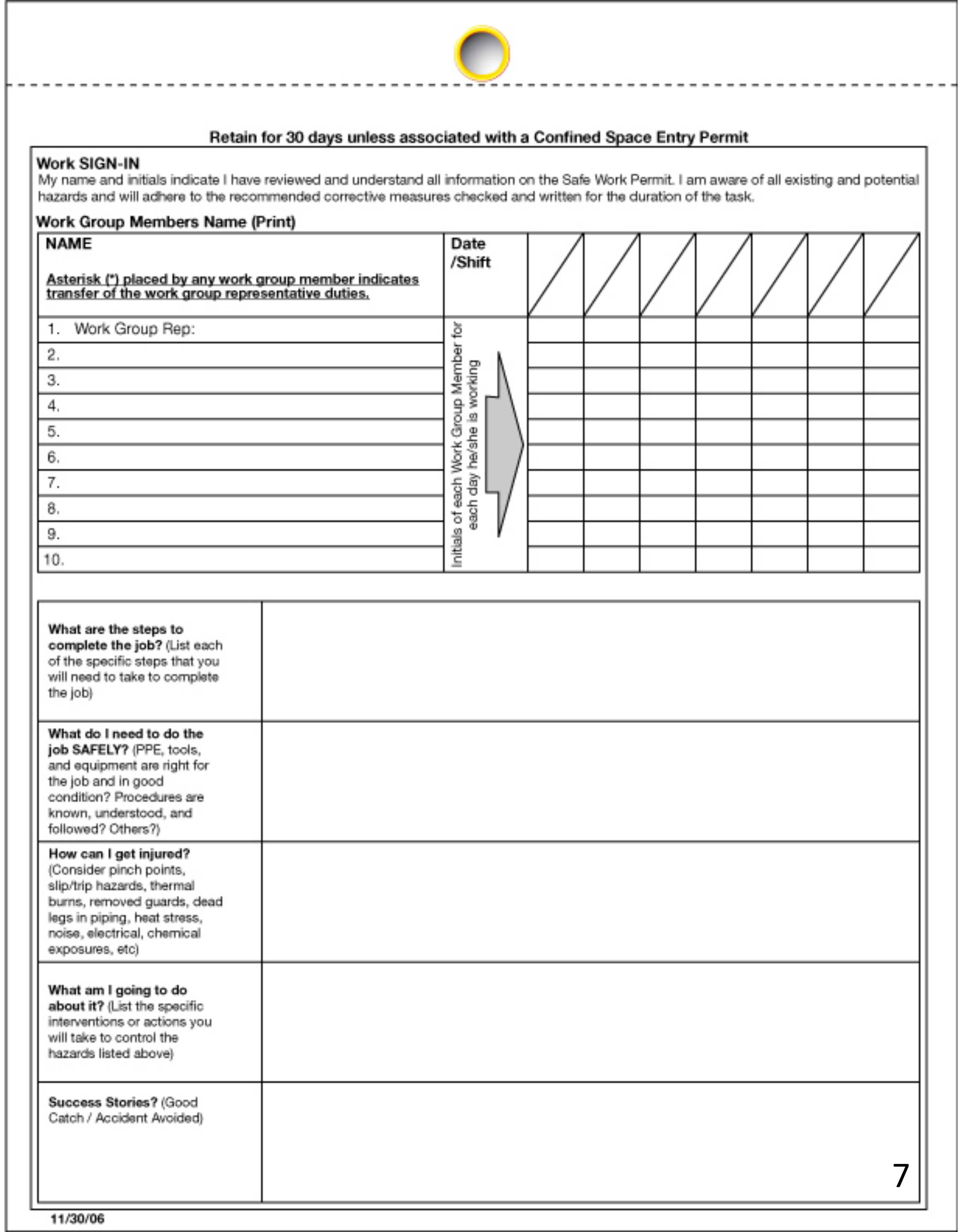
Affected Group Representative(s): ______________ ______________ ______________

Job Follow-up: Signing indicates all work group personnel are released from this Safety Checklist protection.

Jobsite Clean	□ YES	□ NO	Safety hazards/comments:
Job Completed	□ YES	□ NO	

Work Group/Contractor Representative: Owning Area Representative

beAed BN# 950-0190-25



Retain for 30 days unless associated with a Confined Space Entry Permit

Work SIGN-IN

My name and initials indicate I have reviewed and understand all information on the Safe Work Permit. I am aware of all existing and potential hazards and will adhere to the recommended corrective measures checked and written for the duration of the task.

Work Group Members Name (Print)

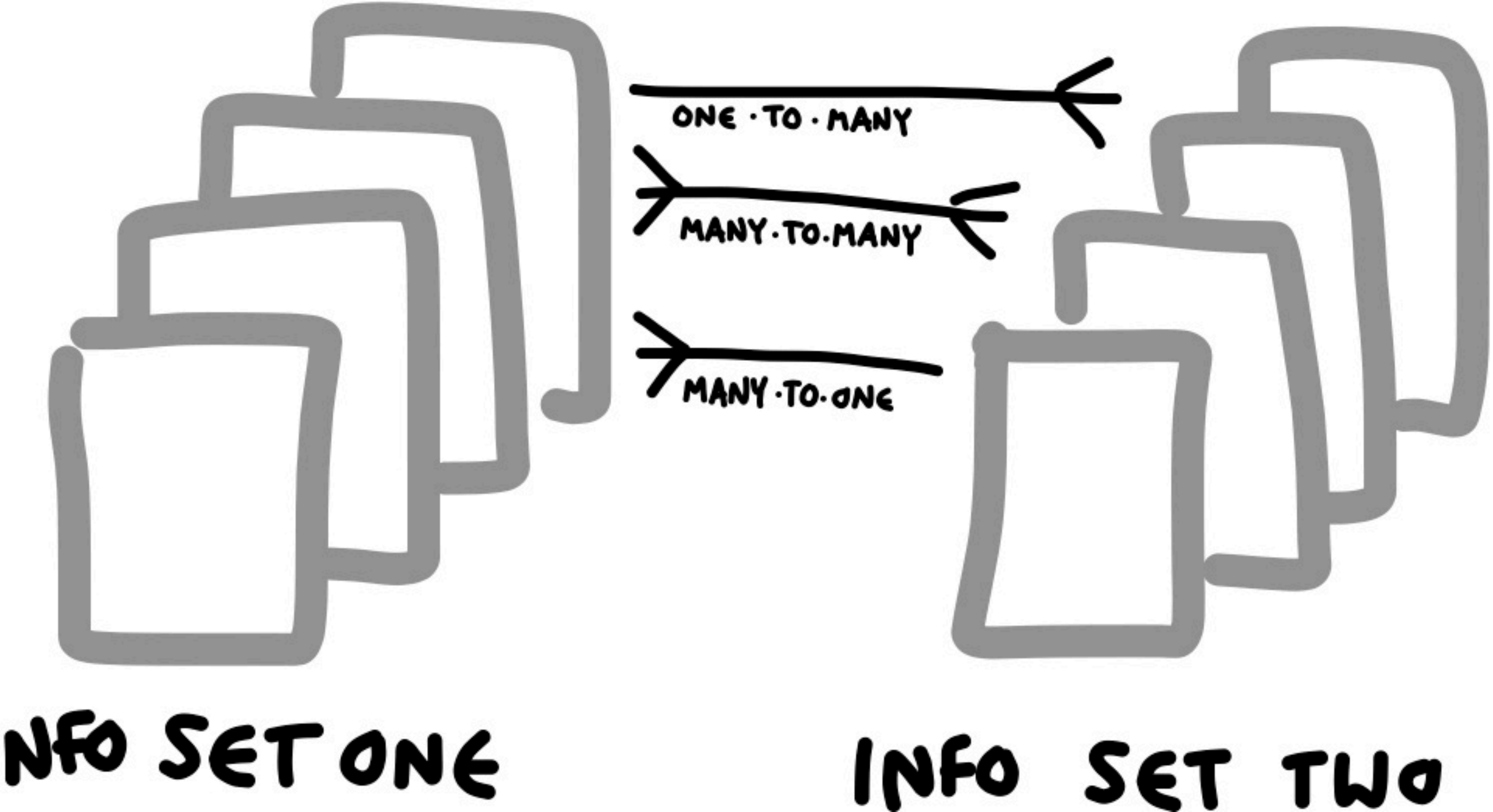
NAME Asterisk (*) placed by any work group member indicates transfer of the work group representative duties.	Date /Shift	/	/	/	/	/	/	/
1. Work Group Rep:	Initials of each Work Group Member for each day he/she is working							
2.								
3.								
4.								
5.								
6.								
7.								
8.								
9.								
10.								

