

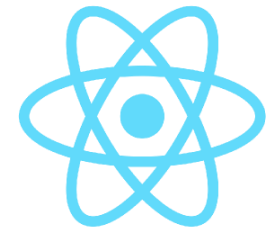
React Fundamentals

Short Recap day #1



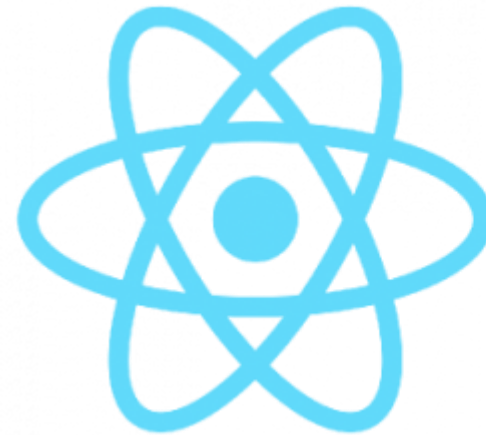
Peter Kassenaar –
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Day #1



- Introduction – overview of the front-end landscape
- React tooling – installation
 - Node.js / npm & npx
 - Create React App (`npx create-react-app <...> --options`)
- The structure and architecture of React apps.
 - General structure, adding components, loading components, adding functionality
- Class based vs. Function based components
- state and props in components

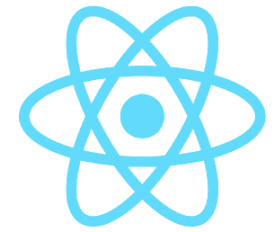
Front-end Frameworks – the big four



React



3 Basic principles in every React App

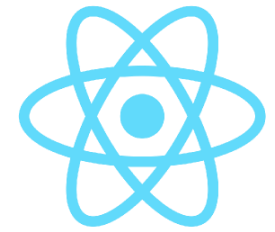


1. Components
2. Reactive Updates
3. Virtual DOM in memory

Important Files

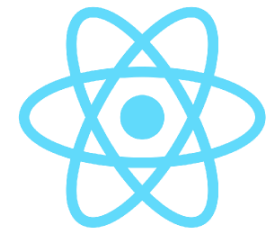
- `Package.json`
- `Index.js`
- `App.js`

Starting your app



`npm start (react-scripts start)` does a lot of stuff for you under the covers:

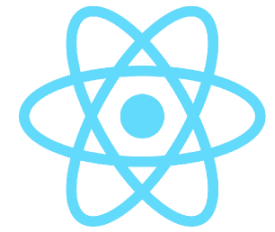
- Kicks off **Babel** for transpiling JSX
- Compile **SASS** to CSS
- Compile the **TypeScript** to JavaScript
- **Webpack** for bundling files
- Sets up webserver at <http://localhost:3000/>
- Sets up **Live Reload**
- ...



Principles we covered:

