

[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 Components
Deskripsi Modul	:	<i>React components adalah unit atau bagian dari kode yang bisa digunakan berkali-kali. Components merupakan satu hal fundamental dari pembuatan user-interface untuk web.</i>
Enabling Learning Objective	:	Memahami tentang React JSX dan bagaimana bisa menggunakan nya untuk komponen UI
Daftar Topik	:	<ol style="list-style-type: none"> 1. Functional components 2. Class components
Searching Keyword	:	<ol style="list-style-type: none"> 1. ReactJS 2. JSX 3. type 4. class 5. component 6. UI

REACTJS

React JSX

Calvin Susanto Putra

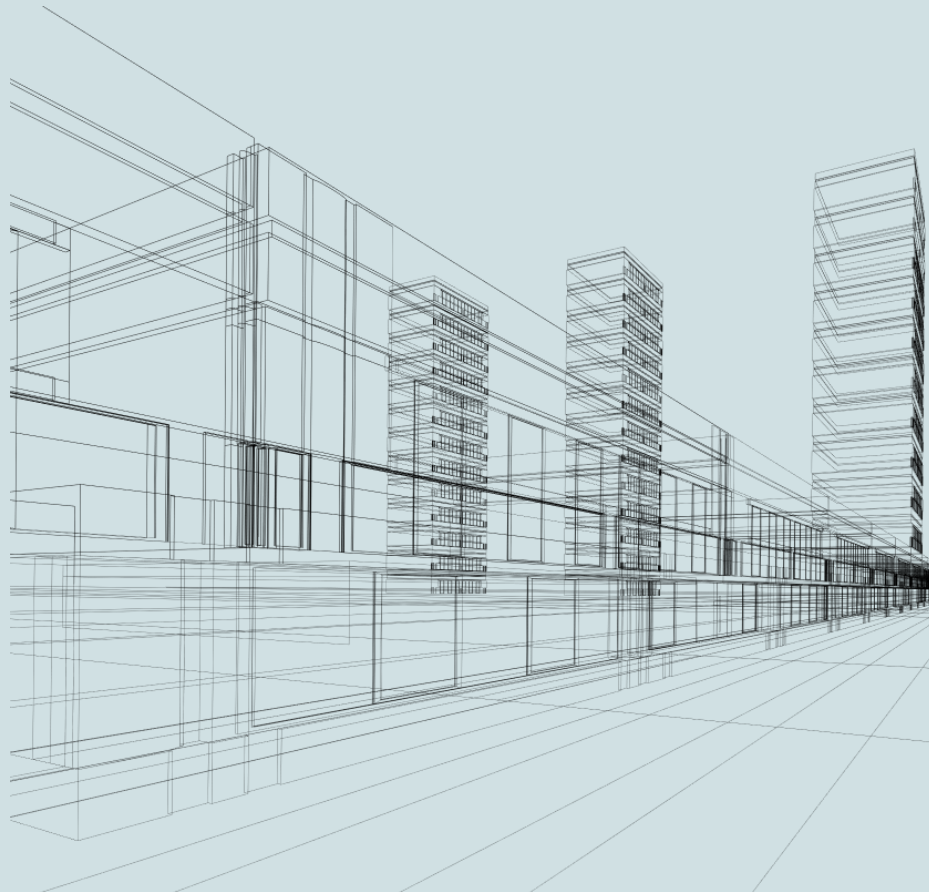
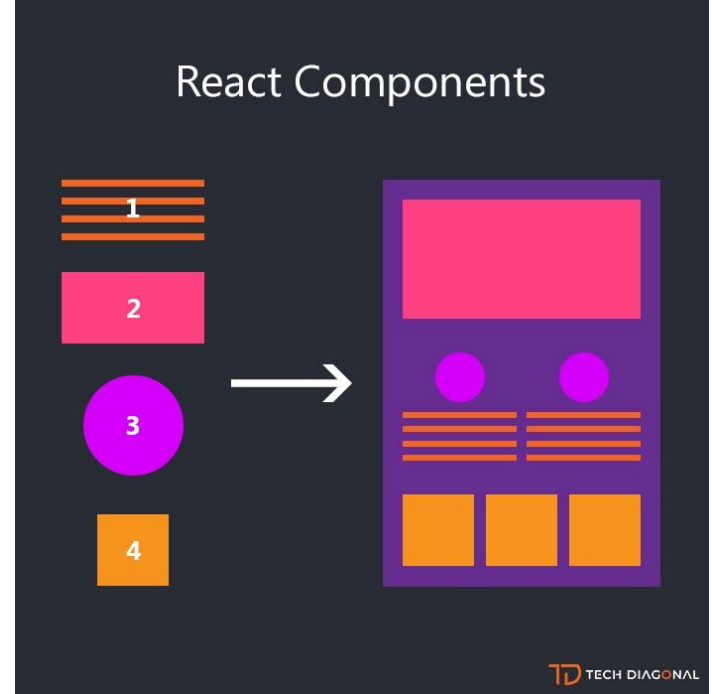