What are the steps to complete the job? (List each of the specific steps that you will need to take to complete the job)	
What do I need to do the job SAFELY? (PPE, tools, and equipment are right for the job and in good condition? Procedures are known, understood, and followed? Others?)	
How can I get injured? (Consider pinch points, slip/trip hazards, thermal burns, removed guards, dead legs in piping, heat stress, noise, electrical, chemical exposures, etc)	
What am I going to do about it? (List the specific interventions or actions you will take to control the hazards listed above)	
Success Stories? (Good Catch / Accident Avoided)	

11/30/06

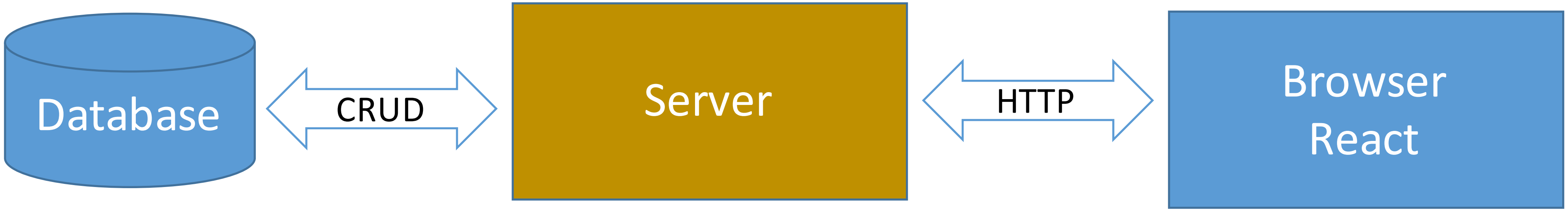
DICRETH COLD STORAGE

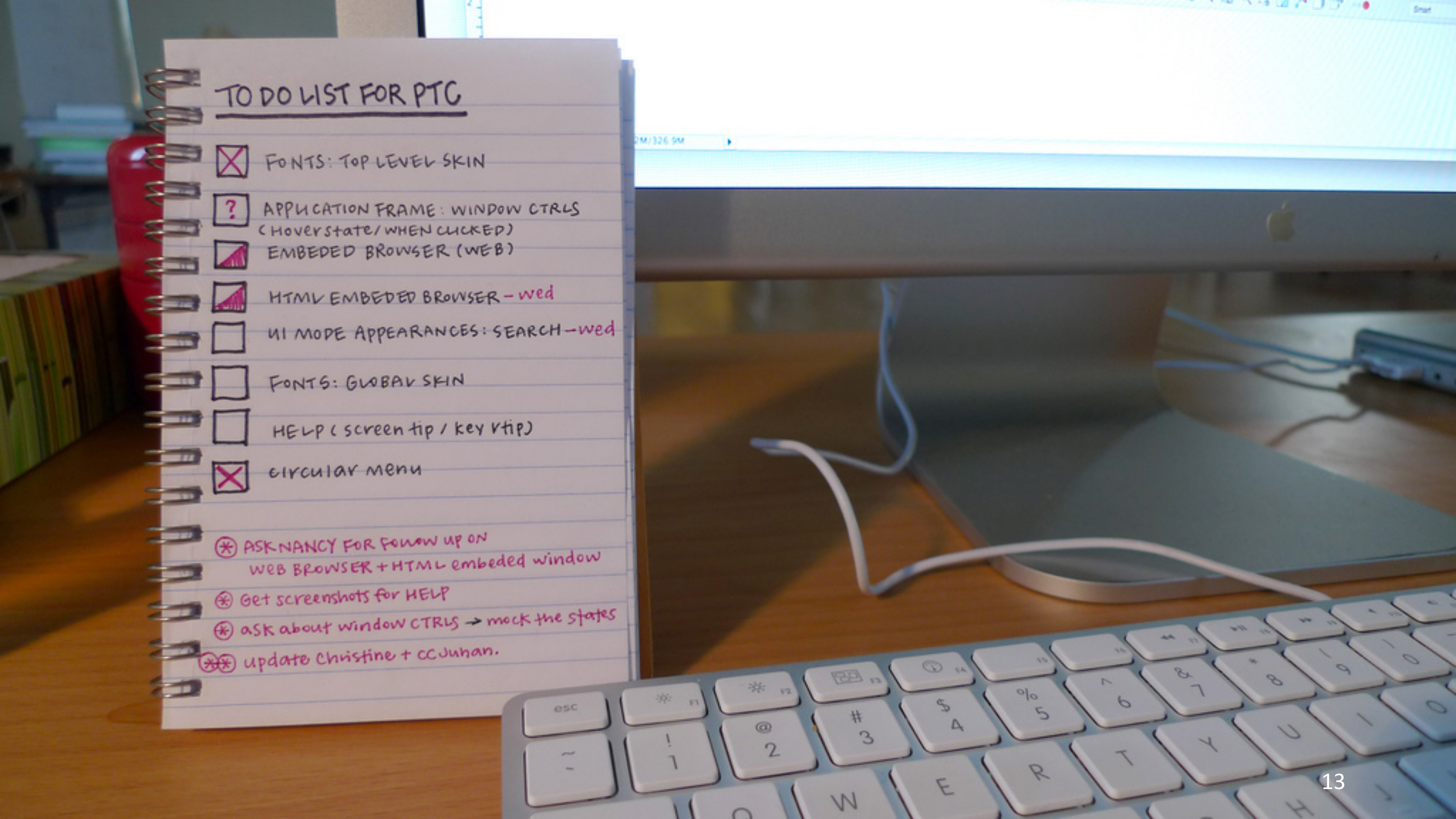
RELATIONAL DATABASE



mongoDB

(Semi) Structured storage





TO DO LIST FOR PTC

☒ FONTS: TOP LEVEL SKIN

? APPLICATION FRAME: WINDOW CTRLS (HOVERSTATE/WHEN CLICKED)

◩ EMBEDED BROWSER (WEB)

◩ HTML EMBEDED BROWSER - wed

□ UI MODE APPEARANCES: SEARCH - wed

□ FONTS: GLOBAL SKIN

□ HELP (screen tip / key rtip)

