

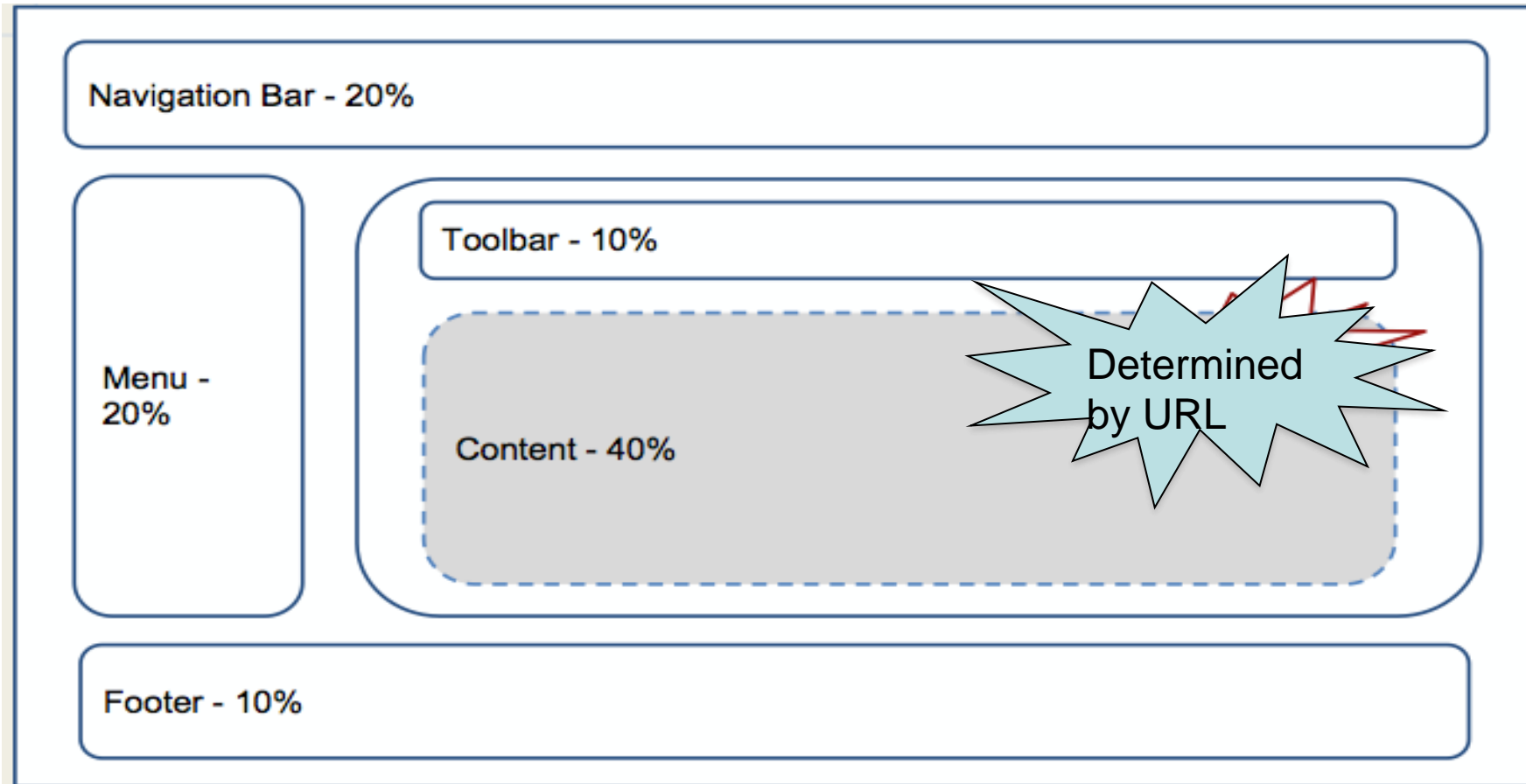
# Navigation

(Continued)

