Setting up a React App. Rendering Elements

Introduction to ReactJS (Part II of a Series)

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Setting up a React App. Rendering Elements

1. Node version (v16.0 and above)

```
> node -v
v16.13.0
```

2. Create your first react app.

```
npx create-react-app myfirstapp
```

Setting up a React App. Rendering Elements

- Create React App
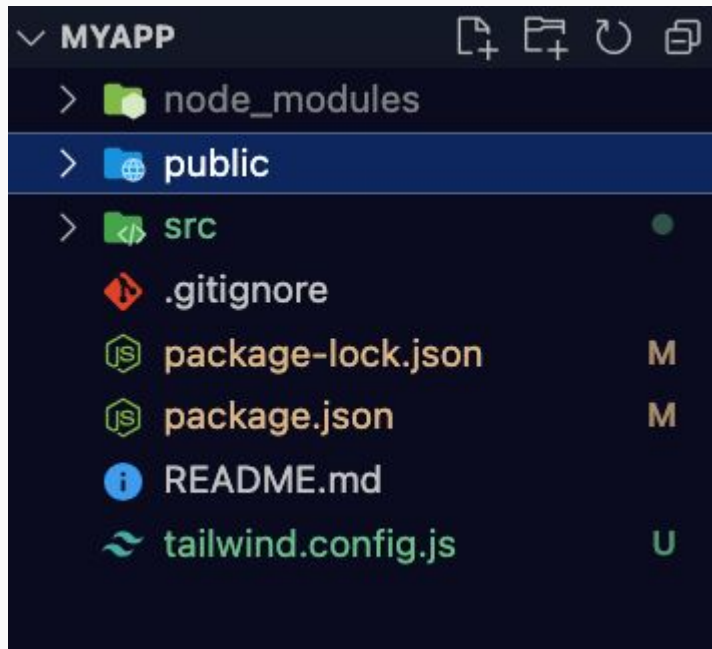- **Project Folder**
- Components
- Adding CSS
- Tailwind
- Setup a Basic Page
- Virtual DOM

Project Folder

1. node_modules: Contains project dependencies managed by npm or Yarn. You don't typically modify this folder.

2. public: Houses static assets like index.html, images, and icons. Contents are included in the final build output.

3. src: Main source code folder where you write your React application logic and components.

Setting up a React App. Rendering Elements

Function Based Component

```
import React from 'react'

function App() {
  return (
    <div>App</div>
  )
}

export default App
```

Class Based Component

```
import React, { Component } from 'react'

export class App extends Component {
  render() {
    return (
      <div>App</div>
    )
  }
}

export default App
```

They are **simpler** and more **concise**. They are defined as JavaScript functions and take **props (input data)** as an argument, returning **React elements** to be rendered.

They are are **JavaScript classes** that extend from **React.Component.** They have a bit more boilerplate but offer additional features, such as **state management and lifecycle methods.**

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1. Inline CSS

```
<h1 style={{ textAlign: "center", color: "red" }}>Hello World</h1>
```

2. External CSS
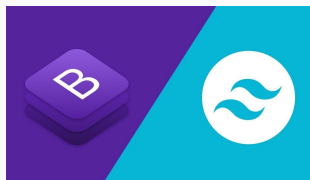
App.css

```
.head1 {
    text-align: center;
    color: "red"
}
```

App.js

```
<h1 className="head1">Hello World</h1>
```

3. Advanced CSS

Bootstrap

Tailwind

Setting up a React App. Rendering Elements

1. Install Tailwind CSS

```
Terminal

> npm install -D tailwindcss
> npx tailwindcss init
```

2. Configure your template paths

```
tailwind.config.js

/** @type {import('tailwindcss').Config} */
module.exports = {
  content: ["./src/**/*.{html,js}"],
  theme: {
    extend: {},
  },
  plugins: [],
}
```

Setting up a React App. Rendering Elements

Create React App

Project Folder

Components

Adding CSS

Tailwind

Setup a Basic Page

Virtual DOM

1. Conditional Rendering
2. Array Map
3. Arrow function
4. Props
5. State Management
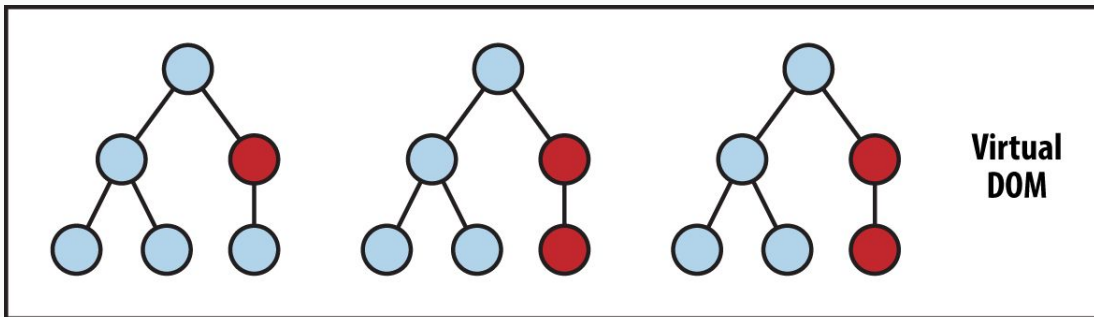
Setting up a React App. Rendering Elements

Virtual DOM

State Change → Compute Diff → Re-render

Browser DOM