☒ circular menu

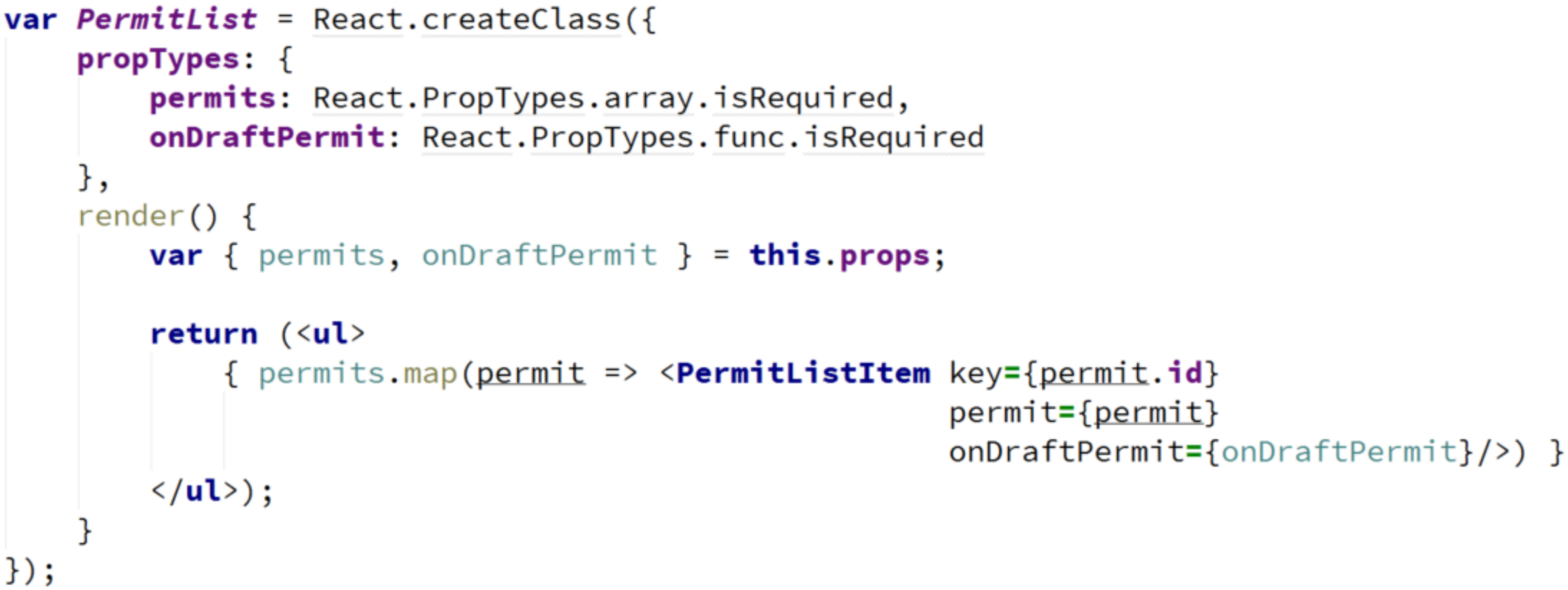
⊛ ASK NANCY FOR FOLLOW UP ON WEB BROWSER + HTML embeded window

⊛ Get screenshots for HELP

⊛ ask about window CTRLS → mock the states

⊛⊛ update Christine + CC Juhan.

A React component to display data



```
var PermitList = React.createClass({
    propTypes: {
        permits: React.PropTypes.array.isRequired,
        onDraftPermit: React.PropTypes.func.isRequired
    },
    render() {
        var { permits, onDraftPermit } = this.props;

        return (<ul>
            { permits.map(permit => <PermitListItem key={permit.id}
                                                    permit={permit}
                                                    onDraftPermit={onDraftPermit}/>) }
        </ul>);
    }
});
```

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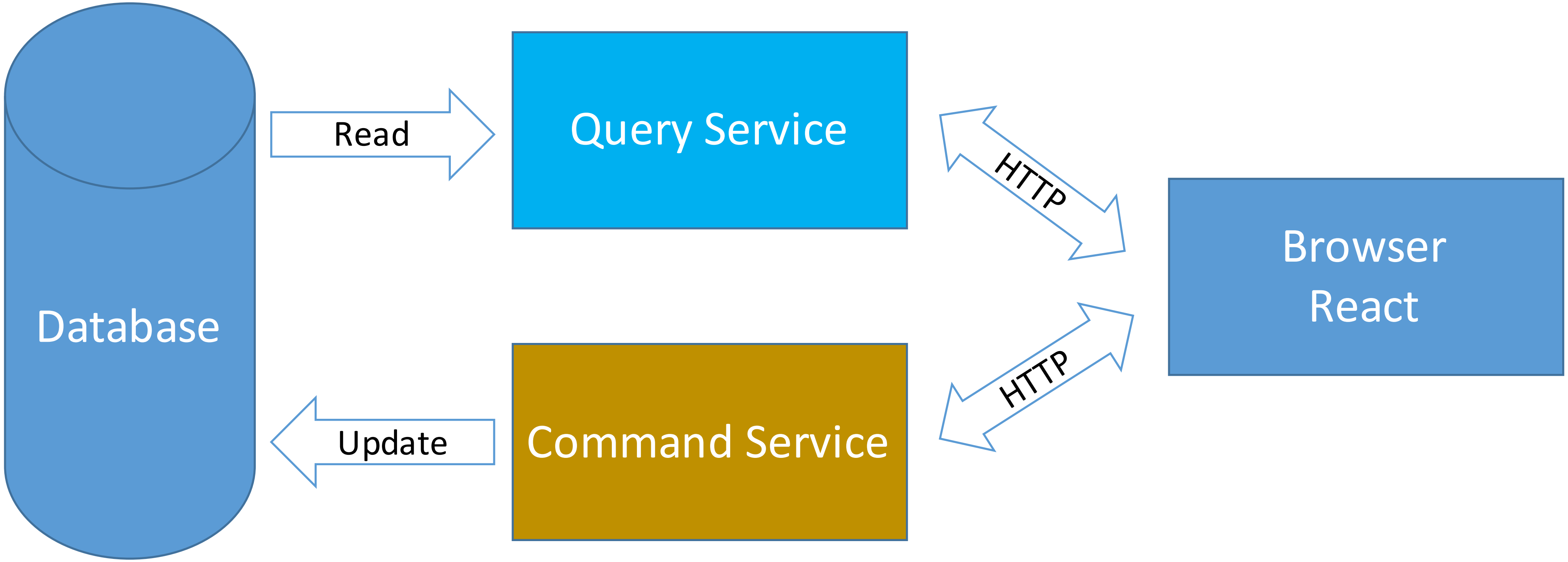
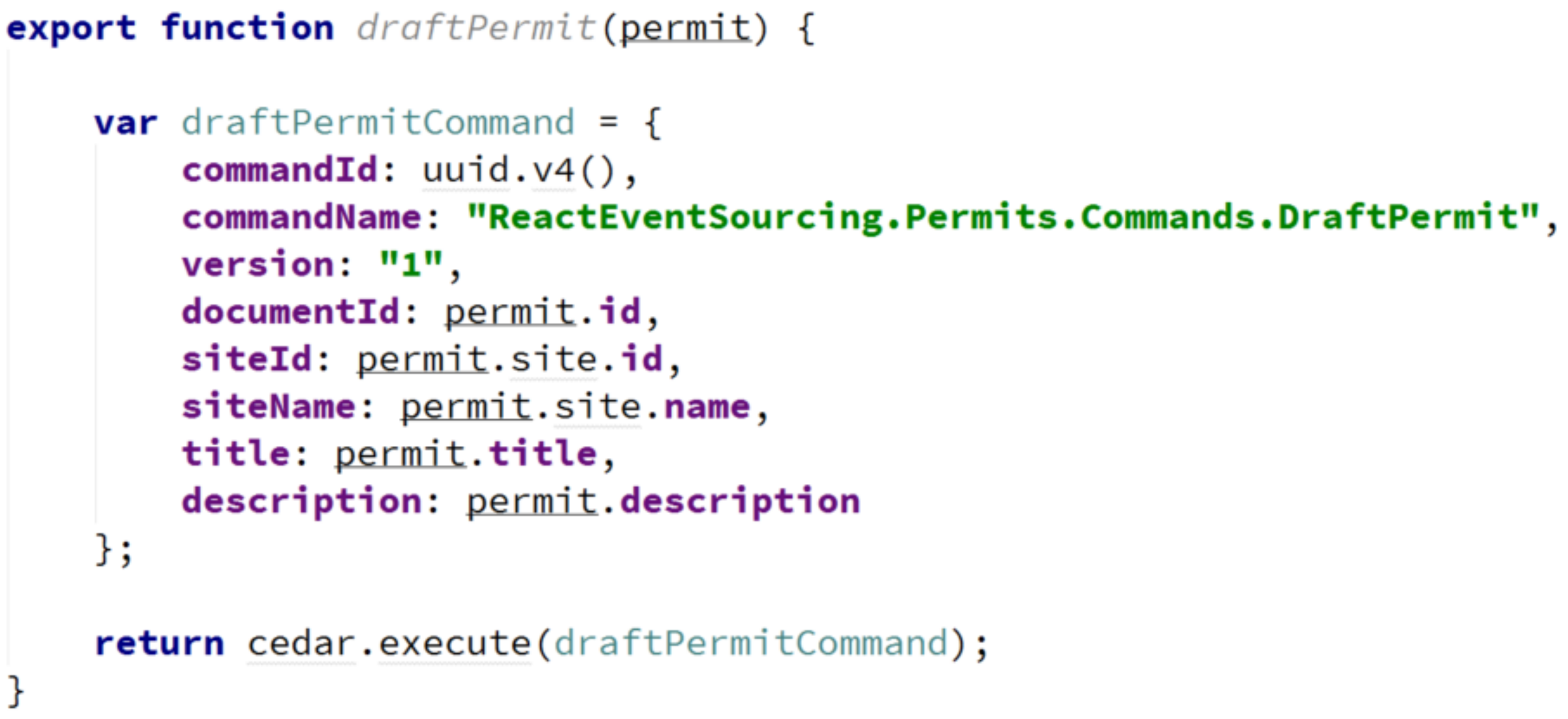
100
VFA-143
102
101
204

