



LESSON 2- FRONT-END DEVELOPMENT

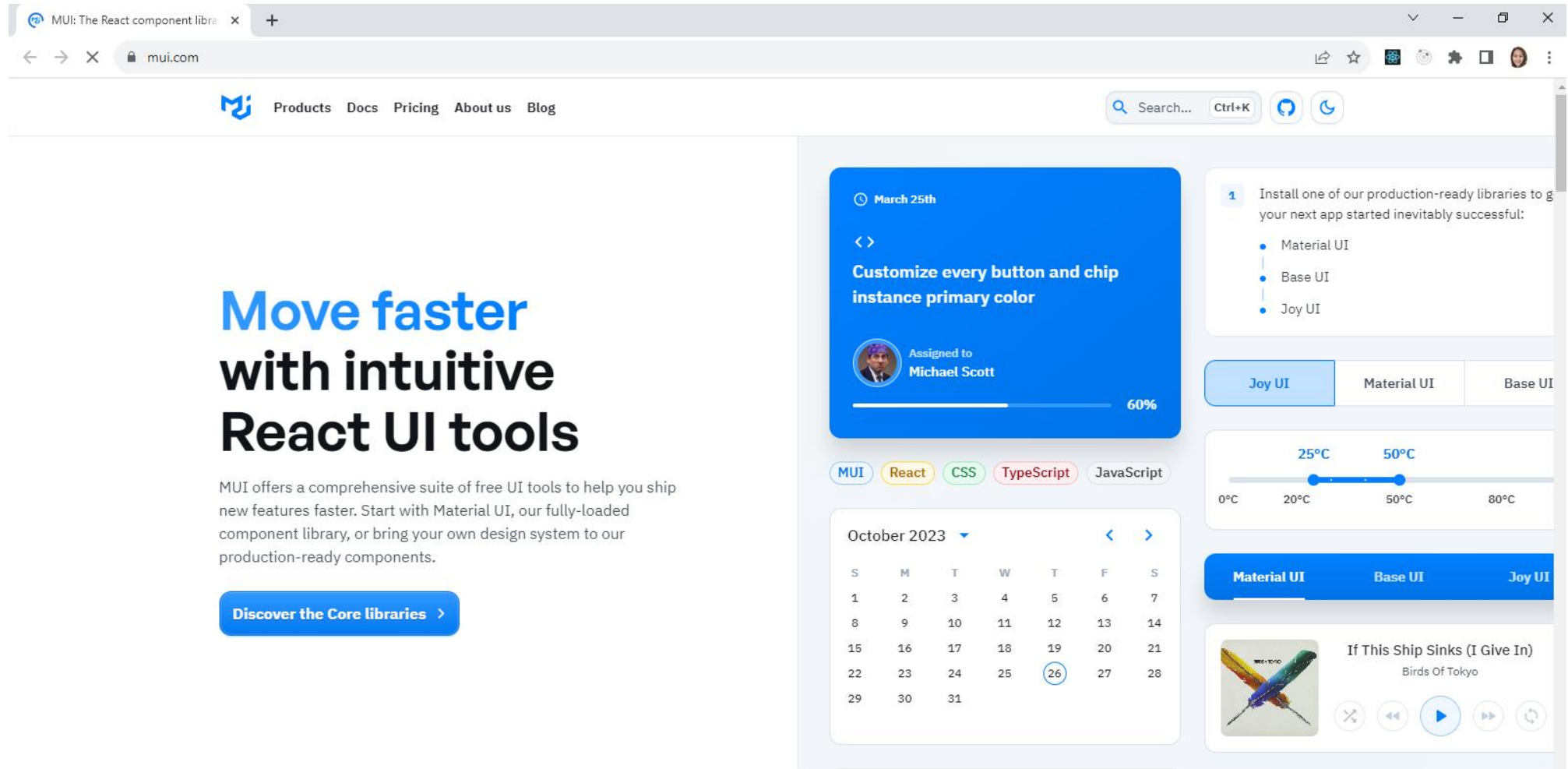
CSSE4103 – FULL STACK DEVELOPMENT

React UI Component Libraries

- React UI component libraries are useful tools that helps in the faster development of user interfaces for React-based applications.
- It allows developers to add features on the application such as buttons, tables and navigation. These can be selected from the UI components, customized and added to the application.