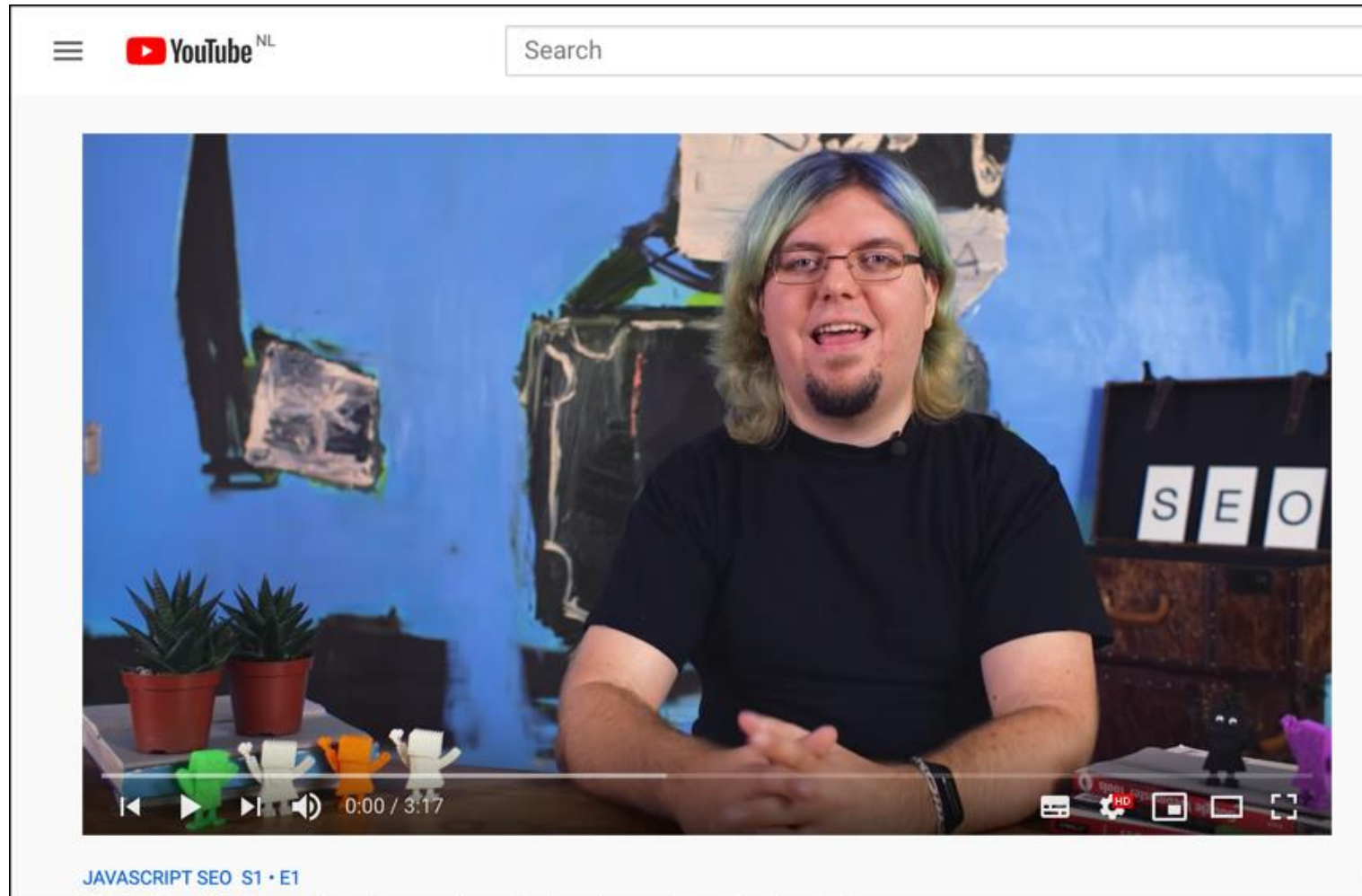
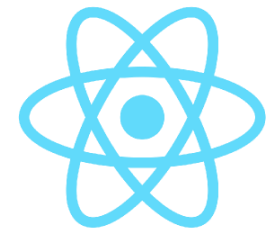
- JSX (looks like HTML, but isn't)
- State
 - `const [someVar, setSomeVar]` in **functions**
 - `state={...}` and `setState()` in **classes**
- Concept: "Lifting state up"
 - Statefull- / Functional- / Smart- / Container-components
 - Stateless- / Presentational- / View- / Dumb-components
- Passing props: variables and functions
 - Inline functions to trigger state changes
`(<button onClick={() => someFunction()}>)`

Principles (cont'd)



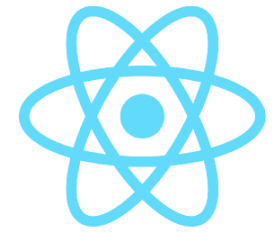
- Loading **external** data
- Looping over data collections with `.map()`
 - Map **loops** over a collection, **takes a value** and **transforms** it to another value.
 - This new value is then **returned**
 - The original collection is unaltered
- **Selecting** specific data and showing **details**
- Sending and receiving **functions as props**

Martin Splitt (Google)