alt
option
x
⌘
command

Command Query Responsibility Segregation

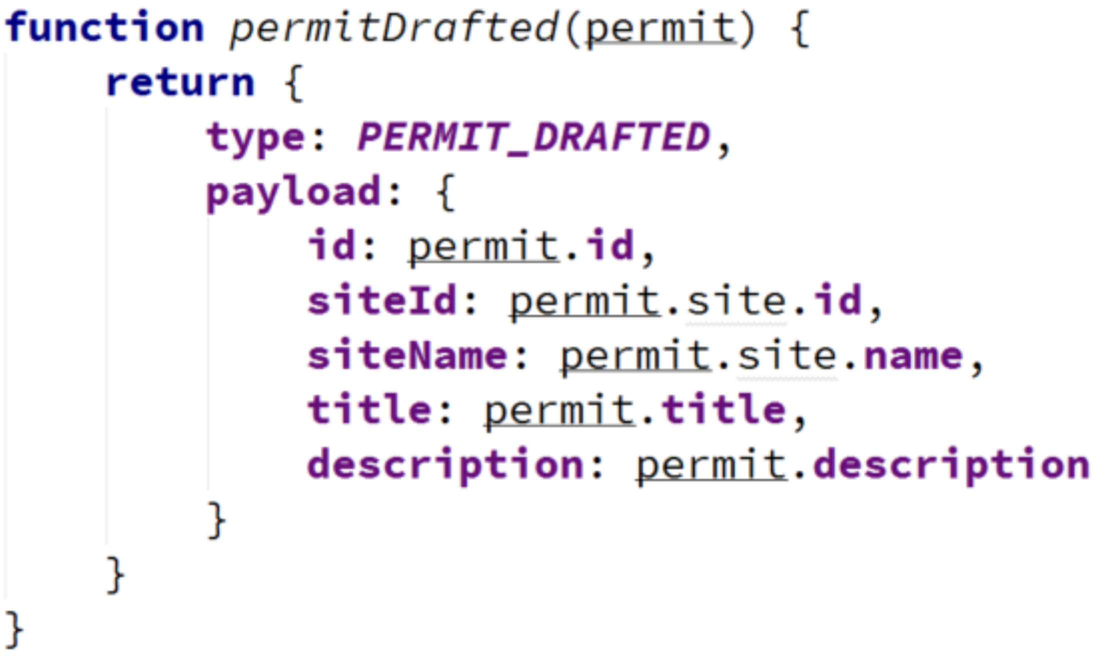


The JavaScript command

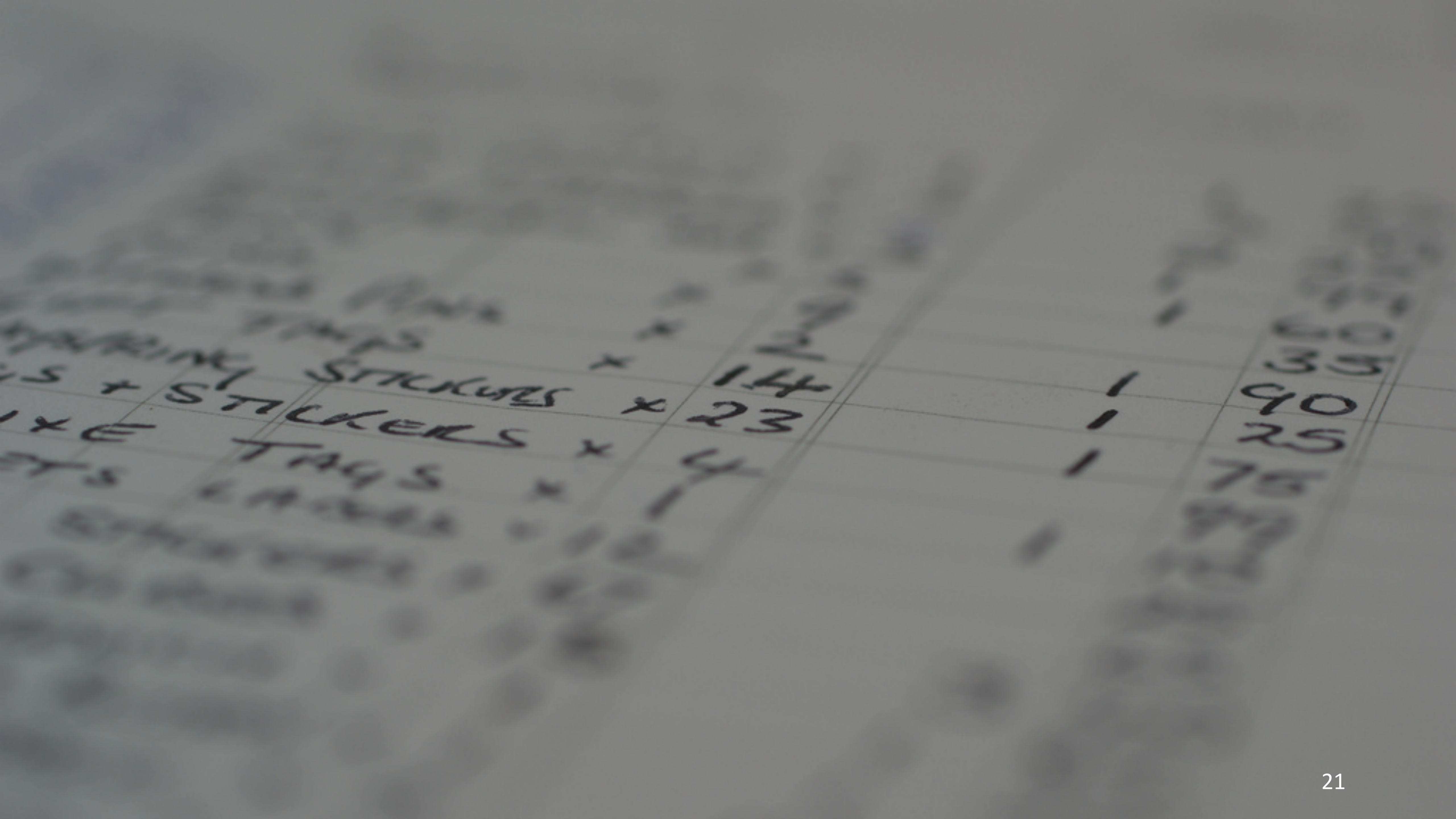


```
export function draftPermit(permit) {

    var draftPermitCommand = {
        commandId: uuid.v4(),
        commandName: "ReactEventSourcing.Permits.Commands.DraftPermit",
        version: "1",
        documentId: permit.id,
        siteId: permit.site.id,
        siteName: permit.site.name,
        title: permit.title,
        description: permit.description
    };

    return cedar.execute(draftPermitCommand);
}
```

