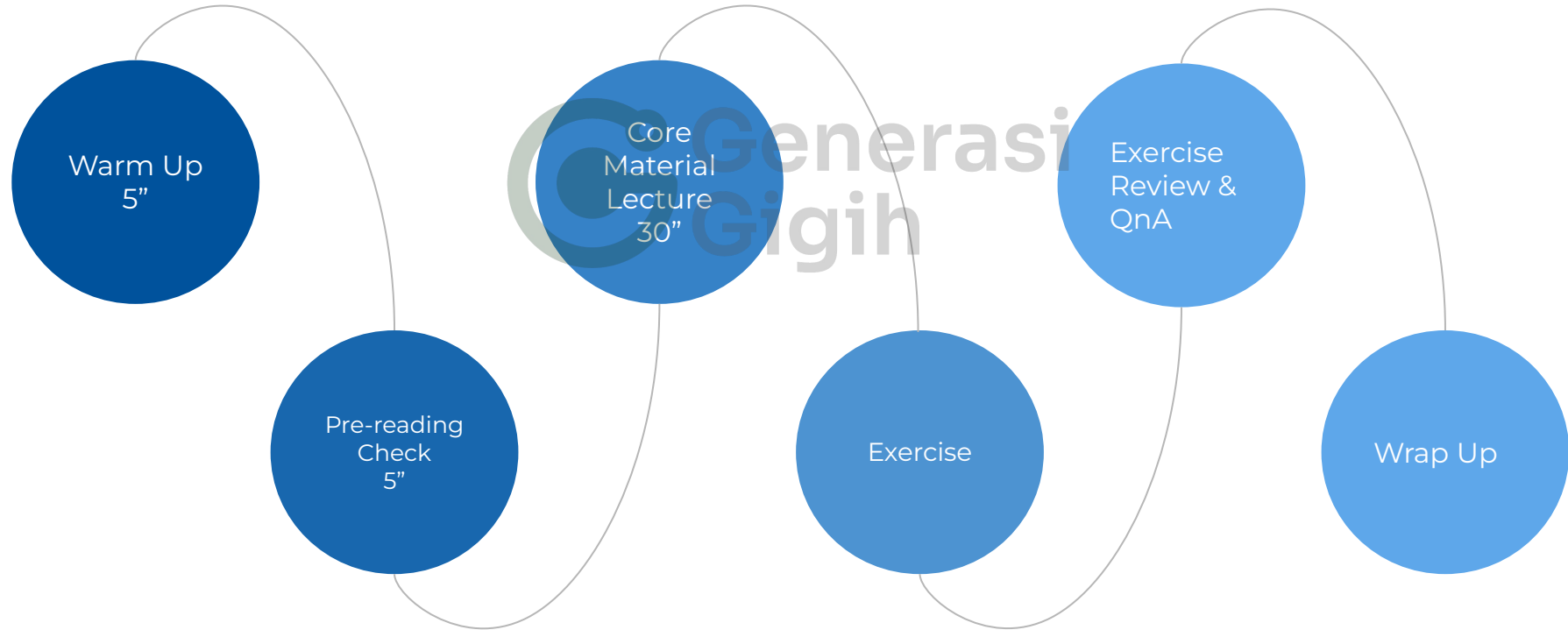


## Full Stack Engineer

### Module 5.3: React Router & UI Component



# Our Agenda



# Let's Warm Up!



Recall conditional rendering

# Let's Discuss



- React Router (15")
- UI Component (ChakraUI) (15")

# Let's Talk About The Materials

React Router

<https://codesandbox.io/s/module-5-session-3-sk807?file=/src/router-example.js>

Most websites is not designed for showing one pages only  
It should be able to show couple of pages within a same web application

Generasi GIGIH

Kurikulum

Program Detail

Cara Mendaftar

How do we build something like this in React?

