



## Routing:

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- Routing is a process in which a user is directed to different pages based on their action or request.
- Routing is the ability to move between different parts of an application when a user enters a URL or clicks an element (link, button, icon, image etc) within the application.

## #React Router Installation

React contains three different packages for routing. They are:

- => react-router : the core library
- => react-router-dom : a variant of the core library meant to be used for web applications
- => react-router-native: a variant of the core library used with react native in the development of Android and iOS applications.

It is not possible to install react-router directly in your application. To use react routing, first, you need to install react-router-dom modules in your application.

```
$ npm install react-router-dom --save
```

## #Components in React Router

There are two types of router components:

- <BrowserRouter> : It is used for handling the dynamic URL.
- <HashRouter> : It is used for handling the static request.
- <Router> : <BrowserRouter> or <HashRouter>
- <Route> : It is used to define and render component based on the specified path
- <Link> : This component is used to create links which allow to navigate on different URLs and render its content without reloading the webpage.
- <NavLink> : If you want to add styling attributes to the rendered element when it matches the current URL. Then we can use NavLink
- <Switch> : The <Switch> component is used to render components only when the path will be matched. Otherwise, it returns to the not found component.
- <Redirect> : A <Redirect> component is used to redirect to another route in our application to maintain the old URLs
- <Prompt> : Used to prompt the user before navigating away from a page. When your application enters a state that should prevent the user from navigating away (like a form is half-filled out), render a <Prompt>

ex : <Router> , <Route>

```
<Router>
  <Route path="/" render={()=>(<div>Home</div>)} />
  <Route path="/contact" component={Contact} />
  <Route path="/about" component={About} />
  <Route path="/gallery" component={Gallery} />
</Router>
```

ex : <Link>, <NavLink>, <Switch> , <Redirect> , <Router>

```
<div>
  <ul>
    <li>
      <Link to="/">Home</Link>
    </li>
    <li>
      <NavLink to="/about" exact activeStyle={{ color:'green' }}>About</NavLink>
    </li>
    <li>
      <Link to="/contact">Contact</Link>
    </li>
  </ul>
  <Switch>
    <Route exact path="/" component={App} />
    <Route path="/about" component={About} />
    <Route path="/contact" component={Contact} />
  </Switch>
</div>
</Router>
```

```
<Redirect
  to={{pathname: '/login', state: {from:props.location}}}
/>
```