A Redux Action Creator



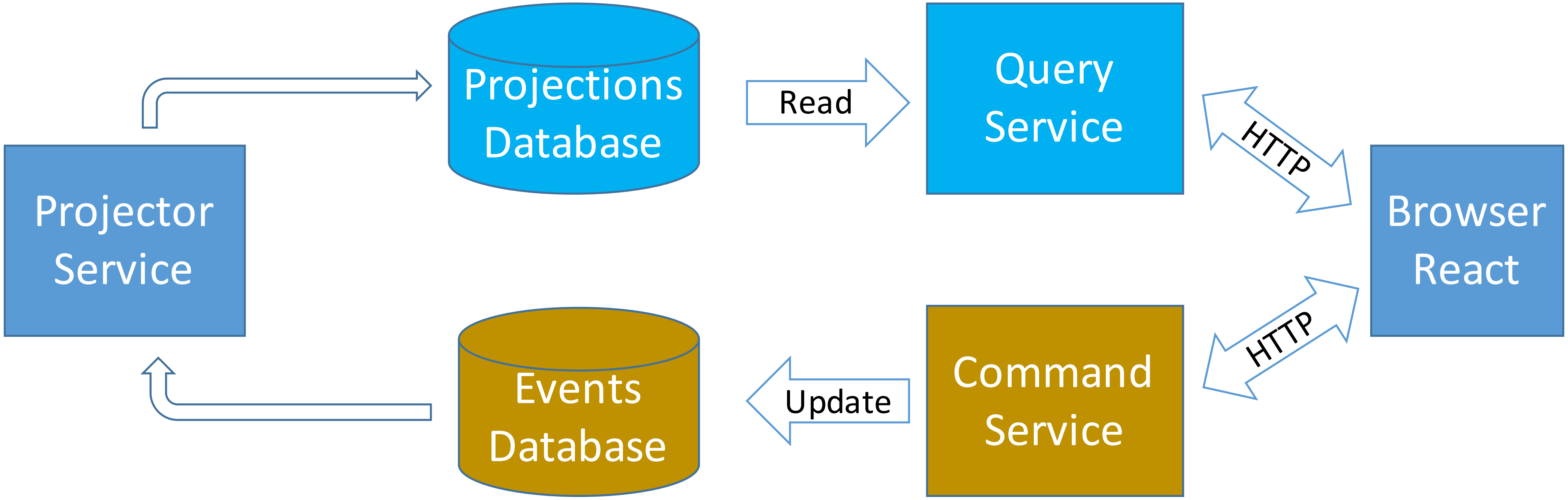
```
function permitDrafted(permit) {
    return {
        type: PERMIT_DRAFTED,
        payload: {
            id: permit.id,
            siteId: permit.site.id,
            siteName: permit.site.name,
            title: permit.title,
            description: permit.description
        }
    }
}
```