Example UI Component Library



Examples of React UI Component Libraries

- 1. MUI (formerly Material-UI) - <https://mui.com/>
- 2. React-Bootstrap - <https://react-bootstrap.netlify.app/>
- 3. Ant Design - <https://ant.design/>
- 4. Reactstrap - <https://reactstrap.github.io/>
- 5. Semantic UI React - <https://react.semantic-ui.com/>

Source: <https://www.sitepoint.com/popular-react-ui-component-libraries/#doineedareactuicomponentlibrary>

ReactStrap



Reactstrap is a **React** component library for **Bootstrap**

<https://reactstrap.github.io/>

- Reactstrap does not embed its own styles, and instead depends on the Bootstrap CSS framework for its styles and theme.
- This allows you to have consistent styles across your React-based components and static parts of your site, and allows you to include your own custom Bootstrap theme when needed.
- Reactstrap exports all the correct Bootstrap classes automatically, and don't need to use or include Bootstrap's JavaScript files or add data attributes to trigger functionality.
- Instead, components are defined in React-friendly components with appropriate props for you to control.

Source: <https://reactstrap.github.io/?path=/story/home-installation--page>



ReactStrap vs BootStrap

Bootstrap

```
<!-- HTML -->
<div class="modal" tabindex="-1">
  <div class="modal-dialog">
    <div class="modal-content">
      <div class="modal-header">
        <h5 class="modal-title">Modal
title</h5>
        <button
          type="button"
          class="btn-close"
          data-bs-dismiss="modal"
          aria-label="Close"
        ></button>
      </div>
      <div class="modal-body">
        <p>Modal body text goes here.</p>
      </div>
    </div>
  </div>
</div>
```

ReactStrap

```
// React
import { Modal, ModalBody, ModalHeader } from 'reactstrap';
...
<Modal isOpen={open} toggle={() => setOpen(false)}>
  <ModalHeader>
    Modal title
  </ModalHeader>
  <ModalBody>
    Modal body text goes here.
  </ModalBody>
</Modal>
</div>
);
};
```

ReactStrap Installation

1. Install ReactStrap and Bootstrap *(ReactStrap currently requires React 16.8 or higher.)*

```
npm install reactstrap bootstrap
```

Open the application's `package.json` and check if the Bootstrap and ReactStrap are added.



Installation

2. Import Bootstrap CSS in the src/index.js file:

```
Import bootstrap/dist/css/bootstrap.min.css';
```



Installation

3. Import required reactstrap components within src/App.js file or your custom component files:

For example:

```
import React from 'react';
import { Button } from 'reactstrap';

const login = () => {
  <Button color="primary">Login</Button>;
};
```

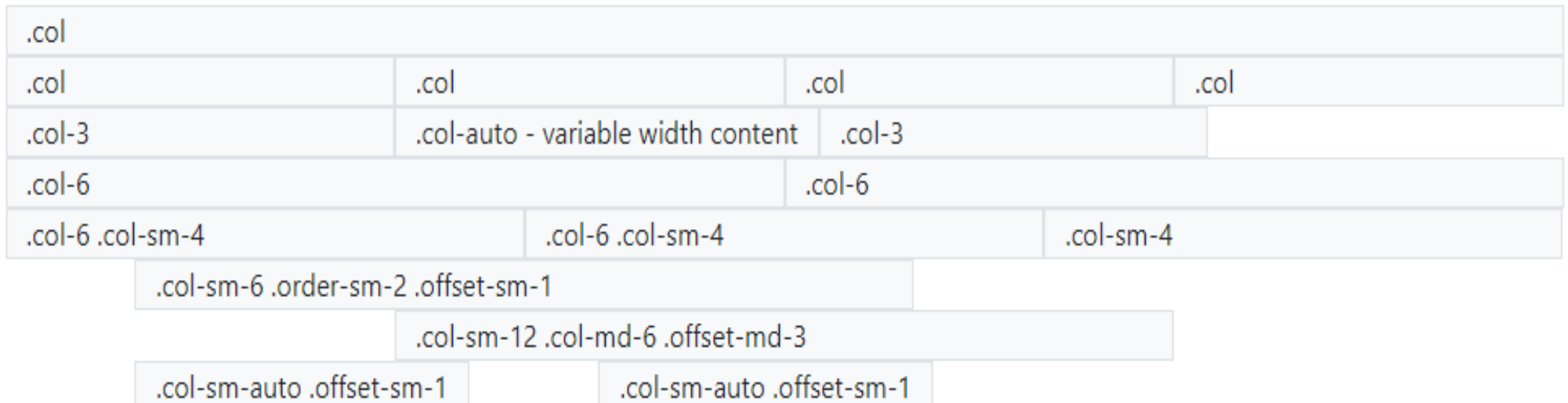
ReactStrap Components

- Layout
- NavBar
- Forms and
- Form Controls



Layout Component

- Powerful mobile-first flexbox grid to build layouts of all shapes and sizes using to a twelve column system, six default responsive tiers.