# React Router

- A collection of navigational components that compose declaratively with your application
- Composed of 3 main components
  - Router
  - Route Matchers
  - Navigation
- Installation
  - Npm: `npm install react-router-dom@5.3.0`
  - Yarn: `yarn add react-router-dom@5.3.0`
- Docs: <https://v5.reactrouter.com/web/guides/quick-start>



# Router Component

- 2 types of Router Component
  - `<BrowserRouter>` supports use cases for regular paths, e.g.  
localhost:3000/accounts
  - `<HashRouter>` supports use cases for paths with # in the beginning, e.g.  
localhost:3000/#/accounts
- Wrapper for all operation below



# Route Matchers Component

- Components used to determine which components will be rendered
- 2 route matchers component
  - `<Switch>` will try to see whether the current URL matches to one of the children `<Route>`
  - `<Route>` contains the path for that route and another details, e.g. `<Route path="/account">` will be rendered if URL started with `"/account"`
- `<Switch>` will try from the first child, when it matches with the first one, it won't try to match to the second child etc. So put the specific `<Routes>` at the top, and the less specific one below.

# Navigation Component

- Components used to move between pages
- 2 navigation component
  - `<Link>` will render `<a>` component that when clicked, will go to the desired path, e.g. `<Link to="/account">`
  - `<Redirect>` will do redirect to another page when rendered, e.g. `<Redirect to="/account">`

# React Router

Lets say we want to build 3 pages in our web apps

1. Homepage
2. Our Products
3. About Us

```
import { BrowserRouter as Router, Switch, Route, Link } from "react-router-dom";

function AppRouter() {
  return (
    <Router>
      <Switch>
        <Route path="/products">
          <h1>List of Our Products</h1>
        </Route>
        <Route path="/about-us">
          <h1>About Us</h1>
        </Route>
        <Route path="/">
          <h1>Welcome to our homepage</h1>
          <Link to="/products">Products</Link>
          <Link to="/about-us">About Us</Link>
        </Route>
      </Switch>
    </Router>
  );
}
```

# Hooks in React Router

1. useHistory
2. useLocation
3. useParams
4. useRouteMatch

```
import {
  BrowserRouter as Router,
  Switch,
  Route,
  useParams
} from "react-router-dom";

function AppRoute() {
  return (
    <Router>
      <Switch>
        <Route path="/:id">
          <Item />
        </Route>
      </Switch>
    </Router>
  );
}

function Item() {
  let { id } = useParams();
  return (
    <div>
      <h3>ID: {id}</h3>
    </div>
  );
}
```

# Private Route

- How do we create pages that can only be accessible if we already login?

```
import {
  BrowserRouter as Router,
  Switch,
  Route,
  Redirect
} from "react-router-dom";

function App() {
  const isLoggedIn = true;
  return (
    <Router>
      <Switch>
        <Route path="/private">
          {isLoggedIn ? (
            <div>You are in private path</div>
          ) : (
            <Redirect to="/public" />
          )}
        </Route>
        <Route path="/public">
          <div>You are in public path</div>
        </Route>
      </Switch>
    </Router>
  );
}
```

# Let's Talk About The Materials

UI Component

# UI Component Library

- Ready to use React components complete with visual and sometimes design system
- For projects that doesn't require custom UI, we can jumpstart by using this library

# UI Component Library

- There can be debates when it comes to choosing which UI component library we want to adopt to our app
  - <https://chakra-ui.com/>
  - <https://material-ui.com/>
  - <https://ant.design/>
  - <https://atomizecode.com/>
  - <https://blueprintjs.com/>
  - <https://mantine.dev/>



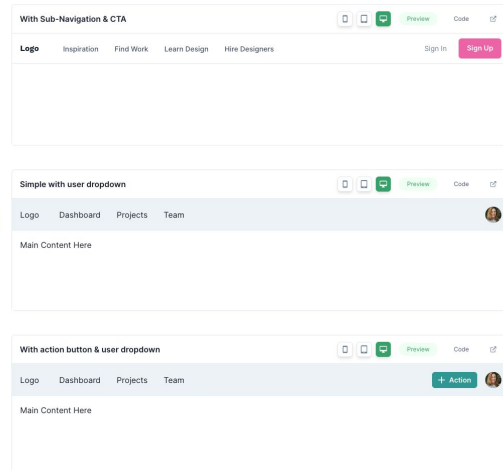
# UI Component Library: How to choose?