STICKERS × 14 1 90
STICKERS × 23 1 25
TAGS × 4 1 75
35

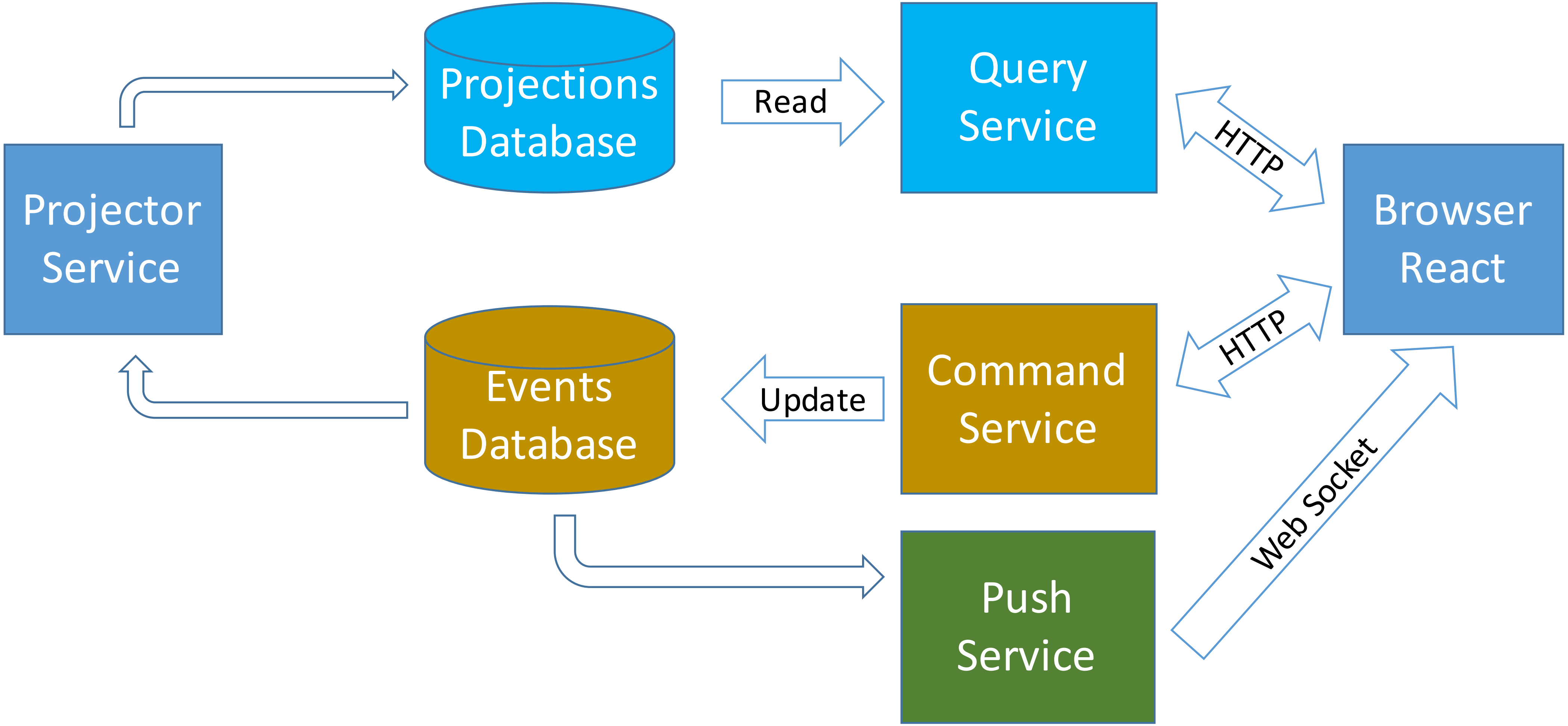
IVCLIDES.
LI.R.LVC.
BV

A 1
U 1
D 2
I 1
T 1

Event Sourcing



Event Pushing



Projector Service

Projections Database

Read

Query Service

HTTP

Browser React

HTTP

Command Service

