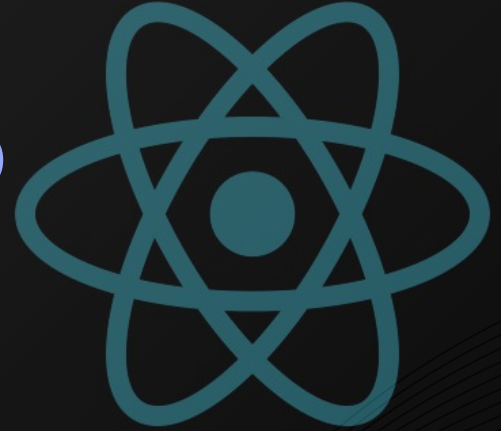


CSE 3901 Tech Group

React



Team Birdo

This is Team Birdo!



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01 – History

What is React and its history?

02 – Uses

How is React used in the industry?

03 – Basics

What are some basics of React?

04 – Demo

Neat in-person demo of React and its abilities.

05 – Mini Quiz

Let's put your React knowledge to the test!

06 – Q&A

Do you have any questions?

01

What is React and its history?

Let's dive in and get to know some interesting facts about this popular open-source JavaScript library!

What is React?

- React is a open-source JavaScript Library that performs data viewing with the help of HTML
- Also known as React.js, it works as views using a component based systems
- Components are specified as custom HTML tags, providing easy usability

History

2011

Jordan Walke created FaxJs, the early prototype of React – shipping a search element of Facebook

2013

Jordan Walke introduced React at JS ConfUS

2014

React Developer Tools becomes an extension of the Chrome Developer Tools

2015

React Native, which enables native Android and iOS with React was open-sourced

2017

Facebook announced React Fiber

02

How is React used in the real world?

Let's take a look at how React is used in the industry, both by individuals and startups, as well as large corporations.



Q and A Website



Ecommerce



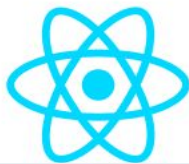
Social Network



Business websites



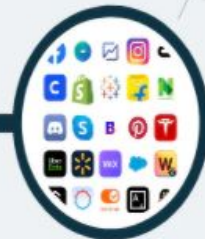
Dashboards



Building out entire front-ends (companies like **Twitter**, **Facebook**, **Dropbox**, **New York Times**, and **Reddit** have done this!)



Making dynamic content
eg. Netflix users see different homepages that display dynamic content based on their viewing history and preferences. A developer uses React to display and create that dynamic content!



Mobile devs use React in the **React Native framework**, used to create native apps for mobile devices written with React syntax.



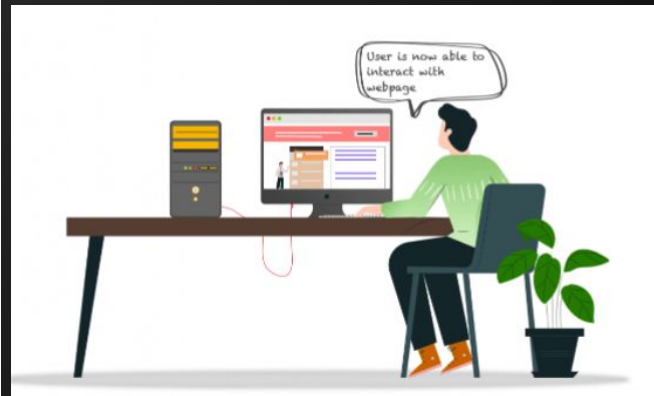
Server is ready to send HTML response to browser



JS gets downloaded and placeholder are now viewable



react get executed by browser



03

What are some basics of React?

Now that we know what it is and how it is used, let's take a look at specifics, such as mechanisms and components!

How does it work?

React creates a VIRTUAL DOM in memory

Instead of manipulating the browser's DOM directly, React creates a virtual DOM in memory, where it does all the necessary manipulating, before making the changes in the browser DOM.

React only changes what needs to be changed!

React finds out what changes have been made, and changes only what needs to be changed.

