

# **FRAMEWORK-BASED PROGRAMMING**

## **Week 2 : ReactJS**



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## A. Experiment

### 1. Adding react to the website

#### a. Create index.html

```
<> index.html X JS like_button.js

<> index.html > html
1  <!DOCTYPE html>
2  <html lang="en">
3    <head>
4      <meta charset="utf-8">
5      <meta name="viewport" content="width=device-width, initial-scale=1.0">
6      <title>Learning ReactJS</title>
7    </head>
8    <body>
9      <p>Hello World</p>
10     <div id="like_button_container"></div>
11
12     <script src="https://unpkg.com/react@16.14.0/umd/react.development.js" crossorigin></script>
13     <script src="https://unpkg.com/react-dom@16.14.0/umd/react-dom.development.js" crossorigin></script>
14
15     <script src="like_button.js"></script>
16   </body>
17 </html>
```

#### b. Create like\_button.js

```
<> index.html JS like_button.js X

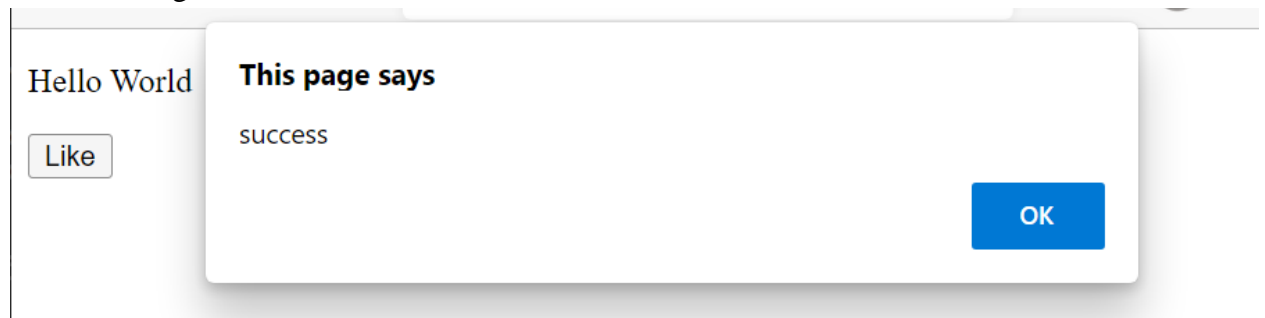
JS like_button.js > LikeButton > onClick
1  const e = React.createElement;
2
3  function LikeButton(){
4    return e(
5      'button',
6      {
7        onClick: () => alert('success')
8      },
9      'Like'
10   );
11 }
12
13
14
15 const domContainer = document.querySelector('#like_button_container');
● 16 ReactDOM.render(e(LikeButton), domContainer)
```

c. Result

Hello World

Like

After clicking like button will show the alert success



2. React-app Installation

a. npm install and create react app

```
C:\Windows\system32\cmd.exe
C:\Users>cd K413
C:\Users\K413>cd react
C:\Users\K413\react>npm install -g create-react-app
npm WARN deprecated tar@2.2.2: This version of tar is no longer supported, and will
not receive security updates. Please upgrade asap.

added 67 packages, and audited 68 packages in 7s

4 packages are looking for funding
  run `npm fund` for details

2 high severity vulnerabilities

Some issues need review, and may require choosing
a different dependency.

Run `npm audit` for details.

C:\Users\K413\react>create-react-app --version
5.0.0

C:\Users\K413\react>
```

