Learning React.js with Principles of Programming Languages
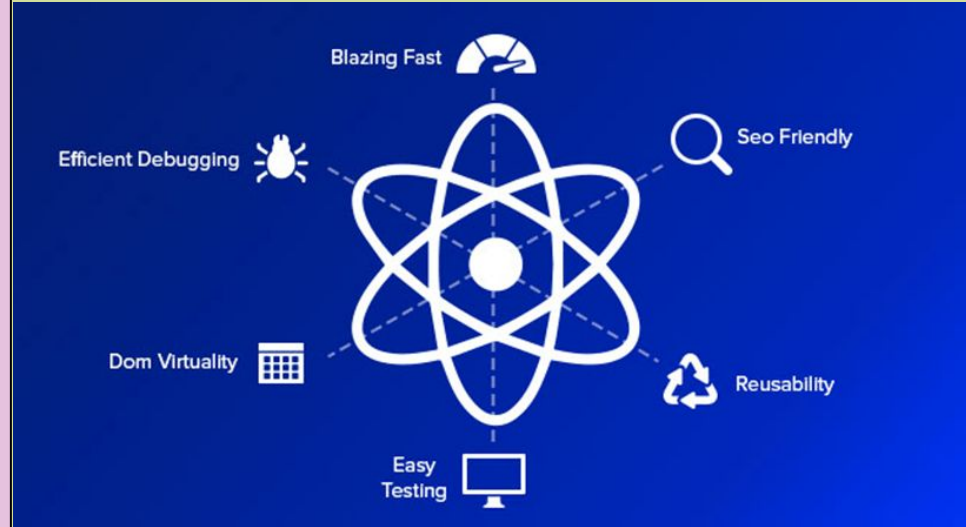
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INTRODUCTION

What is React.js?
- Powerful JavaScript library for building user interfaces
- Created by FaceBook
- Uses JavaScript

Commonly used for web applications, and it provides a lot of advantages

Why React.js?

- React makes use of components (similar to functions)
- Virtual DOM (updates real DOM depending on changes)
- Declarative Programming Language

Basic Structure Of A React Component

React

```
import React from 'react';

function App(props) {
  return (
    <div className='App'>
      <h1>Hello React.</h1>
    </div>
  );
}
```

UI Component

Hello React.

How it relates?

- Functions as values: Components are basically functions

- Higher Order Functions: React uses higher-order functions frequently

- Mutability: React uses mutability and immutability for different aspects.


```
   Taking higher order component as an argument

1  function higherOrderComponent(WrappedComponent) {
2      return (props) => {
3          return <WrappedComponent {...props} />;
4      }
5  }
6
7  const Component = (props) => {
8      return (<h1>Hello {props.name}!</h1>)
9  };
10
11 const NewComponent = higherOrderComponent(Component);
12
13 const element = <NewComponent name="React" />;
```
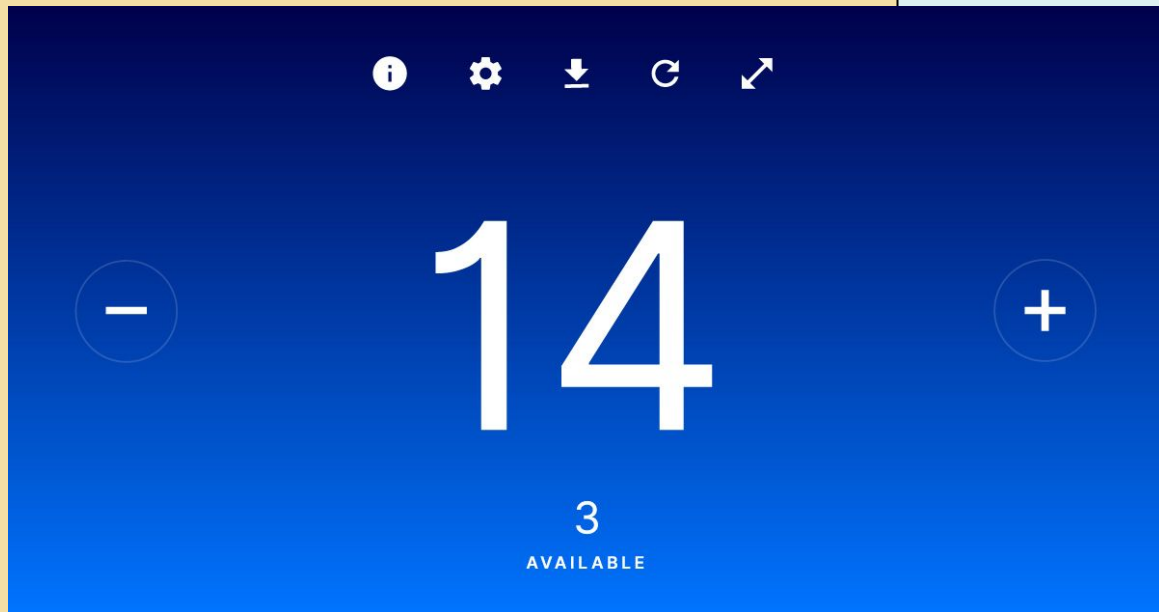
returning new component

Passing component to higher order component as an argument

Counter App

Let's build a counter web app

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AVAILABLE

SUMMARY

1 What is React.js? A powerful JavaScript library for building user interfaces

2 How it relates to this course? Functions as values, Higher Order Functions, Mutability

3 Building a counter web app

THANK YOU