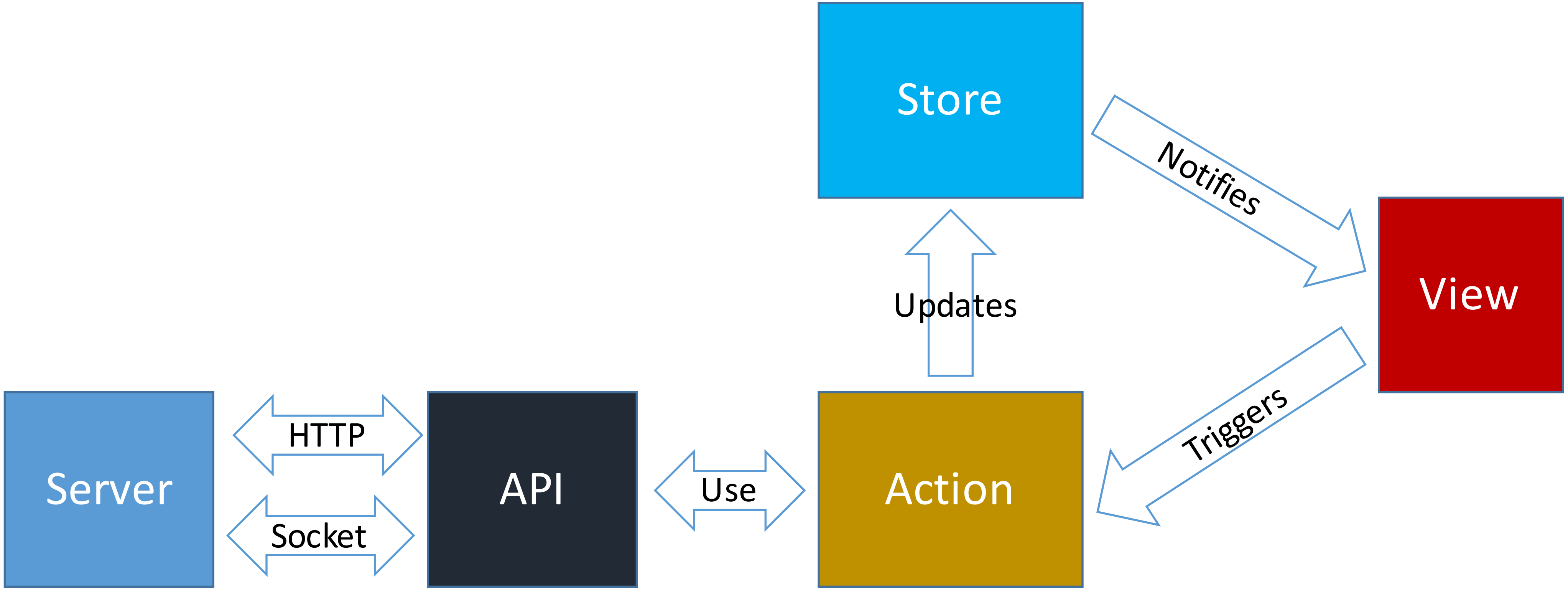
Update

Events Database

Web Socket

Push Service

React with Redux



X-6100
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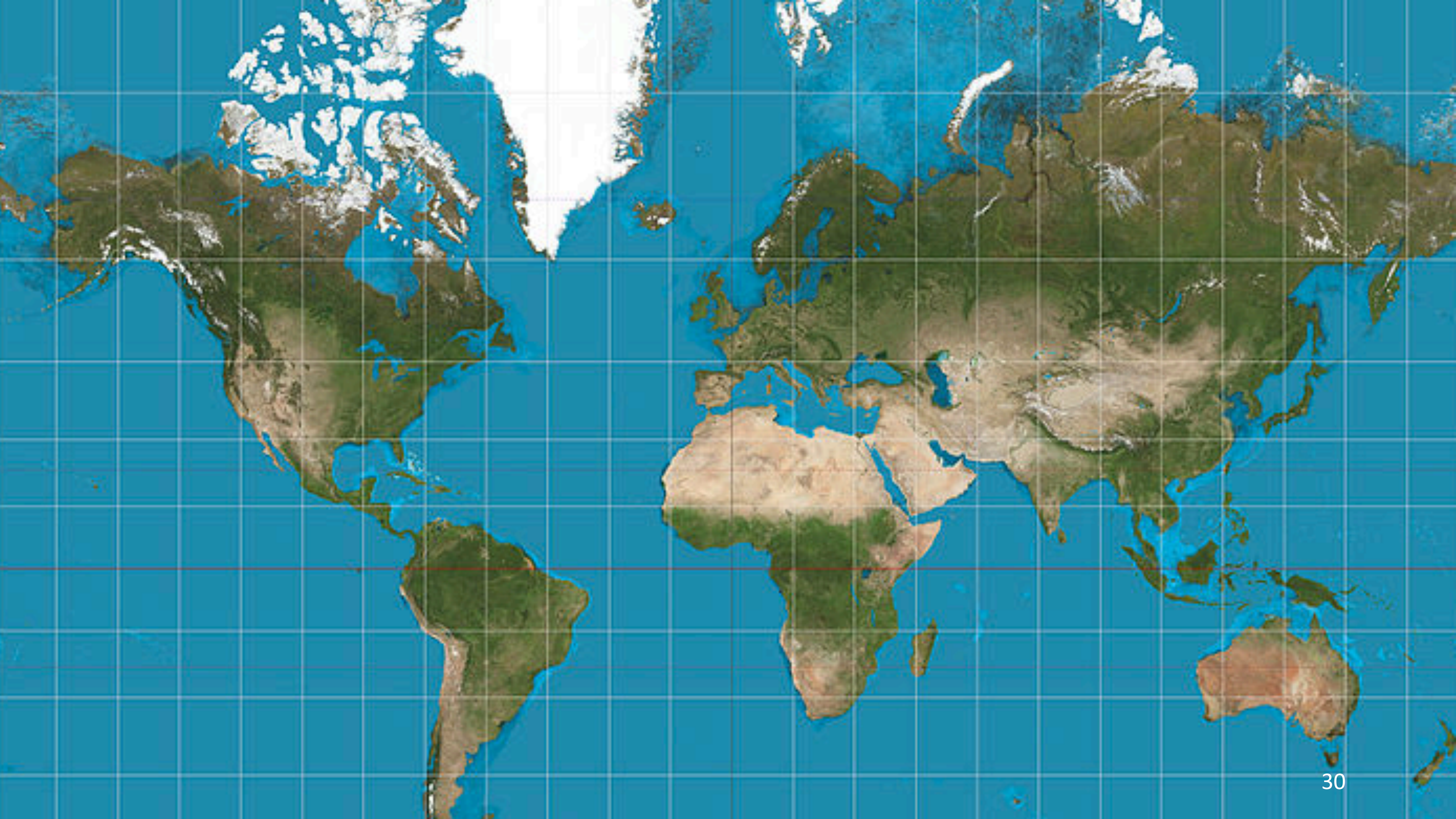
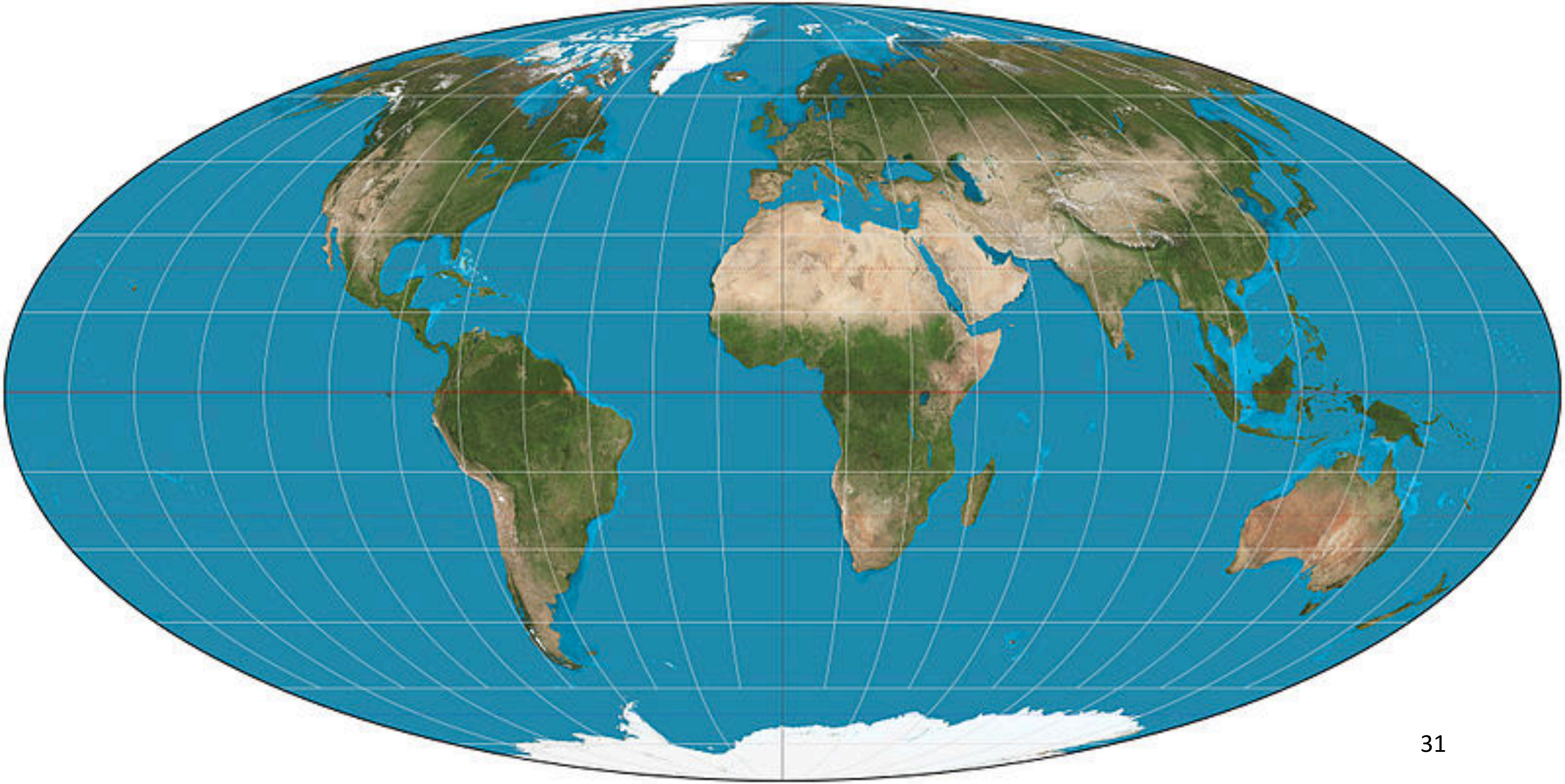
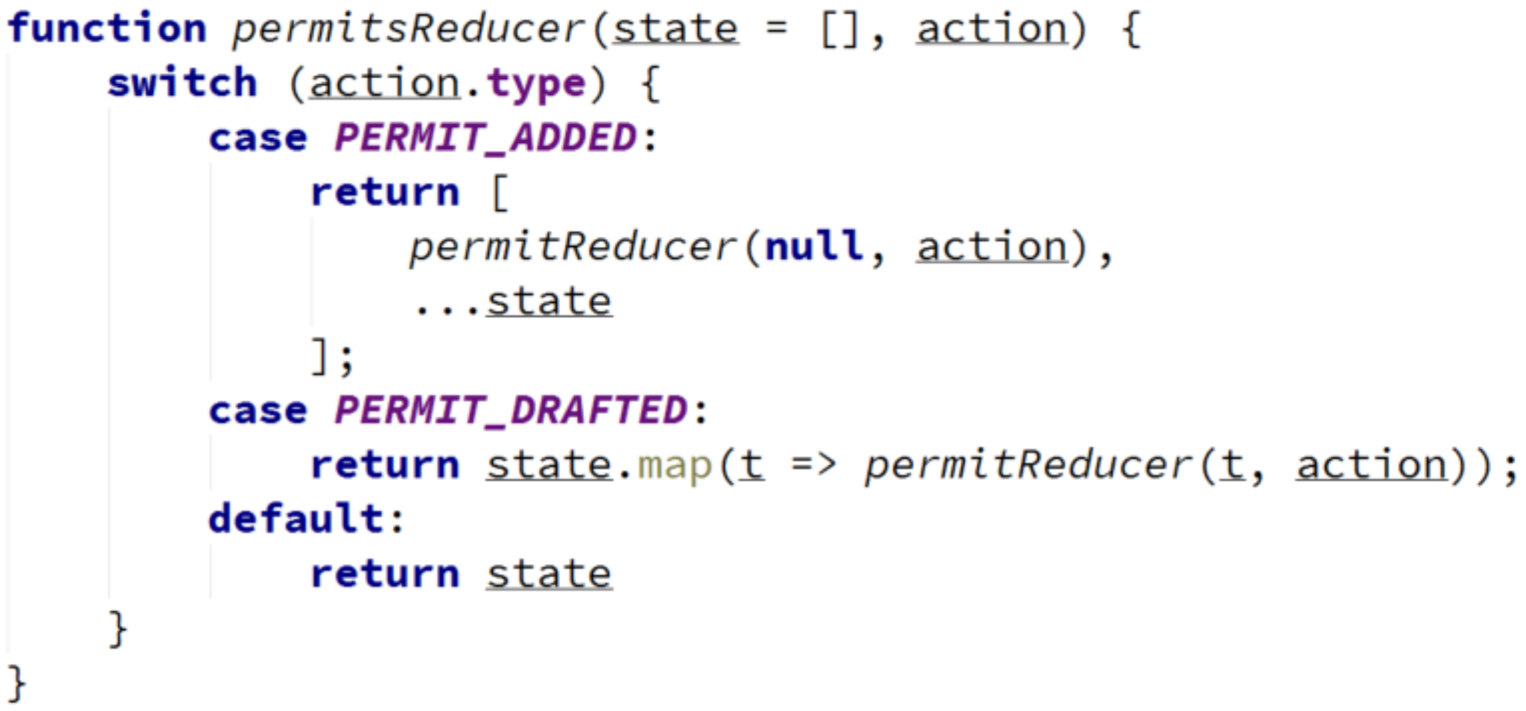


