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### **Experiment 4a**

**Aim :-** To install and configure React use basic props, components, and JSX

**Theory :-**

**React :-**

1. React is a JavaScript library for building user interfaces.
2. React is used to build single-page applications.
3. React allows us to create reusable UI components.

**Props :-**

In React, the term props stands for properties, which refers to the properties of an object. This is because all elements created in React are JavaScript objects. As a result, passing data into a component is done by creating properties and values for the object. It is an object which stores the value of attributes of a tag to create reusable custom components. Props are arguments passed into React components, data with props are being passed in a unidirectional flow. (one way from parent to child).

**Components :-**

Components are independent and reusable bits of code. They serve the same purpose as JavaScript functions, but work in isolation and return HTML. Components come in two types, Class components and Function components, in this tutorial we will concentrate on Function components.

**JSX :-**

JSX is Javascript Extension, JSX allows us to write HTML elements in JavaScript and place them in the DOM without any createElement() and/or appendChild() methods. JSX converts HTML tags into react elements. JSX makes it easier to write and add HTML in React.

Bootstrap is the most popular HTML, CSS, and JavaScript framework for developing responsive, mobile-first websites. It is a free open source frontend development framework for writing faster CSS. Bootstrap makes responsive design a reality.

**Conclusion :-** Thus we have successfully implemented the nav bar using bootstrap and react.

Code :-

index.js

```
import React from "react";
import {
  Nav,
  NavLogo,
  NavLink,
  Bars,
  NavMenu,
  NavBtn,
  NavBtnLink,
} from "./NavbarElements";
function Navbar() {
  return (
    <>
      <Nav>
        <NavLogo to="/">
          Logo
        </NavLogo>
        <Bars />

        <NavMenu>
          <NavLink
            to="/"
            activeStyle={{ color: 'black' }}
          >
            Home
          </NavLink>
          <NavLink
            to="/about"
            activeStyle={{ color: 'black' }}
          >
            About
          </NavLink>
          <NavLink
            to="/contact"
            activeStyle={{ color: 'black' }}
          >
            Contact
          </NavLink>
          <NavLink
            to="/signin"
            activeStyle={{ color: 'black' }}
          >
```

```

        <NavLink>
          Sign In
        </NavLink>
        <NavBtn>
          <NavBtnLink to="/sign-up">Sign Up</NavBtnLink>
        </NavBtn>
      </NavMenu>
    </Nav>
  </>
);
}
export default Navbar;

```

```

const Home = () => {
  return (
    <h1>Welcome to my website!</h1>
  );
};

export default Home;

```

## app.js

```

import './App.css';
import { BrowserRouter, Routes, Route } from "react-router-dom";
import Navbar from "./components/Navbar";
import Home from './pages';
import About from './pages/about';
import Contact from './pages/contact';
import SignUp from './pages/signup';
import SignIn from './pages/signin';

function App() {
  return (
    <BrowserRouter>
      <Navbar />
      <Routes>
        <Route path="/" element={<Home />} />
        <Route path="/about" element={<About />} />
        <Route path="/contact" element={<Contact />} />
        <Route path="/signin" element={<SignIn />} />
        <Route path="/sign-up" element={<SignUp />} />
      </Routes>
    </BrowserRouter>
  );
}

```

```
);  
}  
  
export default App;
```

#### about.js

```
const About = () => {  
  return (  
    <div  
      style={{  
        display: 'flex',  
        justifyContent: 'center',  
        alignItems: 'center',  
        height: '10vh'  
      }}  
    >  
      <h1>About Page</h1>  
    </div>  
  );  
};  
  
export default About;
```

#### signup.js

```
const SignUp = () => {  
  return (  
    <div>  
      <h1>Sign Up and get started</h1>  
    </div>  
  )  
}  
  
export default SignUp;
```

#### contact.js

```
const Contact = () => {  
  return (  
    <div  
      style={{  
        display: 'flex',  
        justifyContent: 'center',  
        alignItems: 'center',  
        height: '100vh'  
      }}  
    >  
      <h1>Contact Us</h1>  
    </div>  
  );  
};  
  
export default Contact;
```

```

        }}
    >
    <h1>Contact Us</h1>
</div>
);
};

export default Contact;

```

signin.js

```

const SignIn = () => {
  return (
    <div>
      <h1>Sign In</h1>
    </div>
  )
}

export default SignIn;

```

Output :-