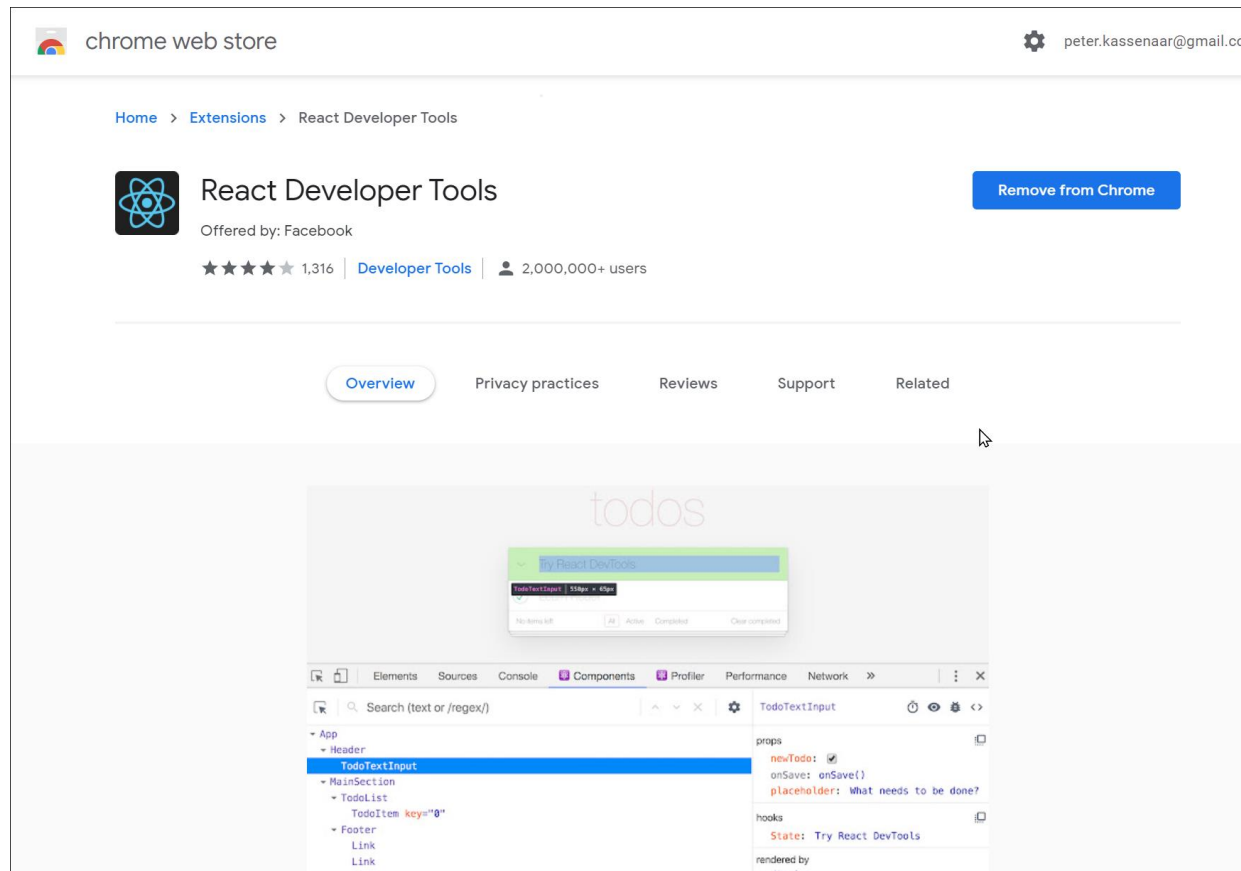


<https://youtu.be/LXF8bM4g-J4>

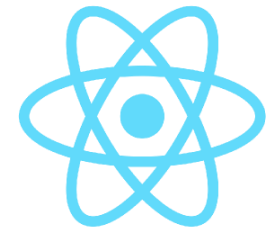
Extra – React DevTools



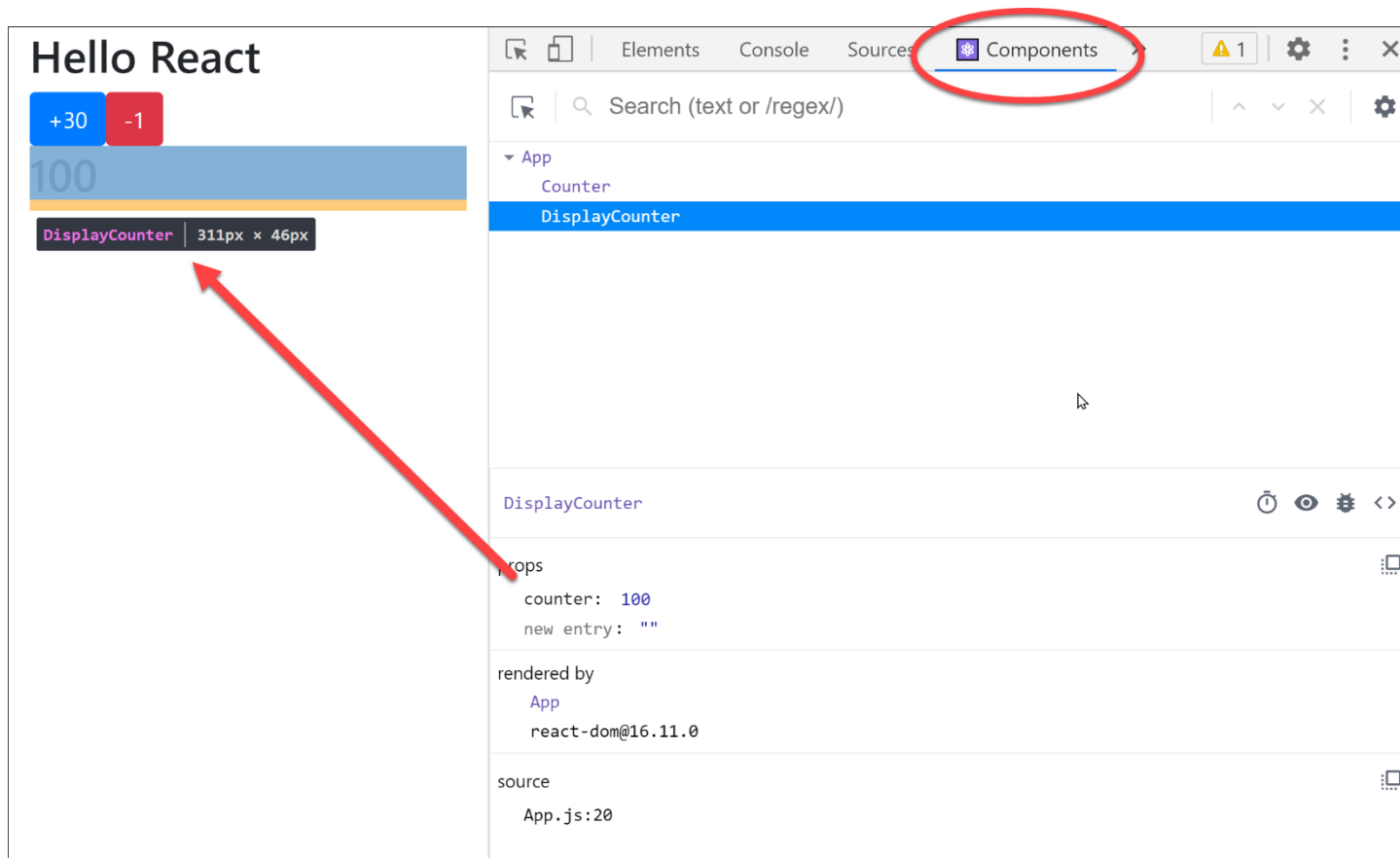
- Inspect the structure of your application in the DOM



Install in Chrome

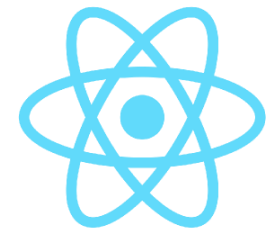


- Open Chrome DevTools and choose tab **Components**



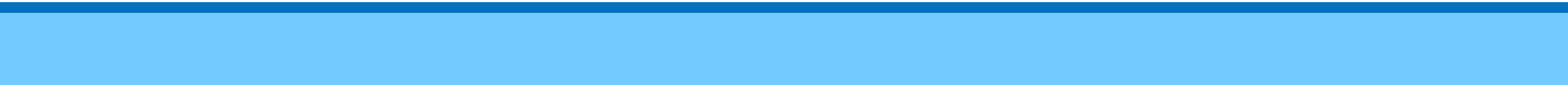
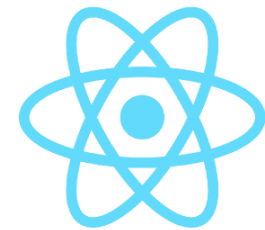
Other

Questions?

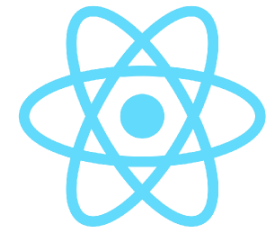


Today:

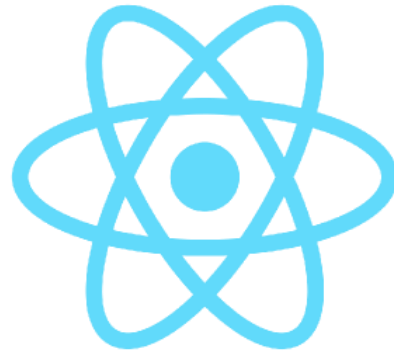
- Rendering **images**
- **Conditional** rendering
- **Lifecycle** hooks
 - More on React Hooks, `useEffect()`
- **Styling** components (short)
- Forms and **handling user input**
 - Concept: `Controlled`~ **vs.** `Uncontrolled` components
- Using **Http** and external API's – complete Apps
 - (Using your own API's)



Tomorrow:



- Wrapping up React Forms
- Using Http and external API's – complete Apps
 - Using your own API
- React Router
 - Basic routing
 - Routing parameters
- Creating a React Wizard
- Short Code review



React Native

Day #3



Start 13:30 uur