- Steps to help you choose:
  - a. List down our existing components, and make sure our library of choice has it all
  - b. Check out whether a library is popular or not so if we encounter any issues we can easily look google it up
  - c. See if the UI library is highly customizable (this step is difficult, usually you'll know once you use it with your app)
- For learning purpose: we will be using chakra-ui as our library of choice

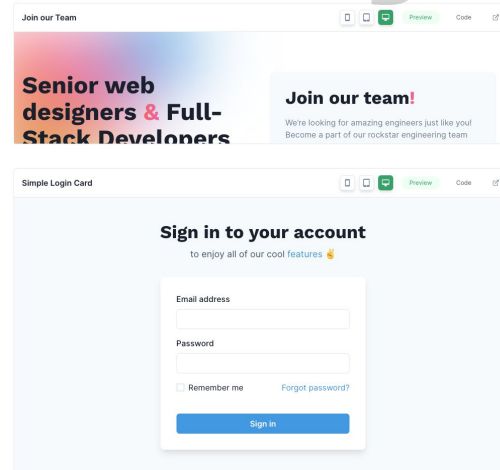
# chakra-ui: Check for Starter Template

Usually UI component library provides a template so you can speed up your app development. In the case of chakra-ui, it has several [start up templates](#) with the source code that you can modify according to your needs

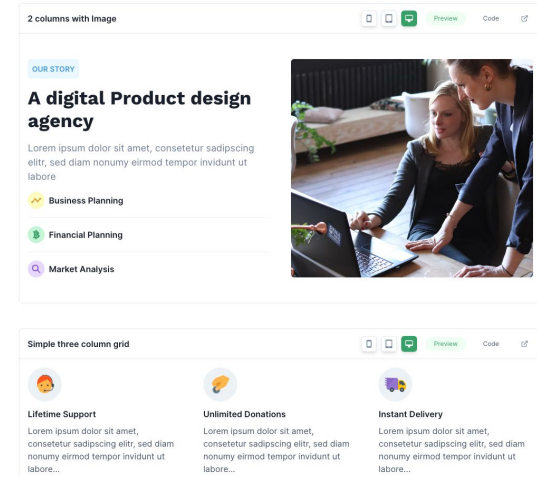
## Navbar



## Authentication

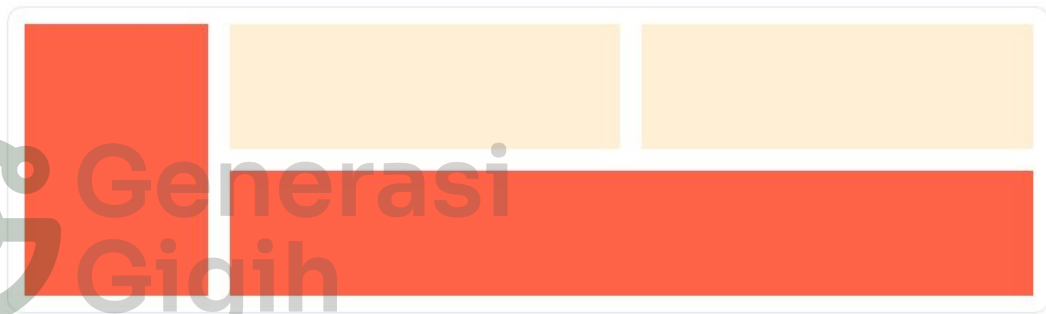


## Features



# chakra-ui: Start with Layouting Feature

Usually UI component library provides layouting solution, and is usually called grid system (if they don't provide, you can use flexbox and css grid which is usually enough). In chakra-ui they provide grid system



EDITABLE EXAMPLE

COPY

```
<Grid
  h='200px'
  templateRows='repeat(2, 1fr)'
  templateColumns='repeat(5, 1fr)'
  gap={4}
>
  <GridItem rowSpan={2} colSpan={1} bg='tomato' />
  <GridItem colSpan={2} bg='papayawhip' />
  <GridItem colSpan={2} bg='papayawhip' />
  <GridItem colSpan={4} bg='tomato' />
</Grid>
```

# chakra-ui: Add Custom Component to Your Existing Project

Or you can start with brand new project and use UI component library right away, which is usually easier since you have no previous code.

