React Patterns

Hand in Hand With the Basic Framework

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Agenda

- Common Libraries Not Covered By This Talk
- Redux
- Routing
- Handling Side Effects

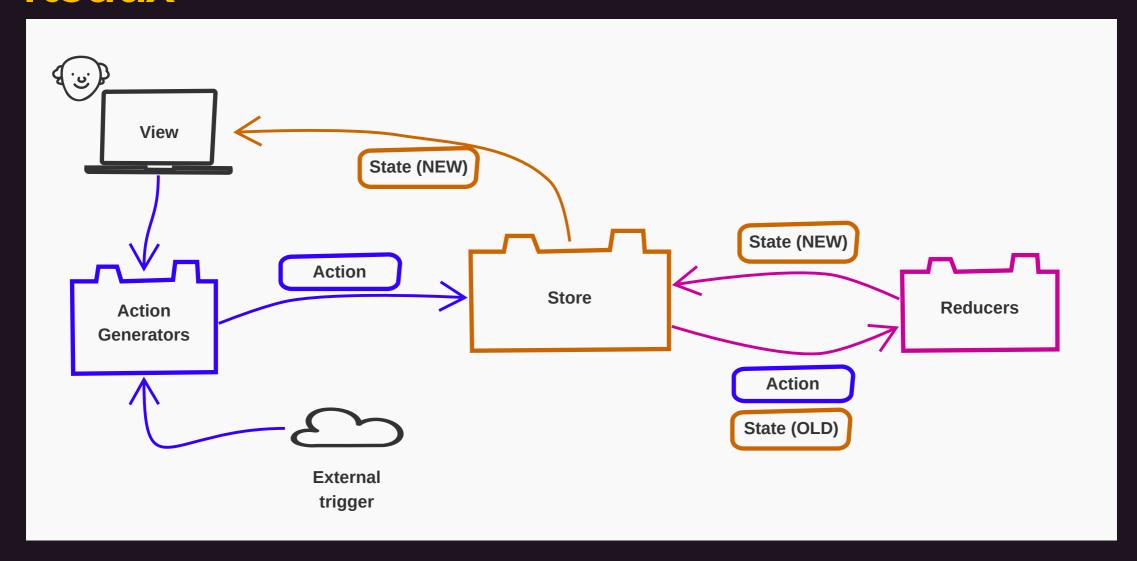
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Common Libraries Not Covered By This Talk

- UI: Material-UI, reactstrap and many other free and commercial offerings
- Dealing with styles: <u>styled-components</u> or <u>CSS Modules</u>
- Framework: Relay, Apollo Client for GraphQL, Gatsby for complete apps
- Utility: <u>Lodash</u>, <u>Ramda</u>
- Outdated: <u>recompose</u>

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Redux



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I Like Redux

- The pattern has turned out to be *extremely powerful*
- Promotes *good structure*
 - ... which results in maintainability
- People complain about boilerplate
 - They're doing it wrong
- People complain about the learning curve
 - Oh well... it's really not that bad. Agreed: being a good programmer has a learning curve.
- Ideas are being adopted elsewhere, e.g. React Hooks (useReducer), reactn (global state management)

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DEMO

Routing

- You know how to map URLs to parts of your app
 - o /user/:id
- The Big Ugly: React Router
 - Very powerful and flexible
 - Component based
- Alternative: Routing as an aspect of State
 - My favorite: <u>Rudy</u>, successor to <u>redux-first-router</u>

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DEMO

Handling Side Effects

- React render functions are expected to be functionally pure
- React has built-in mechanisms to deal with side effects
 - Class-based lifecycle methods (componentDidMount etc)
 - Hooks (<u>useEffect</u>, useLayoutEffect)
 - Logic of side-effects is bound to individual components
- For application-wide logic, I recommend Sagas!

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DEMO

Sagas Can Handle Any Complexity

```
function* composeSendHandler() {
 const jobId = makeJobId();
vield put(startJob(jobId, 'Sending email'));
 const composeData = yield select(getComposeData);
 const account = yield select(getAccount);
 const sendStatus = yield call(sendMail, message);
if (sendStatus) {
   yield put(sendError(sendStatus));
 yield put(completeJob(jobId));
```

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Sources

- This presentation:
 - https://oliversturm.github.io/react-patterns
 - o PDF download: https://oliversturm.github.io/react-patterns/slides.pdf
- Demo code:
 - https://github.com/oliversturm/react-patterns

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Thank You

Please feel free to contact me about the content anytime.

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