1. Explain about conditional rendering in React.
Conditional rendering in React means displaying UI elements based on certain conditions. It works the same way conditions work in JavaScript. You can use if, else, ternary operators, or && to render different components or elements depending on application state.

Example:

{isLoggedIn ? <UserPage /> : <GuestPage />}

2. Define element variables.
Element variables in React are used to store elements in variables so you can conditionally render them later.

Example:

let button;

if (isLoggedIn) {

  button = <LogoutButton />;

} else {

  button = <LoginButton />;

}

return <div>{button}</div>;

3. Explain how to prevent components from rendering.
To prevent a component from rendering, return null from its render() method or function body. This tells React to render nothing.

Example:

function WarningBanner(props) {

 if (!props.warn) {

   return null;

 }

 return <div className="warning">Warning!</div>;

}

Hands-On

Code: App.js

import React, { useState } from 'react';

import GuestPage from './GuestPage';

import UserPage from './UserPage';

function App() {

 const [isLoggedIn, setIsLoggedIn] = useState(false);

```jsx
  const handleLogin = () => setIsLoggedIn(true);

  const handleLogout = () => setIsLoggedIn(false);


  return (

    <div style={styles.container}>

      <h1>Ticket Booking App</h1>

      {isLoggedIn ? (

        <div>

          <UserPage />

          <button onClick={handleLogout}>Logout</button>

        </div>

      ) : (

        <div>

          <GuestPage />

          <button onClick={handleLogin}>Login</button>

        </div>

      )}

    </div>

  );

}


const styles = {

  container: {

    textAlign: 'center',

    marginTop: '60px',

  },

};


export default App;
```

GuestPage.js

```jsx
import React from 'react';


function GuestPage() {

  return (
```

```jsx
    <div>
      <h2>Welcome, Guest!</h2>
      <p>You can browse available flight details below:</p>
      <ul>
        <li>Flight 1: Chennai → Delhi</li>
        <li>Flight 2: Mumbai → Bangalore</li>
        <li>Flight 3: Hyderabad → Kolkata</li>
      </ul>
    </div>
  );
}

export default GuestPage;
```

UserPage.js

```jsx
import React from 'react';

function UserPage() {
  return (
    <div>
      <h2>Welcome, User!</h2>
      <p>You are logged in. Book your tickets below:</p>
      <ul>
        <li>
          Flight 1: Chennai → Delhi


        </li>
        <li>
          Flight 2: Mumbai → Bangalore


        </li>
        <li>
          Flight 3: Hyderabad → Kolkata


        </li>
```
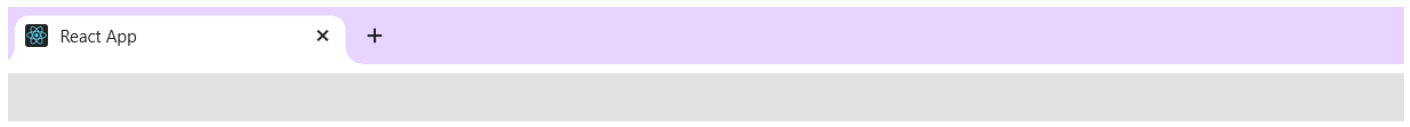
```
      </ul>
    </div>
  );
}


export default UserPage;
```

OUTPUT

Ticket Booking App

Welcome, Guest!

You can browse available flight details below:

Flight 1: Chennai → Delhi
Flight 2: Mumbai → Bangalore
Flight 3: Hyderabad → Kolkata

Login

Ticket Booking App

Welcome, User!

You are logged in. Book your tickets below:

Flight 1: Chennai → Delhi
Flight 2: Mumbai → Bangalore
Flight 3: Hyderabad → Kolkata

Logout