Example: you need card component

Action: find card component, read the docs how to use them

# chakra-ui: Add Custom Component to Your Existing Project

## Card with Image

Place the content within the `CardBody` to get a nice padding around.



### Living room Sofa

This sofa is perfect for modern tropical spaces, baroque inspired spaces, earthy toned spaces and for people who love a chic design with a sprinkle of vintage design.

\$450

Buy now

Add to cart

## Advanced Composition

You can compose `Card` with other components like `Avatar`, `Icon` advanced layout.



**Segun Adebayo**

Creator, Chakra UI

With Chakra UI, I wanted to sync the speed of development with the speed of design. I wanted the developer to be just as excited as the designer to create a screen.



Like

Comment

Share

# chakra-ui: Add Custom Component to Your Existing Project

EDITABLE EXAMPLE COPY

```
<Card maxW='sm'>
  <CardBody>
    <Image
      src='https://images.unsplash.com/photo-1555041469-a586c61ea9bc?ixlib=rb-4.0.3&ixid=MnwMjA3fDB8MhwaG90by1wYWdlfHx8fGVufDB8fHx8&auto=format&fit=crop&w=1770&q=80'
      alt='Green double couch with wooden legs'
      borderRadius='lg'
    />
    <Stack mt='6' spacing='3'>
      <Heading size='md'>Living room Sofa</Heading>
      <Text>
        This sofa is perfect for modern tropical spaces, baroque inspired spaces, earthy toned spaces and for people who love a chic design with a sprinkle of vintage design.
      </Text>
      <Text color='blue.600' fontSize='2xl'>
        $450
      </Text>
    </Stack>
  </CardBody>
  <Divider />
  <CardFooter>
    <ButtonGroup spacing='2'>
      <Button variant='solid' colorScheme='blue'>
        Buy now
      </Button>
      <Button variant='ghost' colorScheme='blue'>
        Add to cart
      </Button>
    </ButtonGroup>
  </CardFooter>
</Card>
```

# Exercise

# Exercise

1. Use React Router to manage path to access tabbing directly
  - a. Move the create playlist page URL to /create-playlist
  - b. The Create Playlist page only accessible when user already login. If user haven't logged in, redirect to root URL (/)
  - c. For the root URL (/)
  - d. If user haven't logged in, show the Login link
  - e. If user already logged in, redirect to Create Playlist page
  - f. Recommendation to /recommendation
  - g. Playlist /<your-playlist-name>
2. Utilize ChakraUI for your UI Component
3. Enable Player
  - a. Send date start click play music
  - b. Play Music remote device

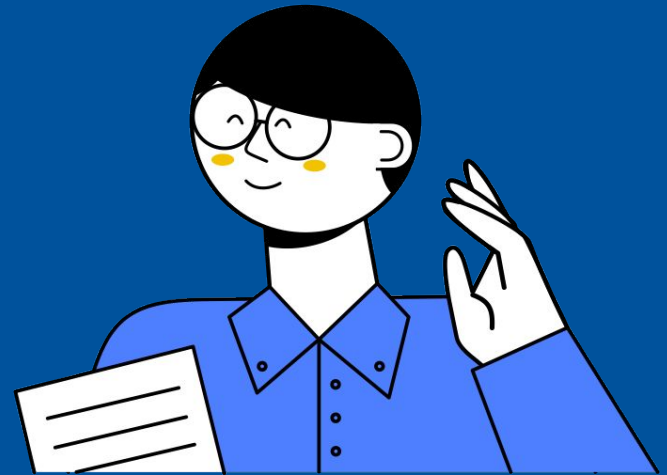






# Showcase Time!

# Q&A!



**Finally, Let's Wrap Up!**

**See you in the  
next session!**

