TW-013 TEAM LEAD VERSION (Sprint-8 Week-1)

TEAMWORK

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 testing library most often associated with React?

A. Mocha
B. Chai
C. Sinon
D. Jest

Answer: D

2. How do you handle passing through the component tree without having to pass props down manually at every level?

A. React Send
B. React Pinpoint
C. React Router
D. React Context

Answer: D

3. Why is it important to avoid copying the values of props into a component's state where possible?

A. because you should never mutate state
B. because `getDerivedStateFromProps()` is an unsafe method to use

C. because you want to allow a component to update in response to changes in the props
D. because you want to allow data to flow back up to the parent

Answer: C

4. Choose the statement that best applies to a function.

A. A function can take zero or more more inputs but only give one output
B. A function takes one input and gives one output
C. A function takes no input and give one or more outputs
D. A function can take any number of inputs and gives none, one or more output

Answer: D

5. Which of these terms commonly describe React applications?

A. declarative
B. integrated
C. closed
D. imperative

Answer: A

6. When using webpack, why would you need to use a loader?

A. to put together physical file folders
B. to preprocess files
C. to load external data
D. to load the website into everyone's phone

Answer: B

7. What do you call a React component that catches JavaScript errors anywhere in the child component tree?

A. error bosses
B. error catchers
C. error helpers
D. error boundaries

Answer: D

8. React components are composed to create a user interface. How are components composed?

A. by putting them in the same file
B. by nesting components
C. with webpack
D. with code splitting

Answer: B

9. Which of the following network component's definition is incorrect?

A. File Server - Stores and manages files
B. Mail Server - It's the network's post office; handles email functions
C. Print Server - Manages application servers on the network
D. Proxy Server - Handles tasks in the place of other machines on the network, particularly an internet connection.

Answer: C

10. Which one is not one of the Physical Network Topologies?

A. Bus
B. Ring
C. Point-to-end
D. Hybrid

Answer: C

Interview Questions 15m

1. What is `create-react-app`?

Answer:

`create-react-app` is the official CLI (Command Line Interface) for React to create React apps with no build configuration.

We don't need to install or configure tools like Webpack or Babel. They are preconfigured and hidden so that we can focus on the code. We can install easily just like any other node modules. Then it is just one command to start the React project.

```
create-react-app my-app
```

It includes everything we need to build a React app:

- React, JSX, ES6, and Flow syntax support.

- Language extras beyond ES6 like the object spread operator.
- Autoprefixed CSS, so you don't need `-webkit-` or other prefixes.
- A fast interactive unit test runner with built-in support for coverage reporting.
- A live development server that warns about common mistakes.
- A build script to bundle JS, CSS, and images for production, with hashes and sourcemaps.

2. What is React useContext?

Answer:

Context provides a way to pass data through the component tree without having to pass props down manually at every level.

In a typical React application, data is passed top-down (parent to child) via props, but such usage can be cumbersome for certain types of props (e.g. locale preference, UI theme) that are required by many components within an application. Context provides a way to share values like these between components without having to explicitly pass a prop through every level of the tree.

Context is designed to share data that can be considered "global" for a tree of React components, such as the current authenticated user, theme, or preferred language.

3. What are fragments in React?

Answer:

Fragments in React allow for returning multiple elements without the need for a container element.

For example;

```
render() {
  return (
    <img />
    <input />
    <button>Click</button>
  )
}
```

The above code is invalid because the render function (when inheriting from a class, and also applies to functional components' return value) can only return one single value, but this example returns three values. (This is a limitation in many programming languages, not just a limitation of React or JavaScript).

To resolve the issue, a container element (such as a div) could be used. However, container elements add unnecessary depth to the DOM and can also break layout of certain CSS features (such as CSS grid).

Fragments allow you to return multiple elements without the container element.

4. When/why do you need to use keys on elements?

Answer:

Keys are used by React to help identify which items have been added, changed, or removed.

Rules for keys;

- Always use a key when building elements using iterator functions, like;
- for loops, map, reduce, etc
- Keys must be unique values
- Avoid using indexes for keys

5. Are you a full-stack developer, or a front-end developer?

Answer:

How a developer answers this question speaks a lot about their skillset or their perception of their skillset.

A developer will fall in to one of three categories;

- A back-end developer
- A front-end developer
- A full-stack developer

A back-end developer has knowledge and expertise in back-end concerns, tooling, languages, frameworks, and so on. They have little-to-no experience of front-end considerations, and they never claim to (a true back-end developer will often be fast to tell you how they do not like working on the front-end!).

A front-end developer has knowledge and expertise in front-end concerns, tooling, languages, frameworks, and so on. A front-end developer will often (although not always) have limited knowledge and experience of back-end concerns, but they recognise that this is not their primary skillset. During an interview, a front-end developer may assert that they have working knowledge and experience with back-end systems, but do not necessary consider that to be a primary skillset.

A full-stack developer. <1% of the time a true full-stack developer will have comprehensive knowledge and experience of both back-end and front-end ecosystems. A true full-stack developer will be as comfortable writing dockerfiles, cloudformation templates, updating DNS records, and configuring build pipelines as they are vertically centering text using CSS.

More often than not, somebody who claims to be a full-stack developer will in fact be a back-end developer who has had minimal exposure both JavaScript & CSS and is deficient in both areas compared to a front-end developer.

For best results when interviewing for a role, choose to specialise. Pick the front-end, or the back-end, whichever skillset is strongest. Specialists often are better developers because they spend more time refining a specific set of skills, rather than a generalist.

More often than not, a specialist will get paid more money than a generalist...although you will find the number of roles dwindles the more of a specialist you become.

6. What is a Computer Network?

Answer:

A computer network is a connection network between two or more nodes using Physical Media Links viz., cable, or wireless to exchange data over pre-configured services and Protocols. A computer network is a collective result of – Electrical Engineering, Computer Science, Telecommunication, Computer Engineering, and Information Technology involving their theoretical as well as practical aspects into action. The most widely used Computer Network of Today is the Internet which supports the World Wide Web (WWW).

Coding Challenge 20m

- Coding Challenge: JS-CC-010 Lottery Game

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Coffee Break 10m

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Video of the Week 5m

- CODING INTERVIEWS 101 □□□ (Prepare For A Coding Interview)

Retro Meeting on a personal and team level 5m

Ask the questions below:

- What went well?
- What went wrong?
- What is 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.

- Project will be explained in class on Thursday.

Closing 5m

-Next week's plan

-QA Session
