

## Practical No.10

**Aim:** Design a web page using react

**Resources Required:** nextleap online editor for react

### Theory:

**React** is an open-source **JavaScript library** developed by **Facebook (Meta)** for building **user interfaces (UIs)**, particularly for **single-page applications (SPAs)** where performance and dynamic updates are important.

It is **component-based**, meaning the UI is divided into small, reusable parts (components), making development easier and modular.

### Advantages of React

- High performance due to **Virtual DOM**.
- Reusable components → faster development.
- Strong community and ecosystem.
- Easy integration with other libraries/frameworks.
- Supports **React Native** for mobile app development.

### Limitations of React

- Requires learning **JSX** (not pure JavaScript).
- React focuses only on the **view layer** → additional libraries are needed for **routing** (React Router) or **state management** (Redux, Context API).
- Frequent updates may confuse beginners.

### Applications of React

- **Single Page Applications (SPA)**.
- Dashboards and interactive websites.
- Social media platforms (e.g., Facebook, Instagram).
- E-commerce websites.
- Cross-platform mobile apps (React Native).

### Source Code:

```
import React from "react";
```

```
function App() {  
  return (  
    <div style={{ fontFamily: "Arial, sans-serif" }}>  
      {/* Header */}  
      <header style={{ background: "#4CAF50", padding: "20px", color: "white" }}>  
        <h1>My Simple React Page</h1>  
        <nav>  
          <a href="#home" style={{ margin: "0 15px", color: "white", textDecoration: "none" }}>Home</a>  
          <a href="#about" style={{ margin: "0 15px", color: "white", textDecoration: "none" }}>About</a>  
          <a href="#contact" style={{ margin: "0 15px", color: "white", textDecoration: "none" }}>Contact</a>  
        </nav>  
      </header>  
  
      {/* Main Content */}  
      <main style={{ padding: "20px", textAlign: "center" }}>  
        <section id="home">  
          <h2>Welcome!</h2>  
          <p>This is a simple webpage built with React.</p>  
        </section>  
  
        <section id="about" style={{ marginTop: "40px" }}>  
          <h2>About</h2>  
          <p>React makes it easy to build interactive UIs with reusable components.</p>  
        </section>  
  
        <section id="contact" style={{ marginTop: "40px" }}>  
          <h2>Contact</h2>
```

```

    <p>Email: example@email.com</p>

  </section>

</main>

  { /* Footer */ }

  <footer style={{ background: "#333", color: "white", padding: "10px", marginTop: "20px",
textAlign: "center" }}>

    <p>© 2025 My React Page</p>

  </footer>

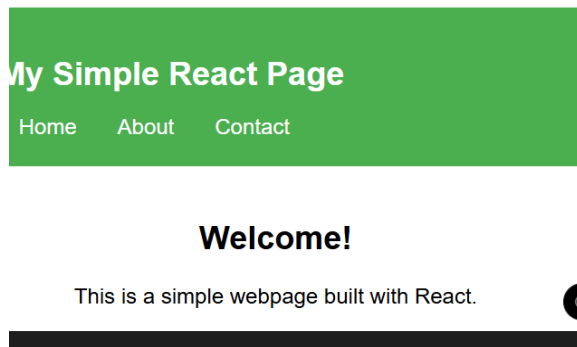
</div>

);
}

```

```
export default App;
```

### Output:



**Conclusion:** The design of the web page using React has been successfully demonstrated.