

[NAMA MODUL]

Pathway	:	
Sub Pathway	:	
Kompetensi	:	
Key Element	:	
Level	:	
Developer	:	
Approval	:	1. Mgr Learning Development 2. SM School of Dig Platform & Service

} Sesuai
Dirkom-10

Nama/ NIK/
Bidang
Atau Nama
Vendor

Modul Pembelajaran	:	React States
Deskripsi Modul	:	<i>State adalah objek React yang digunakan untuk memuat data atau informasi tentang komponen. State component dapat berubah seiring waktu; dan setiap kali ia berubah, komponen dapat di render ulang.</i>
Enabling Learning Objective	:	Memahami tentang React States, bagaimana definisikan nya, dan mengganti nya dalam komponen
Daftar Topik	:	<ol style="list-style-type: none"> 1. Defining the State 2. Changing the state
Searching Keyword	:	<ol style="list-style-type: none"> 1. ReactJS 2. States 3. class constructor 4. props 5. setState 6. this.setState()

REACTJS

React States

Calvin Susanto Putra

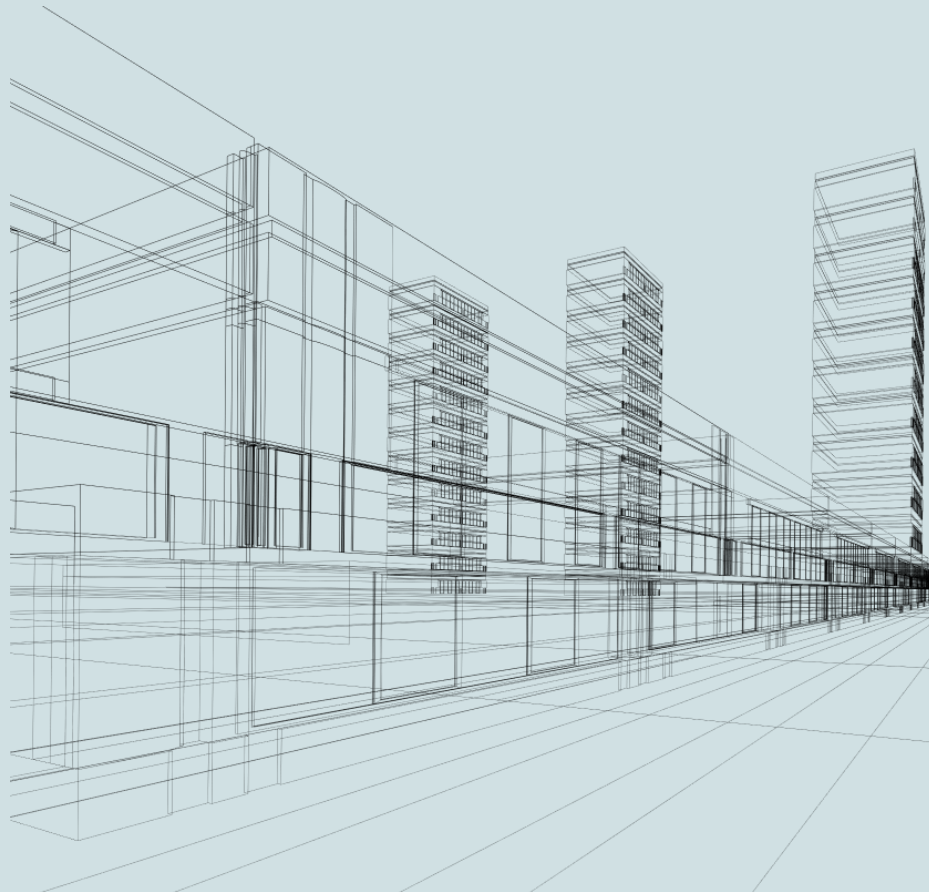
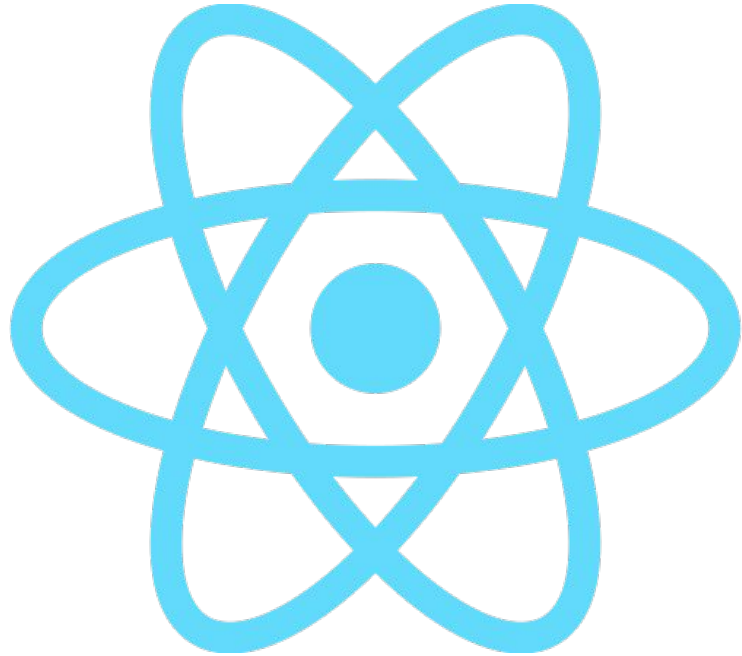


