College of Engineering, Construction and Living Sciences
Bachelor of Information Technology
IN608: Intermediate Application Development Concepts
Level 6, Credits 15

Practical 19 React 4: Events & Conditional Rendering

Due Date: 12/10/2020 at 5pm

In this practical, you will complete a series of tasks covering today's lecture. This practical is worth 2% of the final mark for the IN608: Intermediate Application Development Concepts course.

Before you start, in your practicals repository, create a new branch called **19-practical**.

Take a look at what you will be building today: https://int-app-dev-practical-19.herokuapp.com/

Task 1

In the `19-react-4-events-conditional-rendering`, copy & paste the `practical19events` directory into your practicals repository. `cd` to `practical19events` & install the following package:

- React transition group - `npm i react-transition-group`
- Node sass - `npm i node-sass`

Optionally, you can install all of them at once, i.e., npm i react-transition-group node-sass.
In `components`, create two files called `Navbar.js` & `NavItem.js`. In `Navbar.js`, declare the following:

```
import React from 'react'

const Navbar = (props) => {
  return (
    <nav className='navbar'>
      <ul className='navbar-nav'>{props.children}</ul>
    </nav>
  )
}

export default Navbar
```

You are probably wondering what `props.children` is? `props.children` is used to pass data from the parent to its children. In this instance, a `li` element is a child to the parent `Navbar`.

```
import React from 'react'
import Navbar from './components/Navbar'

const App = () => {
  return (
    <Navbar>
      <li>Some data...</li>
      <li>Some data again...</li>
    </Navbar>
  )
}

export default App
```

In `NavItem.js`, declare the following:

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

const NavItem = (props) => {
  const [open, setOpen] = useState(false)
  return (
    <li className='nav-item'>
      <a href='#' className='icon-button' onClick={() => setOpen(!open)}>
        {props.icon}
      </a>
      {open && props.children}
    </li>
  )
}

export default NavItem
```

What is happening?
We create a component for each `NavItem` in our `Navbar`. We declare some state for opening & closing a `NavItem` using `useState`. We return `JSX` which contains a `li` element & nested `a` element. You will notice an `onClick` listener calling a function which toggles the state of `open`. We declare `props.icon` in the `a` element, which will allow us to display an SVG when rendered `NavItem` in `App.js`. If `open` is `true` then it will display `props.children`, i.e., dropdown menu items. More on this soon. **Note:** you will be warned to provide a valid, navigable address as the `href` value. Ignore this warning in the meantime.

In `DropdownMenu.js`, comments are provided & explain the code is doing.

In `App.js`, declare the following:

```
import React from 'react'
import Navbar from './components/Navbar'
import NavItem from './components/NavItem'
import DropdownMenu from './components/DropdownMenu'
import { ReactComponent as BellIcon } from './icons/bell.svg'
import { ReactComponent as MessengerIcon } from './icons/messenger.svg'
import { ReactComponent as CaretIcon } from './icons/caret.svg'
import { ReactComponent as PlusIcon } from './icons/plus.svg'

const App = () => {
```

```
  return (
    <Navbar>
      <NavItem icon={<PlusIcon />} />
      <NavItem icon={<BellIcon />} />
      <NavItem icon={<MessengerIcon />} />
      <NavItem icon={<CaretIcon />}>
        <DropdownMenu />
      </NavItem>
    </Navbar>
  )
}

export default App
```

What is happening?
We import `Navbar`, `NavItem` & `DropdownMenu` from the `components` directory. We create an instance of `Component` for four SVGs using `ReactComponent` & an alias, i.e., `ReactComponent as PlusIcon`. We render a `NavItem` with an icon, i.e., `PlusIcon` in `Navbar`. To render a `NavItem` with a `DropdownMenu`, we nest the child `DropdownMenu` in the parent `NavItem`.

Task 2

Rename `index.css` to `index.scss`. Convert all the `CSS` to `Sass`. In `App.js`, replace `import './index.css'` with `import './index.scss'`.

Expected Output

Run the command `npm start` then navigate to http://localhost:3000/

Resources

- React transition group
- React transition group - npm
- Sass
- Sass - npm