Unit 8: React – Exercise 1+2: Light Switch

Assigned: N/A

Due: N/A

Completed: 01/19/23

**Google Docs:**

**Part 1:** <https://docs.google.com/document/d/17IBjjlv-Iyb-LPkFIaukfW38gO6FRCLQoSHTckDu3oE/preview#heading=h.wliq8xqicap1>

**Part 2:** <https://docs.google.com/document/d/1uTgl2UxXUQeSsiqikS4dQ8-H-JxH96iIzjXPoSCQfAc/preview>

**GitHub:**

**Part 1**

**Non-functioning switch component**

Build a component named Switch that looks roughly like this. It doesn’t do anything yet. It just always says OFF. Add a couple of these switches to the App.tsx component.

Text, application

Description automatically generated with medium confidence

**Steps to Create a Component**

1. Create new tsx and css files. (Switch.tsx, Switch.css)
2. Import the css file in the tsx file.
3. Create a functional component in Switch.tsx. Export it at the bottom with export default.
4. In the function, return JSX code. It’s a good idea to give the root element the className equal to your component name (<div className="Switch">).
5. Fill in any JSX and CSS you want.
6. Add your component to App.tsx: 1) import it. 2) include it in JSX via tag (<Switch />).

**Part 2**

**Functioning Switch Component**

Text, application

Description automatically generated with medium confidenceGraphical user interface, text, application, chat or text message

Description automatically generated

**Task 1:** Add a state variable to your Switch. Use that state to show "ON" or "OFF" in the JSX. Update the state appropriately when the On and Off buttons are clicked.

**Task 2:** Modify the Switch so that the background changes color when the switch is on. To do this, add a CSS class in the JSX only when the state is on. Add a CSS rule for this class to give it the color. This may require some creative thinking, but see if you can figure it out!

**Component:** LightSwitch.tsx

import { useState } from "react";

import "../css/LightSwitch.css";

function LightSwitch(){

    // State Hook

    const [isOn, setIsOn] = useState<boolean>(false);

    function displayOnOff() : string {

        return isOn ? 'On' : "Off";

    };

    let lightSwitchClass = "LightSwitch " + (isOn ? "blueBackground" : "");

    return (

        <div className={lightSwitchClass}>

            <h1>Switch</h1>

            <p>{displayOnOff()}</p>

            <button onClick={() => setIsOn(true)}>On</button>

            <button onClick={() => setIsOn(false)}>Off</button>

        </div>

    );

};

export default LightSwitch;

**CSS: LightSwitch.css**

.LightSwitch {

    border: 3px solid black;

    max-width: 30%;

}

.blueBackground {

    background-color: blue;

    color: #fff;

}

**Function:** App.tsx

import React from 'react';

import logo from './logo.svg';

import './App.css';

import LightSwitch from './components/LightSwitch';

function App() {

  return (

    <div className="App">

      <LightSwitch />

    </div>

  );

}

export default App;