Uses ES6, JSX, and Components

- ES6 stands for ECMAScript 6, the 6th version of ECMAScript which is used to standardize JavaScript.
- JSX stands for JavaScript XML, and it allows us to write HTML in React. It converts HTML tags into react elements.
- Components are independent and reusable bits of code. They serve the same purpose as JavaScript functions, but work in isolation and return HTML.

Two types of React components

Class components

A class component must include the `extends React.Component` statement. This statement creates an inheritance to `React.Component`, and gives your component access to `React.Component`'s functions.

The component also requires a `render()` method, this method returns HTML.

Function components

A Function component also returns HTML, and behaves much the same way as a Class component, but Function components can be written using much less code and are easier to understand.

React Hooks: What are they?

Hooks allow function components to have access to state and other React features.

Hooks allow us to "hook" into React features such as state and lifecycle methods.

You must import Hooks from react.

State generally refers to application data or properties that need to be tracked.

There are 3 rules for hooks:

- Hooks can only be called inside React function components.
- Hooks can only be called at the top level of a component.
- Hooks cannot be conditional

Some React Hook Examples

useState

The React useState Hook allows us to track state in a function component.

State generally refers to data or properties that need to be tracked in an application.

useEffect

The useEffect Hook allows you to perform side effects in your components.

Some examples of side effects are: fetching data, directly updating the DOM, and timers.

useEffect accepts two arguments. The second argument is optional.

useContext


React Context is a way to manage state globally.

It can be used together with the useState Hook to share state between deeply nested components more easily than with useState alone.

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04

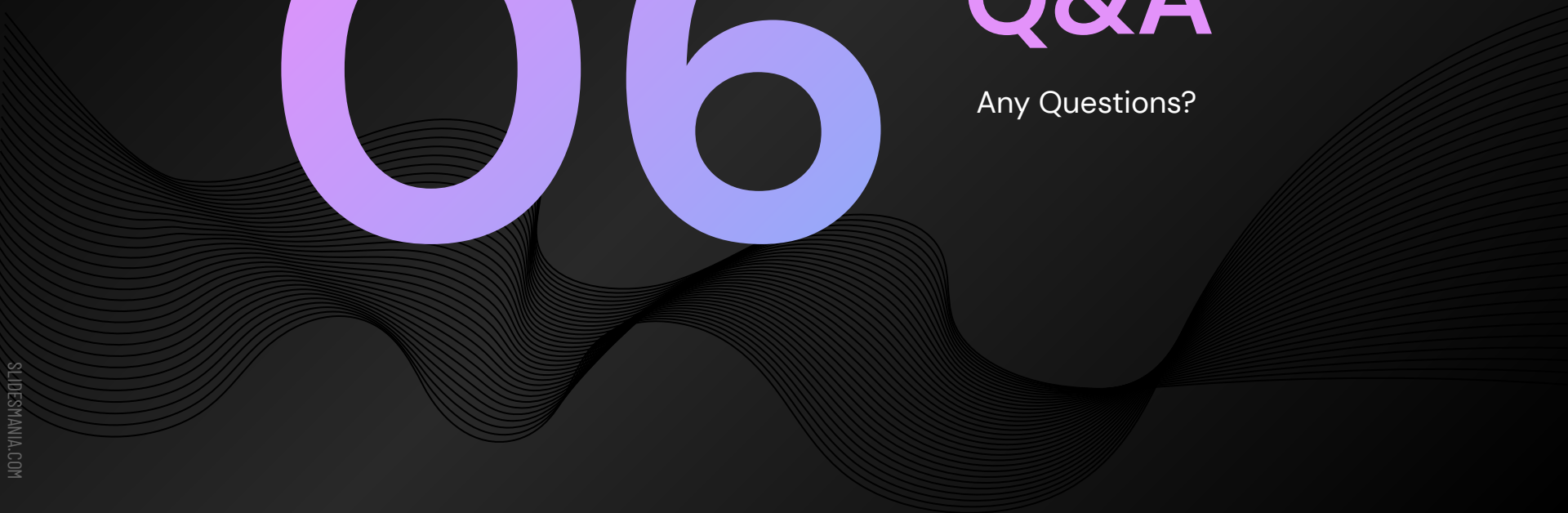
Live
Demo

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05

Mini Quiz

Are you up for the challenge?

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06

Q&A

Any Questions?

Thank you!

Grind Leetcode 24/7



Credits.

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