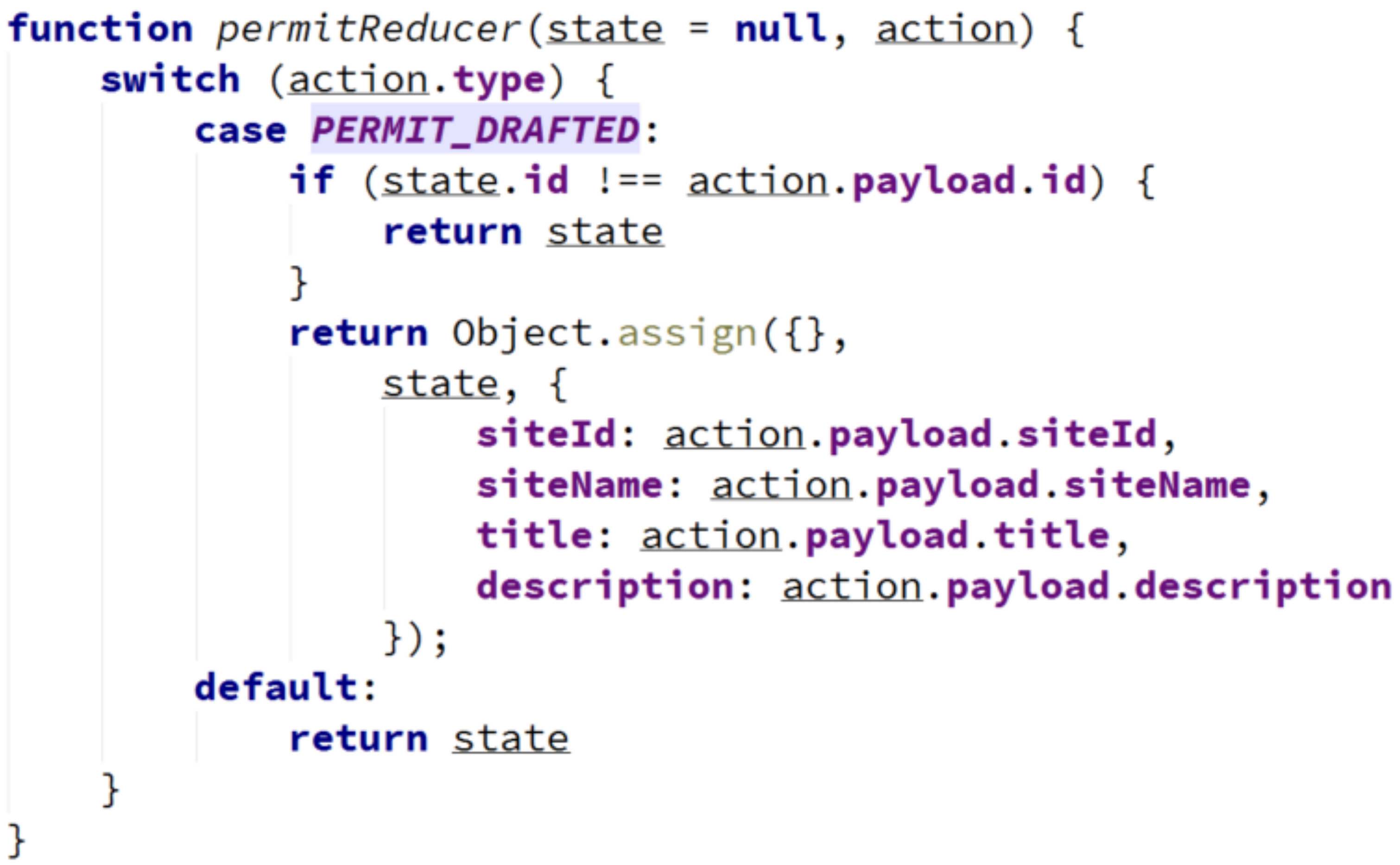


The permit collection reducer



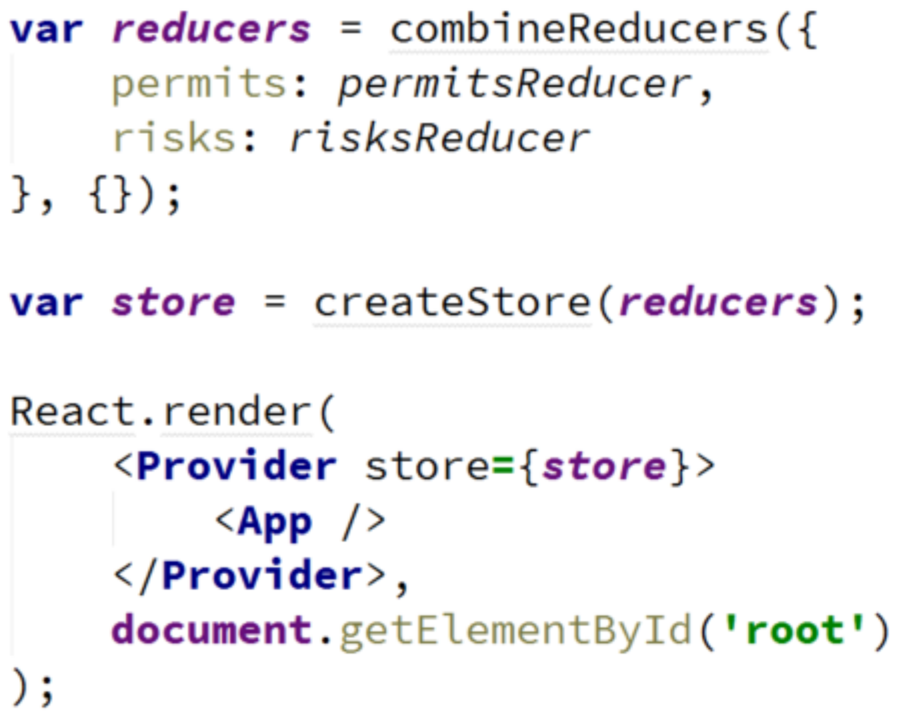
```
function permitsReducer(state = [], action) {
    switch (action.type) {
        case PERMIT_ADDED:
            return [
                permitReducer(null, action),
                ...state
            ];
        case PERMIT_DRAFTED:
            return state.map(t => permitReducer(t, action));
        default:
            return state
    }
}
```

The single permit reducer



```
function permitReducer(state = null, action) {
    switch (action.type) {
        case PERMIT_DRAFTED:
            if (state.id !== action.payload.id) {
                return state
            }
            return Object.assign({},
                state, {
                    siteId: action.payload.siteId,
                    siteName: action.payload.siteName,
                    title: action.payload.title,
                    description: action.payload.description
                });
        default:
            return state
    }
}
```

The React application startup

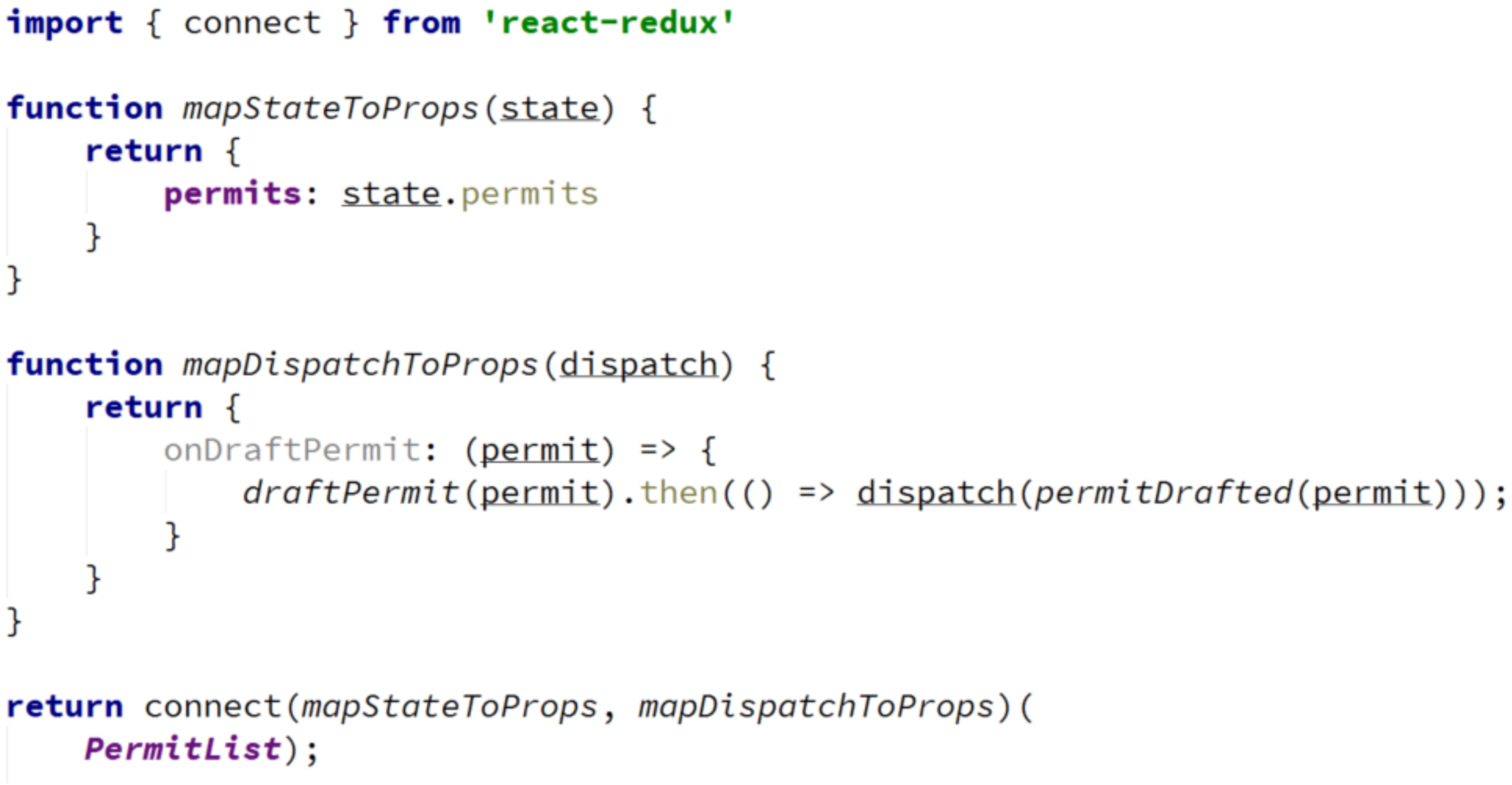


```
var reducers = combineReducers({
    permits: permitsReducer,
    risks: risksReducer
}, {});

var store = createStore(reducers);

React.render(
    <Provider store={store}>
        <App />
    </Provider>,
    document.getElementById('root')
);
```

Connecting the state to the component



```
import { connect } from 'react-redux'

function mapStateToProps(state) {
    return {
        permits: state.permits
    }
}

function mapDispatchToProps(dispatch) {
    return {
        onDraftPermit: (permit) => {
            draftPermit(permit).then(() => dispatch(permitDrafted(permit)));
        }
    }
}

return connect(mapStateToProps, mapDispatchToProps)(
    PermitList);
```

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