Table of Contents

- a. **Functional components**
- b. **Class components**

Functional Components

- are a type of components defined by standard ES6/7 syntax (Pascal case), whether as a normal Javascript or arrow function
- returns HTML elements in JSX or XML format into web-readable Javascript and conversion to web UI components
- is significantly less time-consuming and easier to understand for beginner-level developers



Functional Components

- An example of a standard functional component:
- As well as a complex arrow function::

```
function Welcome(props) {  
  return (  
    <h1>  
      Hello, {props.name}  
    </h1>  
  );  
}
```

```
function Welcome = ({data}) => {  
  return (  
    <h1>  
      Hello, {data.user?.name}  
    </h1>  
  );  
}
```

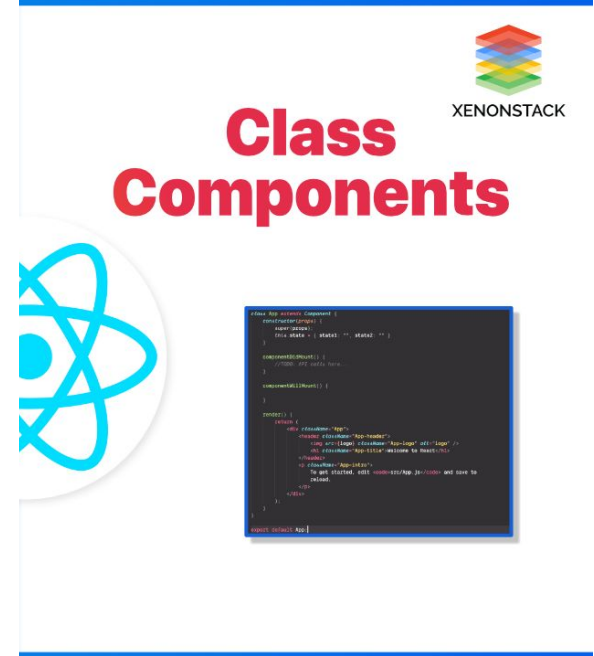
Functional Components

- Functional components can also refer or defer to other components for the output; such methods is defined as 'composing' a component
- For example, it is possible to return a single prop or data instance multiple times, as can be seen from the figure on the right
- Is capable of 'hoisting', where variables and functions can be called before declaration

```
function Welcome(props) {  
  return  
    <h1>  
      Hello, {props.name}  
    </h1>;  
}  
  
function App() {  
  return (  
    <div>  
      <Welcome name="Telkom University" />  
      <Welcome name="iBiG Digital" />  
      <Welcome name="iBig Academy" />  
    </div>  
  );  
}
```

Class Components

- follows a two-way syntax, beginning with standard ES6 format then extended to a class component
- renders a component virtually and directly
- depends on the concurrent state with the 'this.state' method to pass into a class constructor; thus, it is also capable of containing logic
- is considered the more difficult of the two yet comprehensive with its usage of objects and direct rendering methods



Class Components

- An example of a basic class component and its render method:

```
class Welcome extends React.Component {  
  render() {  
    return  
      <h1>  
        Hello, {this.props.name}  
      </h1>;  
  }  
}
```

- The render method ensures that the component, in its entirety, is outputted in the UI form

Class Components

- relies heavily on the React lifecycle methods sourced from the React library that can be used to handle states and even hooks
- Examples of such methods include:
 - a. `componentWillMount`
 - b. `shouldComponentUpdate`
 - c. `componentDidUpdate`

