

MODULE 5

5.1 - REACT

A FULLSTACK REACT MASTERCLASS

TINYHOUSE



Hello World - HTML

```
<html>
  <body>
    <div id="app">
      <h2>Hello World!</h2>
      <button onclick="changeGreeting()">
        Change Greeting
      </button>
    </div>
    <script src=".main.js"></script>
  </body>
</html>
```



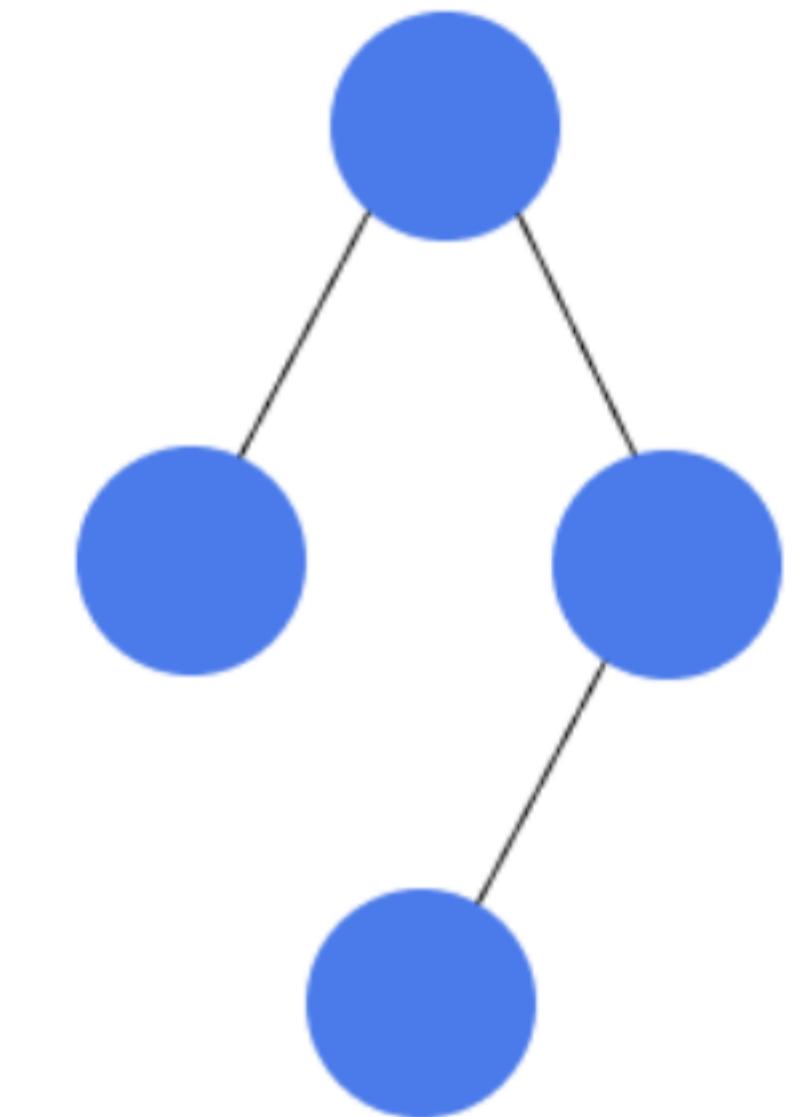
Traditional JavaScript

```
let greetingTag = document.getElementsByTagName('h2')[0];  
  
changeGreeting = () => {  
  if (greetingTag.textContent === 'Hello World!') {  
    greetingTag.textContent = 'What is up!';  
  } else {  
    greetingTag.textContent = 'Hello World!';  
  }  
};
```