Table of Contents

- a. Defining the state
- b. Changing the state

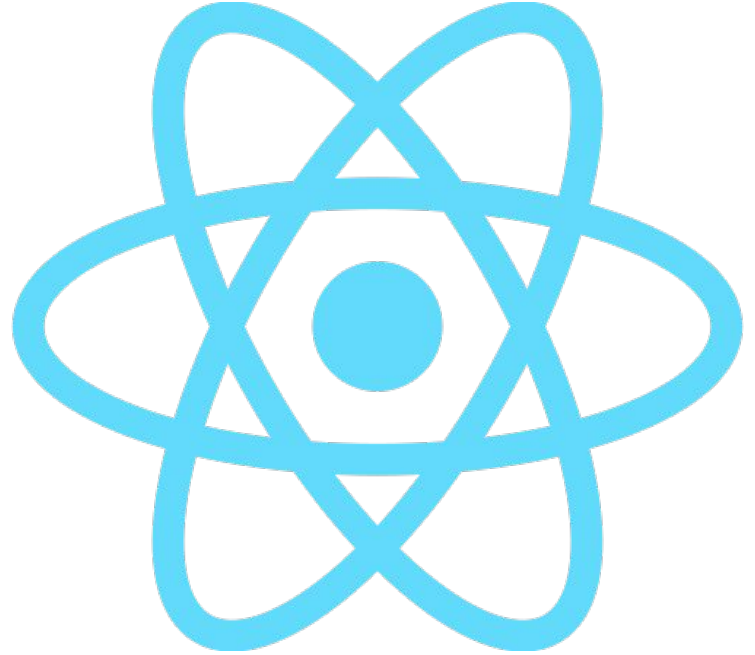
Defining the state

- A state can be modified based on user action or network changes
- Every time the state of an object changes, it re-renders the component to the browser
- The state object is initialized in the constructor and can store multiple properties



Defining the state

- `this.setState()` method is used to change the value of the state object, as well as perform a shallow merge between the new and the previous state
- States are classified as a form of Hooks in React; methods that allow components to use React's inbuilt features without a class constructor



Defining the state

- The `useState()` method must first be imported:

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

- It must then be declared within the component:

```
const [count, setCount] = useState(0);
```

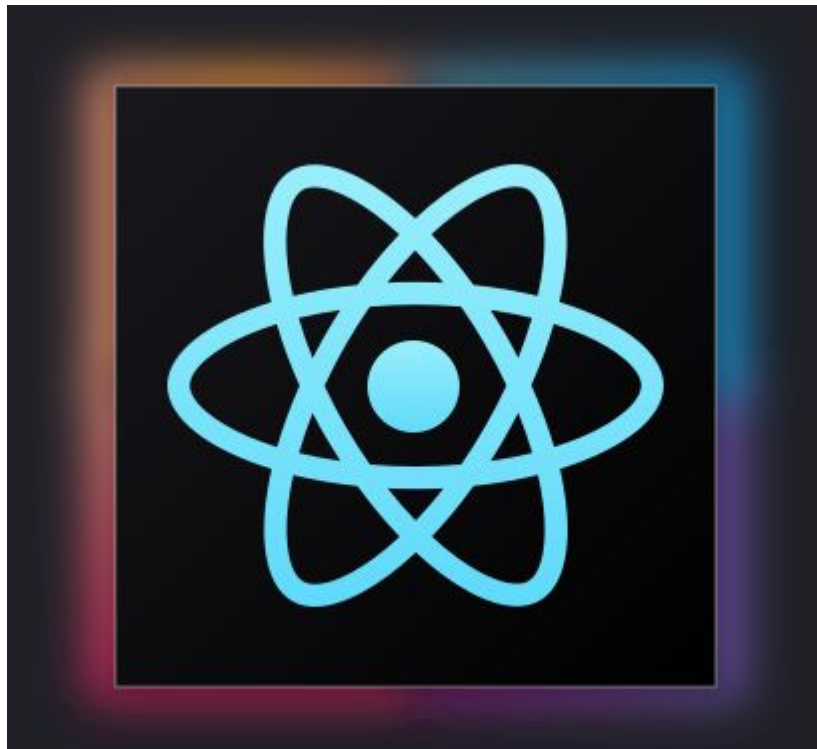
Defining the state

- Only then can the `setState` method be called to perform a logical task in a component:

```
<div>
  <p> You Clicked: {count} Times </p>
  <button onClick={ () => setCount(count + 1) }>
    Click Me!
  </button>
</div>
```


