Modul Pembelajaran [Kode Modul]

[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	:	*React components adalah unit atau bagian dari kode yang bisa digunakan berkali-kali. Components merupakan satu hal fundamental dari pembuatan user-interface untuk web.*
Enabling Learning Objective	:	Memahami tentang React JSX dan bagaimana bisa menggunakan nya untuk komponen UI
Daftar Topik	:	1. Functional components 2. Class components
Searching Keyword	:	1. ReactJS 2. JSX 3. type 4. class 5. component 6. UI

REACTJS
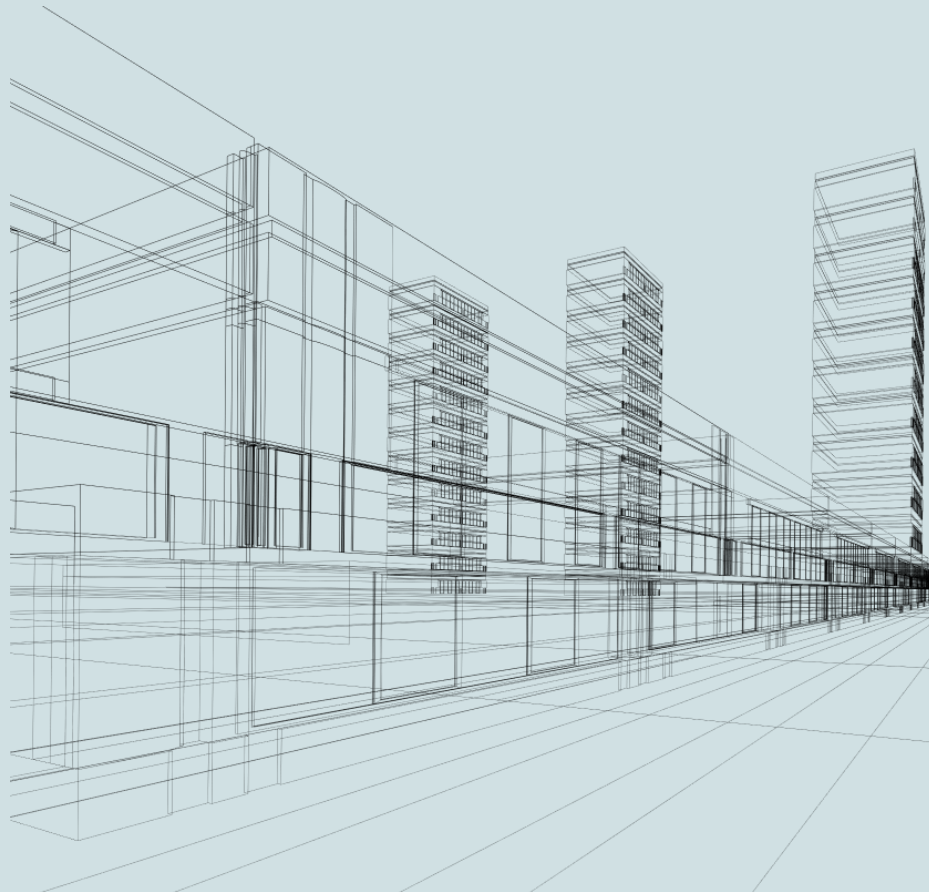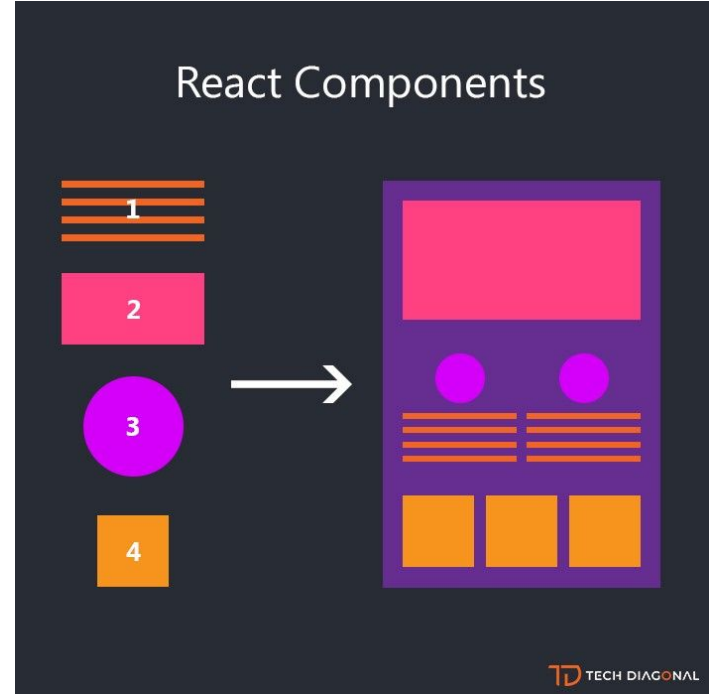
React JSX