Source: <https://reactstrap.github.io/?path=/docs/components-layout--layout>

Layout Components

- `<Container>` - It is equivalent to `<div>` tag.
- `<Row>` - To divide the container into multiple rows.
- `<Col>` - To divide the Row into multiple columns

Source: <https://reactstrap.github.io/?path=/docs/components-layout--layout>



NavBar

```
<Navbar>
```

```
  <Nav>
```

```
    <NavItem>
```

```
      <NavLink href="/">Home</NavLink>
```

```
    </NavItem>
```

```
  </Nav>
```

```
</Navbar>
```



Form and Form Controls

```
<Form>
```

```
  <FormGroup>
```

```
    <Label for="exampleEmail">Email</Label>
```

```
    <Input
```

```
      id="exampleEmail"
```

```
      name="email"
```

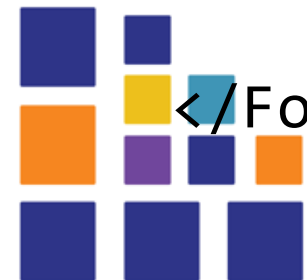
```
      placeholder="with a placeholder"
```

```
      type="email"
```

```
    />
```

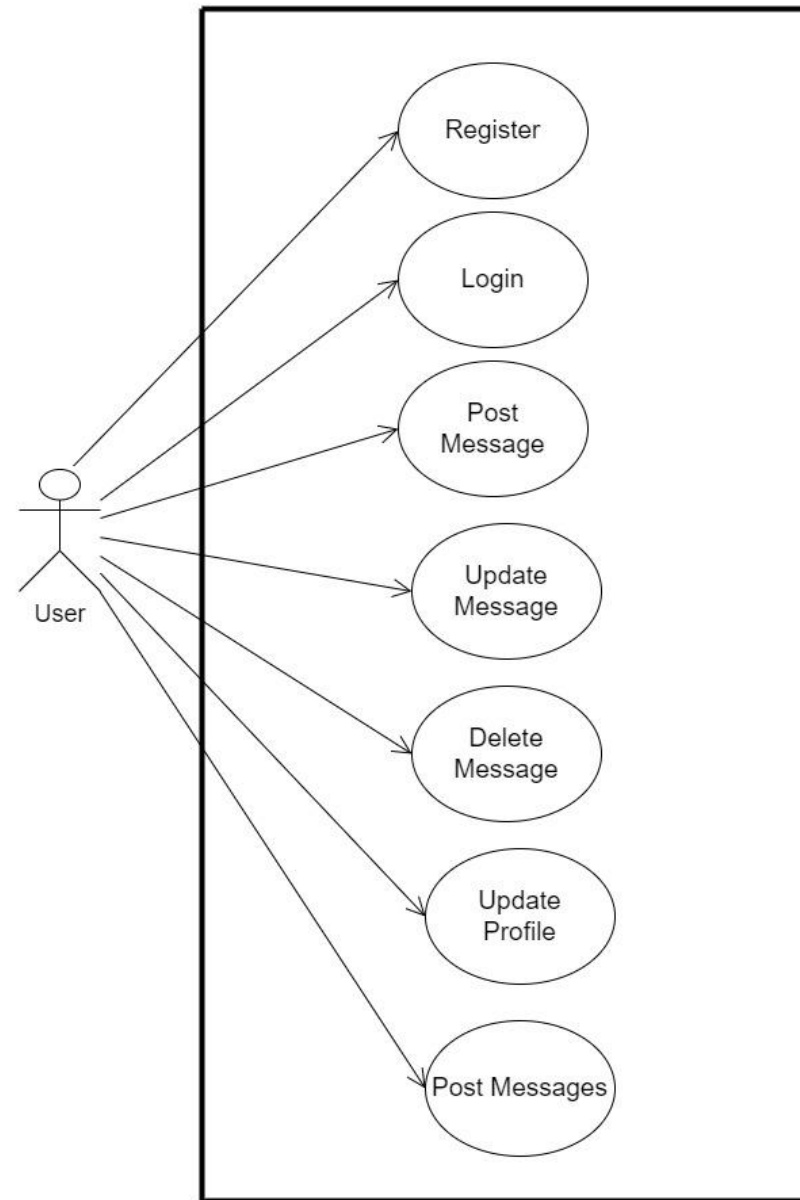
```
  </FormGroup>
```

```
</Form>
```



Project Overview

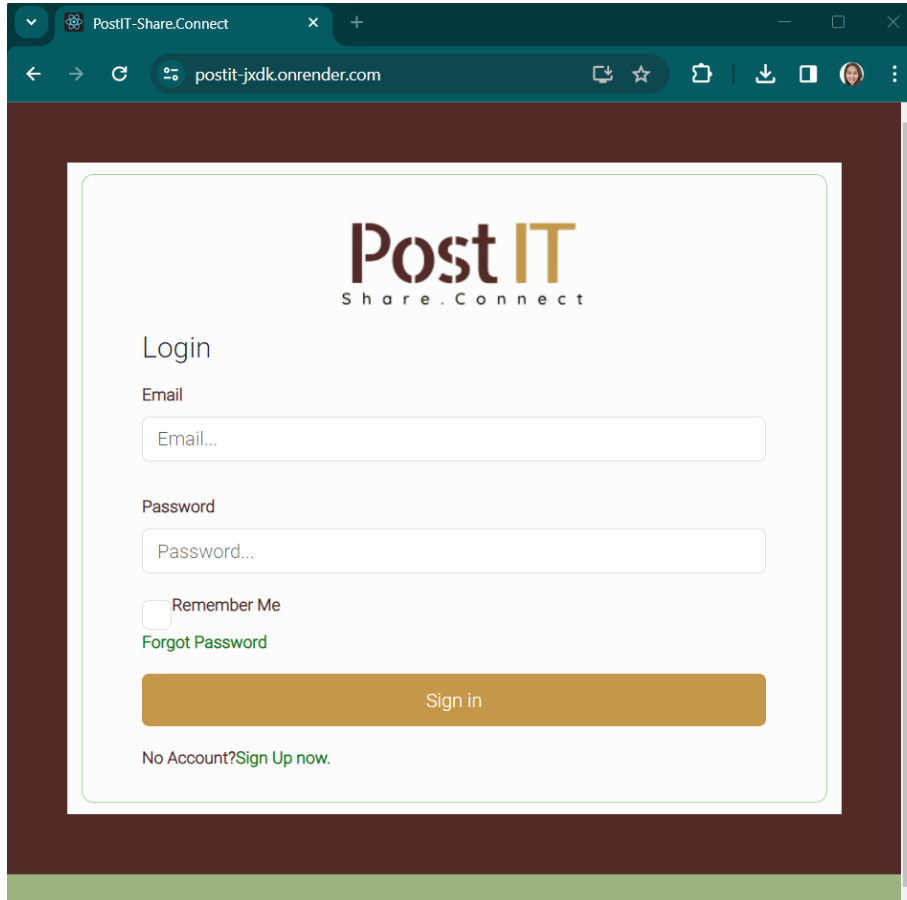
- The project that will be developed as an example is named **PostIT** which is a basic Social Media Application developed using MERN Stack. The functionalities are shown represented by the Use Case Model.



**PostIT - Social Media Application
Use Case Diagram**



Login



The screenshot shows a web browser window with the address bar displaying "postit-jxdk.onrender.com". The page features the "Post IT Share . Connect" logo at the top. Below the logo, the word "Login" is centered. The form includes an "Email" field with a placeholder "Email...", a "Password" field with a placeholder "Password...", and a "Remember Me" checkbox. A link for "Forgot Password" is provided in green text. A large orange "Sign in" button is positioned below the password field. At the bottom of the form, there is a link "No Account? Sign Up now." in green text.

Post IT
Share . Connect

Login

Email

Email...

Password

Password...

☐ Remember Me

[Forgot Password](#)

[Sign in](#)

[No Account? Sign Up now.](#)

Register

PostIT-Share.Connect

https://postit-jxdk.onrender.com/register

Post IT
Share . Connect


Enter your name...

Enter your email...

Enter your password...

Confirm your password...

Register



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References

ReactStrap - <https://reactstrap.github.io/>

ReactStrap - <https://www.npmjs.com/package/reactstrap>

React UI Components Libraries: Our Top Pick

<https://kinsta.com/blog/react-components-library/>

The Most Popular React UI Component Libraries

<https://www.sitepoint.com/popular-react-ui-component-libraries/#doineedareactuicomponentlibrary>