Class Components

- An example of state-handling in React, note the constructor and super constructor reference

```
class ClassCount extends React.Component {  
  constructor(props) {  
    super(props);  
    this.state = {  
      count: 0  
    };  
  }  
}
```

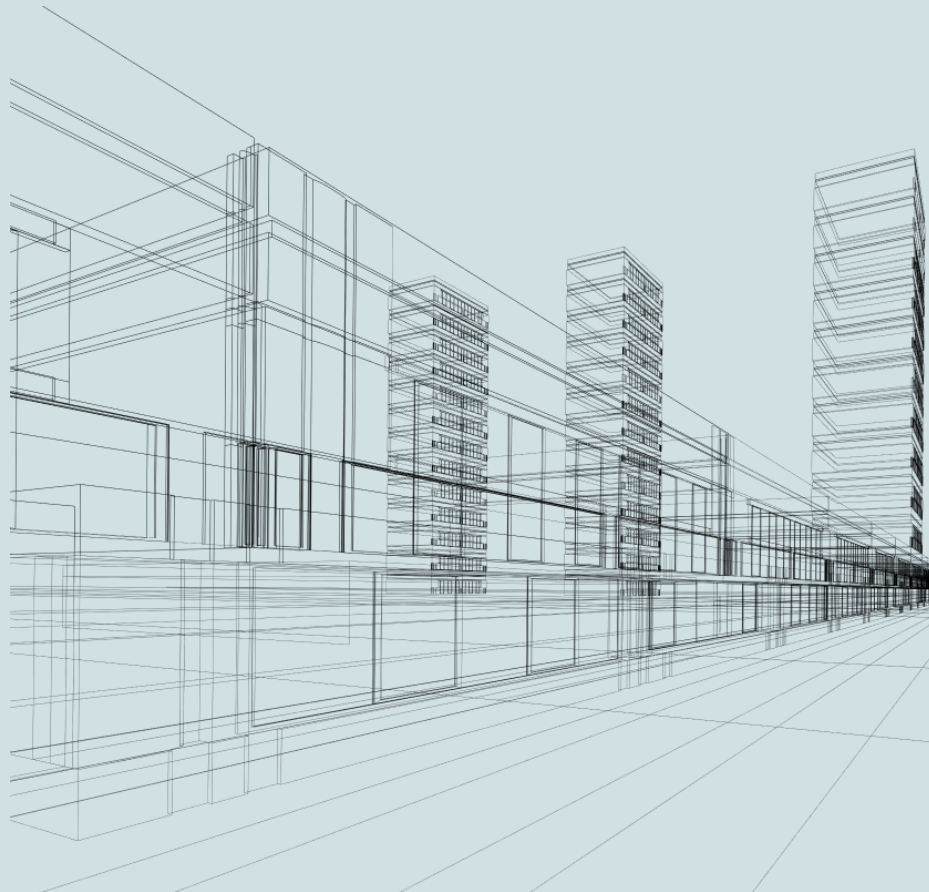
References

- <https://reactjs.org/docs/components-and-props.html>
- <https://medium.com/@desaihetvi/components-in-react-5d72887cc51d>
- <https://www.xenonstack.com/blog/functional-vs-class-components>
- https://www.w3schools.com/react/react_components.asp#:~:text=Components%20are%20independent%20and%20reusable,will%20concentrate%20on%20Function%20components.

REACTJS

React JSX

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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 komponen dan perbedaan nya dalam penggunaan untuk membuat user-interface

PERSIAPAN

*Offline: Laptop
Online: Link Zoom*

OVERVIEW

React components adalah unit atau bagian dari kode yang bisa digunakan berkali-kali. Components merupakan satu hal fundamental dari pembuatan user-interface untuk web.

DIRECTION

- Menjelaskan definisi na komponen dalam React
- Menjelaskan perbedaan antara komponen Functional dan Class
- Demonstrasikan metode untuk memakai props, states, dan data lain dalam komponen berbeda
- 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)
5-7	Presentasi, Diskusi	Menjelaskan fitur-fitur Functional components dan kapabilitas nya dalam React
8-11	Presentasi, Diskusi, Case Study	Menjelaskan tentang Class components, perdebaan nya, dan sistem nya terkait penggunaan class untuk handle states dan props

References

Ilya Kantor (2022), “Error handling, "try...catch"”,
<https://javascript.info>