Changing the state

- as stated before, the `setState()` method is used to change the value of an object
- calling or utilizing `setState` re-renders the entire component and its child components automatically, eliminating the need to use the render function
- changing or updating the state requires the `'this.setState'` method, serving as a marker on how a component should respond



Changing the state

- Take this example of a state being used to update a component:

```
function App() {  
  return(  
    <div>  
      <p>  
        This button has  
        { this.state.hasBeenClicked ? null : "Not" }  
        been clicked.  
      </p>  
      <button onClick={ this.handleClick() }>  
        Click Me!  
      </button>  
    </div>  
  );  
}
```

Changing the state

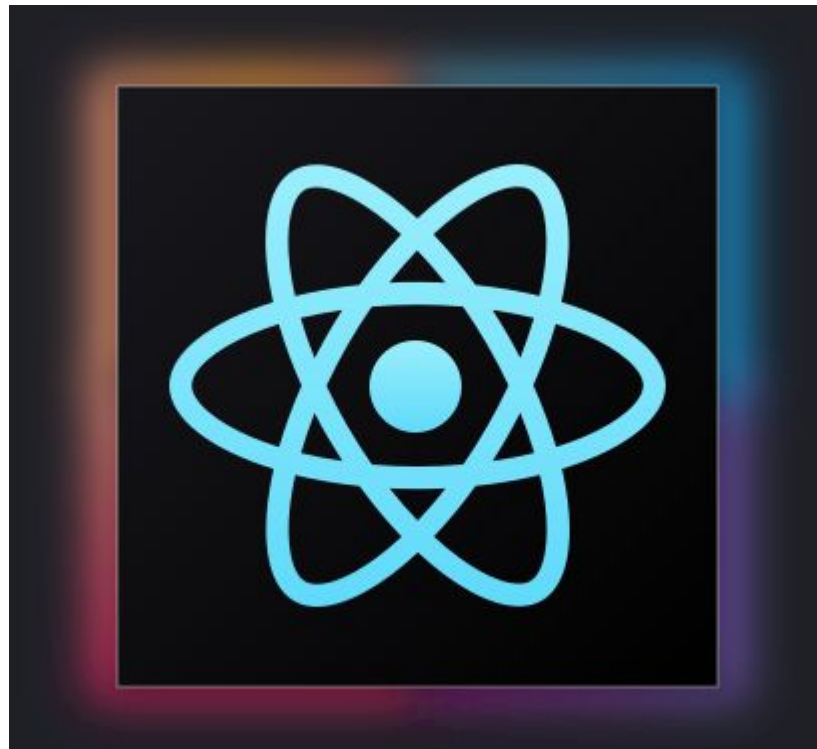
- The state relies on the following utility functions to run properly and render the new value:

```
    this.state = {  
      hasBeenClicked: false,  
    };  
  }  
  
  handleClick = () => {  
    hasBeenClicked: true  
  }
```

- The above functions could be written in a class constructor or App.js function itself

Changing the state

- when a state gets updated, only the value or property of that state gets passed in, allowing for two boolean values in different functions to *merge*
- however, this only occurs in the first-level, which means that only one specific value gets updated whilst the rest are overwritten



Changing the state

- An example of state-handling using an array, where the array stores a set of data:

```
const data = () => {  
  theme: 'blue',  
  addressInfo: {  
    street: null,  
    number: null,  
    city: null,  
    country: null  
  },  
};
```

Changing the state

- Let's say we want to update 'addressInfo',
To merge the data requires the
'this.setState()' method:

```
this.setState({  
  addressInfo: {  
    city: "New York City",  
  },  
});
```

Changing the state

- This updates the selected child value (addressInfo) and overwrites the others:

```
{
  theme: 'blue',
  addressInfo: {
    city: 'New York City',
  },
}
```