# Agenda.

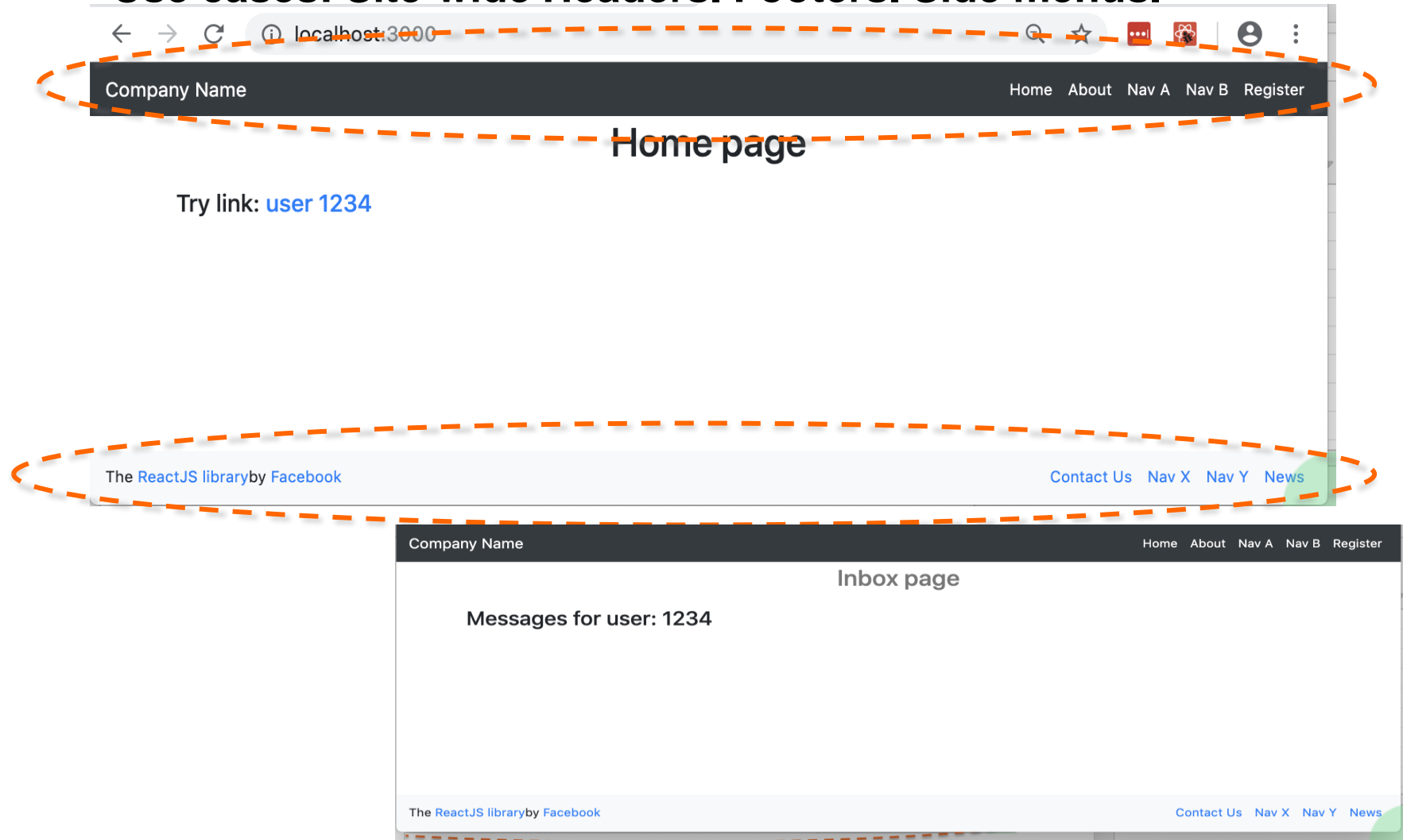
- **Navigation / Routing (Contd.)**
- **Design Patterns – The Provider Pattern**
- **Protected/Private Routes.**
  - **A use case in the Provider pattern and**

# Typical Web app layout



# Persistent elements/components

- **Use cases: Site-wide Headers. Footers. Side menus.**



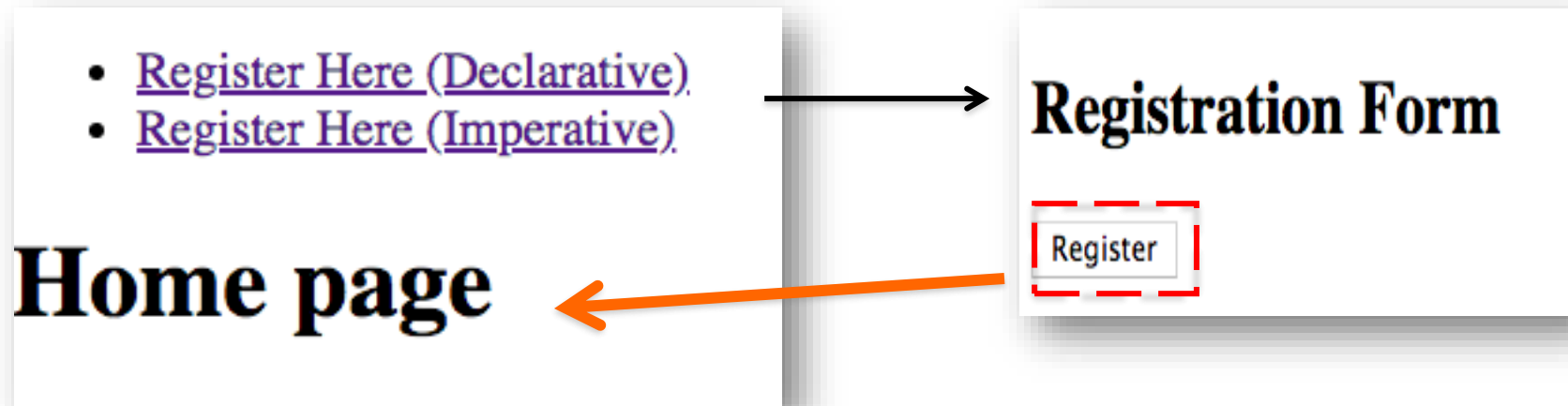
# Persistent elements/components

- **Ref.** src/sample6

```
27  const App = () => {
28    return (
29      <BrowserRouter>
30        <Header />
31        <div className="container">
32          <Routes>
33            <Route path="/about" element={<About />} />
34            <Route path="/register" element={<Register />} />
35            <Route path="/contact" element={<Contact />} />
36            <Route path="/inbox/:userId" element={<Inbox />} />
37            <Route index element={<Home />} />
38            <Route path="*" element={<Navigate to="/" replace />} />
39          </Routes>
40        </div>
41        <Footer />
42      </BrowserRouter>
43    );
44  };
```

# Programmatic Navigation.

- Perform navigation a component's JS logic.
- Two options:
  1. **Declarative** –custom state variable and <Navigate />
  2. **Imperative** – the useNavigate hook
- **EX.:** See /src/sample7/.



# Routing Summary

- **React Router package adheres to React principles:**
  - **Declarative.**
  - **Component composition.**
  - **The event → state change → re-render**
- **Package's main components - <BrowserRouter>, <Route>, <Navigate>, <Link>, <NavLink>**
- **Special hooks to allow us access routing data/methods, e.g. useParams, useNavigate, useLocation.**