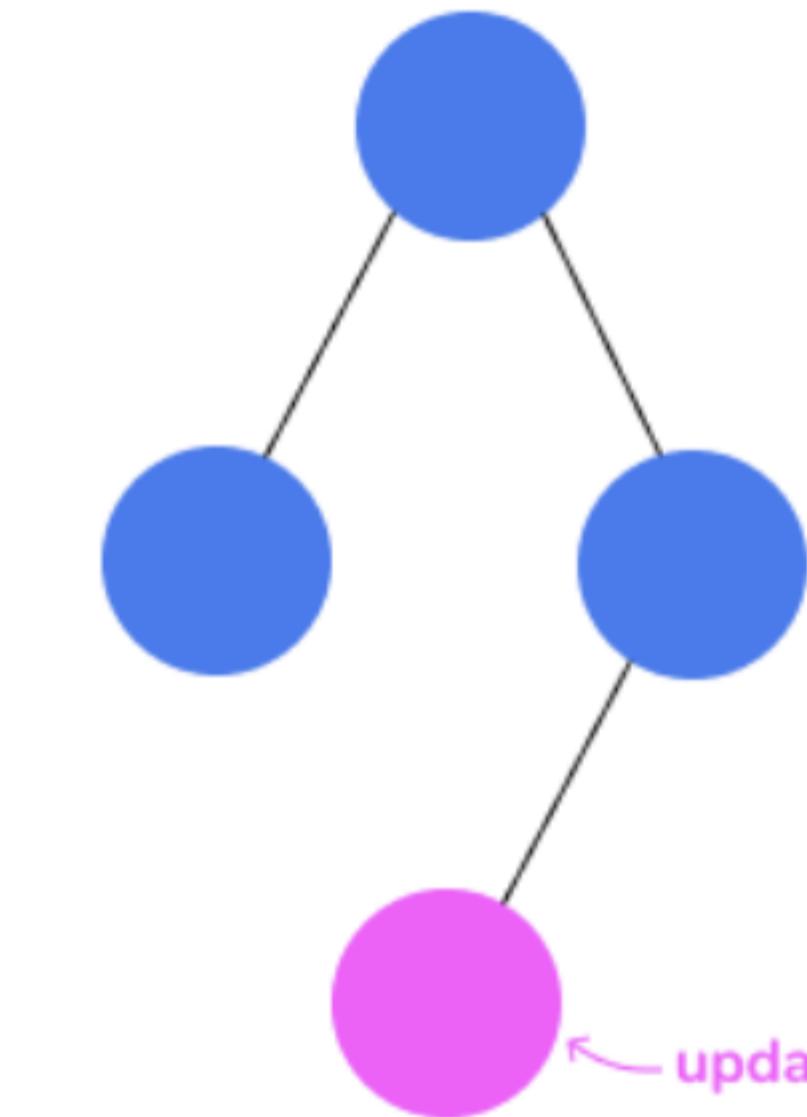


React - Virtual DOM

Initial Real DOM

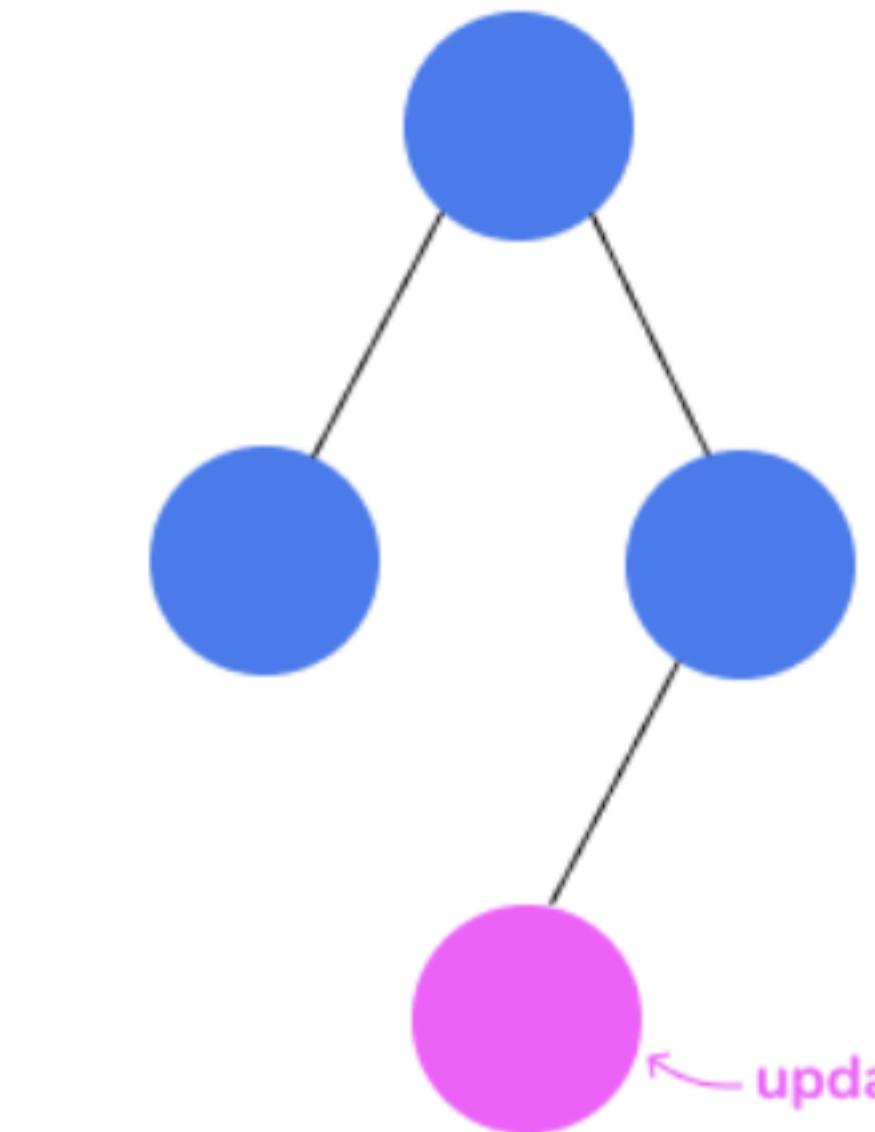


Virtual DOM



→
PATCH

Updated Real DOM



React - JSX

```
ReactDOM.render(<h2>Hello World!</h2>, document.getElementById('app'));
```



React - Reusable Components

```
import React from 'react';

const HelloWorld = () => {
  return <h2>Hello World!</h2>;
};
```

```
import HelloWorld from './components';

ReactDOM.render(<HelloWorld />, document.getElementById('app'));
```



React - Data Driven Applications

```
import React, { useState } from 'react';

const HelloWorld = () => {
  const [message, setMessage] = useState('Hello World!');

  changeMessage = () => {
    let newMessage =
      message === 'Hello World!' ? 'What is up!' : 'Hello World!';
    setMessage(newMessage);
  };

  return <h2 onClick={changeMessage}>{message}</h2>;
};
```



React - Props

```
import React from 'react';

const HelloWorld = ({ message }) => {
  return <h2>{message}</h2>;
};
```

```
import HelloWorld from './components';

ReactDOM.render(
  <HelloWorld message="Hello World!" />,
  document.getElementById('app'),
);
```



React - Class Components

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

class HelloWorld extends Component {
  constructor(props) {
    super(props);
    state = {
      message: 'Hello World!',
    };
  }

  componentDidMount() {
    console.log('Component has mounted!');
  }

  render() {
    return <h2>{this.state.message}</h2>;
  }
}
```



React - Function Components

```
import React, { useState, useEffect } from 'react';

const HelloWorld = () => {
  const [message] = useState('Hello World!');

  useEffect(() => {
    console.log('Component has mounted!');
  }, []);

  return <h2>{message}</h2>;
};
```

