

TW-012 TEAM LEAD VERSION



CLARUSWAY
WAY TO REINVENT YOURSELF

Meeting Agenda

- ▶ Icebreaking
- ▶ Questions
- ▶ Interview Questions
- ▶ Coding Challenge
- ▶ Video of the week
- ▶ Retro meeting
- ▶ Case study / project

Teamwork Schedule

Ice-breaking

5m

- Personal Questions (Study Environment, Kids etc.)
- Any challenges (Classes, Coding, studying, etc.)
- Ask how they're studying, give personal advice.
- Remind that practice makes perfect.

Team work

5m

- Ask what exactly each student does for the team, if they know each other, if they care for each other, if they follow and talk with each other etc.

Ask Questions

15m

1. What is the correct command to create a new React project?

- A. npx create-react-app myReactApp
- B. npm create-react-app
- C. npx create-react-app
- D. npm create-react-app myReactApp

Answer: A

2. What does **myReactApp** refer to in the following command?

```
npx create-react-app myReactApp
```

- A. A reference to an existing app.
- B. The directory to create the new app in
- C. The type of app to create.
- D. The name you want to use for the new app.

Answer: D

3. What command is used to start the React local development server?

- A. npm serve
- B. npm run dev
- C. npm start
- D. npm build

Answer: C

4. What package contains the render() function that renders a React element tree to the DOM?

- A. React
- B. ReactDOM
- C. Render
- D. DOM

Answer: B

5. To develop and run React code, Node.js is required.

- A. True
- B. False

Answer: A

6. A copy of the 'real' DOM that is kept in memory is called what?

- A. Shadow DOM
- B. React DOM
- C. DOM
- D. Virtual DOM

Answer: D

7. What is the name of the tool used to take JSX and turn it into createElement calls?

- A. JSX Editor
- B. ReactDOM
- C. Browser Buddy
- D. Babel

Answer: D

8. React component names must begin with an uppercase letter.

- A. True
- B. False

Answer: A

9. Which operator can be used to conditionally render a React component?

- A. ||
- B. ::
- C. &&
- D. ??

Answer: C

10. React can only render elements in the root document element.

- A. True
- B. False

Answer: B

11. When rendering a list using the JavaScript map() method, what is required for each element rendered?

- A. index
- B. id
- C. key
- D. data

Answer: C

12. What is the correct syntax to import a Component from React?

- A. import React.Component from 'react'
- B. import [Component] from 'react'
- C. import component from 'react'
- D. import { Component } from 'react'

Answer: D

13. React separates the user interface into components. How are components combined to create a user interface?

- A. With code splitting
- B. By nesting components
- C. By putting them in a folder structure
- D. With webpack

Answer: B

Interview Questions

15m

1. What are controlled components?

Answer:

In HTML, form elements such as "input", "textarea", and "select" typically maintain their own state and update it based on user input. When a user submits a form the values from the aforementioned elements are sent with the form. With React it works differently. The component containing the form will keep track of the value of the input in its state and will re-render the component each time the callback function e.g. onChange is fired as the state will be updated. A form element whose value is controlled by React in this way is called a "controlled component". With a controlled component, every state mutation will have an associated handler function. This makes it straightforward to modify or validate user input.

2. What is a higher order component?

Answer:

A higher-order component (HOC) is an advanced technique in React for reusing component logic. HOCs are not part of the React API. They are a pattern that emerges from React's compositional nature. A higher-order component is a function that takes a component and returns a new component. HOCs allow you to reuse code, logic and bootstrap abstraction. HOCs are common in third-party React libraries. The most common is probably Redux's connect function. Beyond simply sharing utility libraries and simple composition, HOCs are the best way to share behavior between React Components. If you find yourself writing a lot of code in different places that does the same thing, you may be able to refactor that code into a reusable HOC.

3. How Virtual-DOM is more efficient than Dirty checking?

Answer:

In React, each of our components have a state. This state is like an observable. Essentially, React knows when to re-render the scene because it is able to observe when this data changes. Dirty checking is slower than observables because we must poll the data at a regular interval and check all of the values in the data structure recursively. By comparison, setting a value on the state will signal to a listener that some state has changed, so React can simply listen for change events on the state and queue up re-rendering. The virtual DOM is used for

efficient re-rendering of the DOM. This isn't really related to dirty checking your data. We could re-render using a virtual DOM with or without dirty checking. In fact, the diff algorithm is a dirty checker itself. We aim to re-render the virtual tree only when the state changes. So using an observable to check if the state has changed is an efficient way to prevent unnecessary re-renders, which would cause lots of unnecessary tree diffs. If nothing has changed, we do nothing.

Coding Challenge

20m

- [Coding Challenge: Image Gallery \(R-01\)](#)



Coffee Break

10m



Video of the Week

5m

- [What Is React \(React.js\) & Why Is It So Popular?](#)

Retro Meeting on a personal and team level

5m

Ask the questions below:

- What went well?
- What went wrong?
- What are the improvement areas?

Case study/Project

15m

Case study should be explained to the students during the weekly meeting and has to be completed in one week by the students. Students should work in small teams to complete the case study.

- 1. [Tour Places \(RP-01\)](#)
 - *There will be no session for the solution. Our expectation is that it will be done in team work / workshops.*
- 2. [NBA Legends App \(RP-02\)](#)
 - *It will be solved on Tuesday, February 21.*

Closing

5m

-Next week's plan

-QA Session