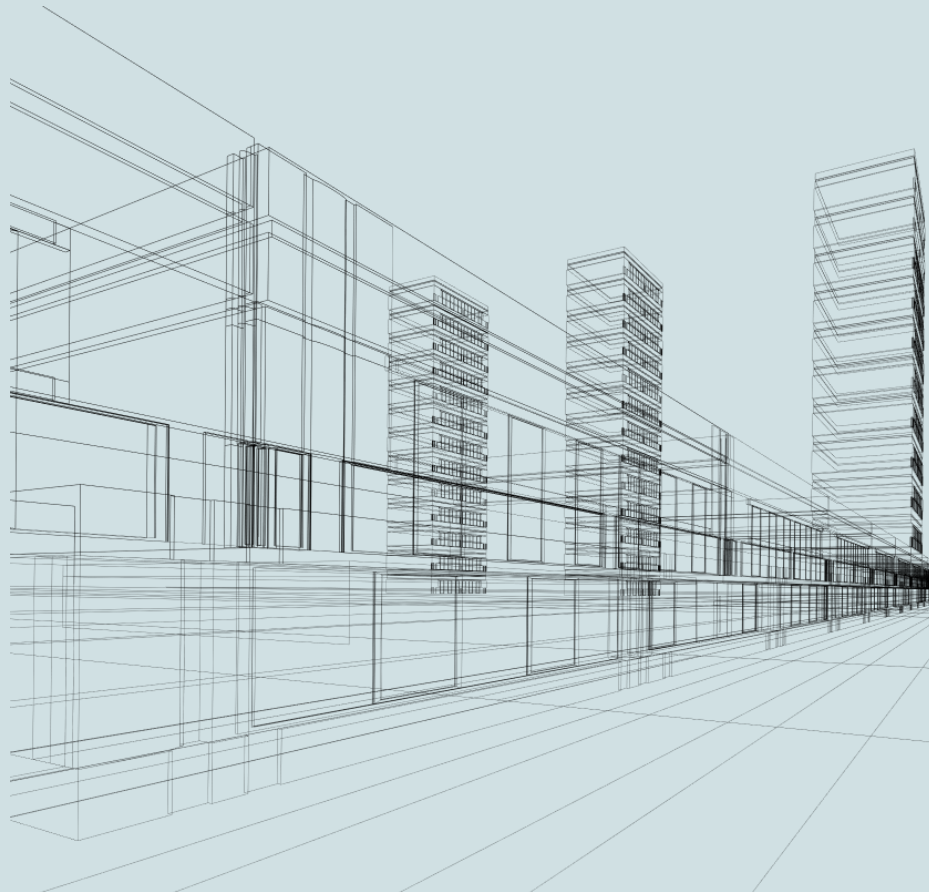
References

- <https://reactjs.org/docs/state-and-lifecycle.html>
- <https://reactjs.org/docs/hooks-state.html>
- <https://www.patterns.dev/posts/reactjs/>
- <https://learn.co/lessons/react-updating-state>

REACTJS

React States

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Kelengkapan Modul

- Pre & Post Test (minimal 10 soal, pilihan ganda a-d)
- Pre Reading
- Teaching Notes
- Referensi

Assessment – [Pre & Post Test]

Pre-Reading



ReactJS is a Javascript library for building user interfaces. This PDF ebook is a portable offline reference guide for the community, can be printed or synced with your kindle for a better reading experience. It's based on ReactJS version v.16.13.1

This is an excellent reference format for ReactJS beginners, is not a tutorial just the official documentation for your reference

TEACHING NOTES*

☒ Lesson/Topics ☒ Case Study ☐ Clips ☐ Games ☐ Others :

OBJECTIVES

Memahami tentang React States, bagaimana definisikan nya, dan mengganti nya dalam komponen

PERSIAPAN

*Offline: Laptop
Online: Link Zoom*

OVERVIEW

State adalah objek React yang digunakan untuk memuat data atau informasi tentang komponen. State component dapat berubah seiring waktu; dan setiap kali ia berubah, komponen dapat di render ulang.

DIRECTION

- Menjelaskan definisi nya atas States di React
- Menjelaskan state-handling dengan metode React (this.setState, setState)
- Demonstrasikan metode untuk mengguna setState buat komponen
- Mengatur dan mengelola arah dan jalan-nya diskusi;
- Memberikan contoh-contoh, kasus dan ilustrasi;
- Memberikan apresiasi dalam tanya jawab;
- Memberikan debrief atau insight/pesan dari kegiatan;
- Memberikan dan menyampaikan kesimpulan dan di tiap sesi atau di akhir sesi

PERALATAN YANG DIBUTUHAN

*Offline : Laptop
Online: Link Zoom*

***Catatan :** jumlah halaman teaching Note dapat ditambah seauai kebutuhan

DIRECTION

Section (slide/clip/case/etc)	Activities (Hal apa yang akan dilakukan untuk setiap section-nya)	Description (hal-hal spesifik yang harus dilakukan, misal : penjelasan dan atau penekanan materi, pengelolaan arah dan jalannya diskusi, wrap up/insight atau debrief, etc)
5-8	Presentasi, Diskusi	Menjelaskan definisi nya atas States di React
9-15	Presentasi, Diskusi, Case Study	Menjelaskan state-handling dengan metode React (this.setState, setState)