- b. Execute the define file

```
C:\Windows\system32\cmd.exe

To address all issues (including breaking changes), run:
  npm audit fix --force

Run `npm audit` for details.

Success! Created web-reactku at C:\Users\K413\react\web-reactku
Inside that directory, you can run several commands:

  npm start
    Starts the development server.

  npm run build
    Bundles the app into static files for production.

  npm test
    Starts the test runner.

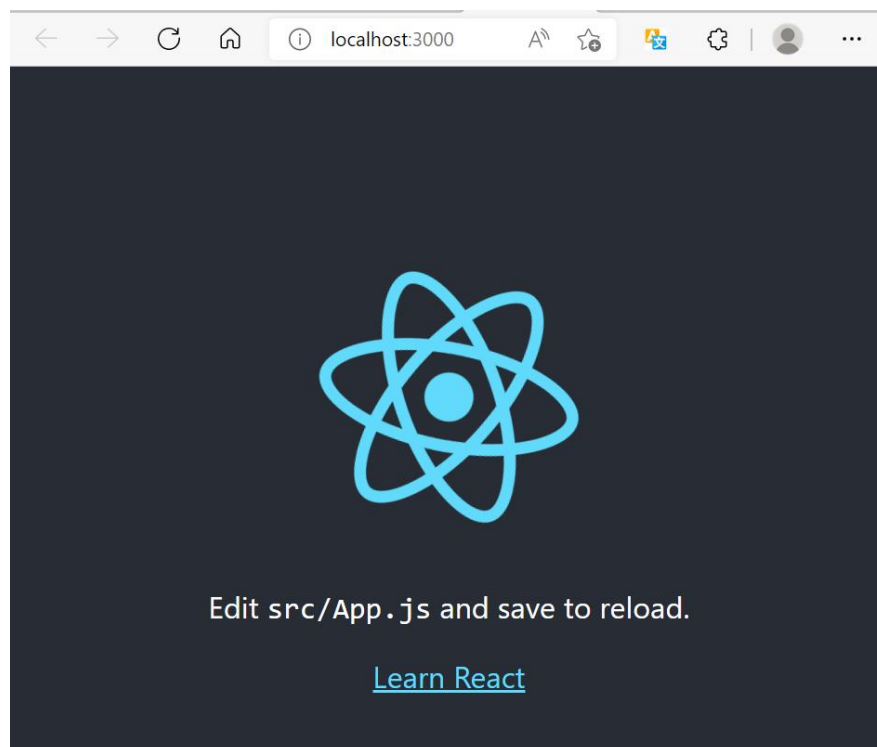
  npm run eject
    Removes this tool and copies build dependencies, configuration files
    and scripts into the app directory. If you do this, you can't go back!

We suggest that you begin by typing:

  cd web-reactku
  npm start

Happy hacking!
C:\Users\K413\react>
```

- c. Open the path folder of web-reactku and input npm start in terminal. It will be display like bellow



### 3. React Project Structure

#### a. Index.js

```
src > JS index.js
1 import React from 'react';
2 import ReactDOM from 'react-dom';
3 import './index.css';
4 import App from './App';
5 import reportWebVitals from './reportWebVitals';
6
7 ReactDOM.render(
8   <React.StrictMode>
9     <App />
10  </React.StrictMode>,
11  document.getElementById('root')
12 );
13
14 // If you want to start measuring performance in your app, pass a function
15 // to log results (for example: reportWebVitals(console.log))
16 // or send to an analytics endpoint. Learn more: https://bit.ly/CRA-vitals
17 reportWebVitals();
18 |
```

#### b. Index.html

```
src > <> index.html > html
1 <html>
2   <head>
3     <title>React App</title>
4   </head>
5   <body>
6     <noscript>You need to enable JavaScript to run this app</noscript>
7     <div id="root"></div>
8
9   </body>
10 </html>
```

#### c. App.js

```
src > JS App.js > ...
1 import logo from './logo.svg';
2 import './App.css';
3
4 function App() {
5   return (
6     <div className="App">
7       <header className="App-header">
8         <img src={logo} className="App-logo" alt="logo" />
9         <p>
10           Edit <code>src/App.js</code> and save to reload.
11         </p>
12         <a
13           className="App-link"
14           href="https://reactjs.org"
15           target="_blank"
16           rel="noopener noreferrer"
17         >
18           Learn React
19         </a>
20       </header>
21     </div>
22   );
23 }
24
25 export default App;
26
```

#### 4. Creating Hello Component Using Arrow Function

##### a. Add arrow function in index.js

```
# App.css  index.html  JS index.js
src > JS index.js > ...
1  import React from 'react';
2  import ReactDOM from 'react-dom';
3  import './index.css';
4  import App from './App';
5  import reportWebVitals from './reportWebVitals';
6
7  const Hello = () =>{
8    |   return <p>Hello !</p>
9    | }
10 ReactDOM.render(<Hello />, document.getElementById("root"));
11 //ReactDOM.render(
12 //   <React.StrictMode>
13 //     <App />
14 //   </React.StrictMode>,
15 //   document.getElementById('root')
16 //);
17
18 // If you want to start measuring performance in your app, pass a function
19 // to log results (for example: reportWebVitals(console.log))
20 // or send to an analytics endpoint. Learn more: https://bit.ly/CRA-vitals
21 //reportWebVitals();
22 |
```

##### b. Result