Calvin Susanto Putra

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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:

```
function Welcome(props) {

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

- As well as a complex arrow function::

```
function Welcome = ({data}) => {

  return (
    <h1>
      Hello, {data.user?.name}
    </h1>
  );
}
```
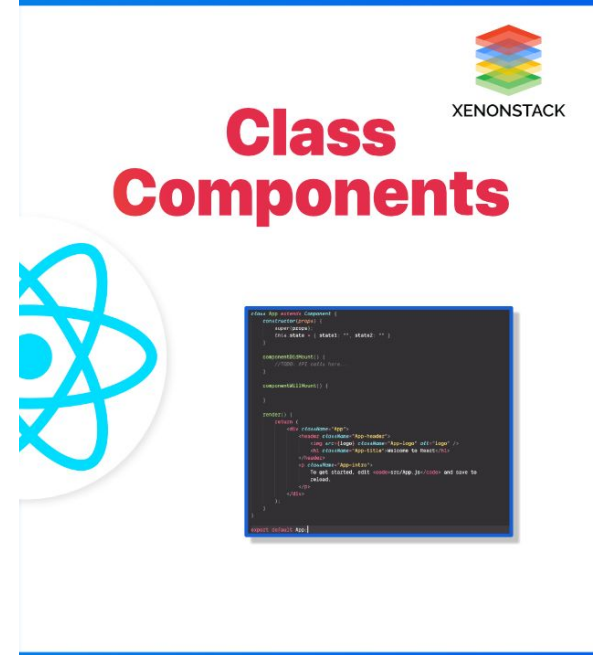
Functional Components

- 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 App() {
    return (
        <div>
            <Welcome name="Telkom" />
            <Welcome name="Corporate" />
            <Welcome name="University" />
        </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, t 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,
        }
    }
}
```
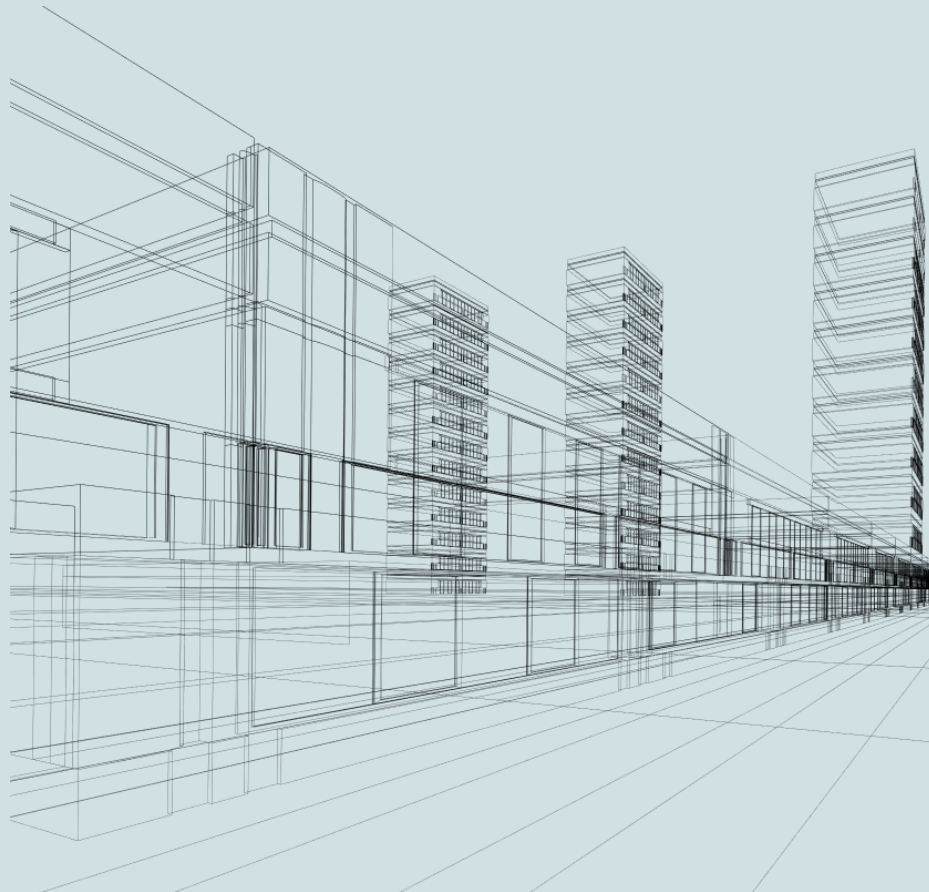
References

- 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

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.

PERALATAN YANG DIBUTUHAN

Offline : Laptop

Online: Link Zoom

PERSIAPAN

Offline: Laptop
Online: Link Zoom

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

***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 panggunaan class untuk handle states dan props