



# Routing



# Overview


- React Router DOM
- BrowserRouter
- Link
- Route



# Routing ?

Generally, routing is an important concept in web applications development for both backend and front end development .

Routing is a technique used to display different contents to users/views of our application based on the link the click - like home,about us or contacts- or the url they supply.



## Routing - meaning

For instance entering `codetraingh.com` and `codetraingh.com/program` will both display different content.

That's how routing works.

Simply put, routing means showing users different content to your users for different links or urls.



## SPA and Routing

In SPA routing works differently because there are not pages to navigate to but components to display.

The idea is not to go to a different page when the url or link changes. But to display different component when the link/url changes.

Since we are not loading new pages from the server, we cannot use the regular browser navigation but need to provide one ourselves.

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# React Router



## React Router - to the rescue

React router is a React library that provides routing capabilities to our React app.

React router comes in two packages one for React Native and Reactjs called react-router-dom on NPM.

Run the command below to install react router

```
yarn add react-router-dom
```



## React Router - in parts

React router has 3 major parts of concern:

1. **BrowserRouter** - indicates that part of your app where routing should happen. Usually it wraps around you entire application.
2. **Route** - specifies which component to display/render for a specified/given route
3. **Link**- used to manipulate/change the current url/link of your app.





## React Router - in action

To put React router into full action we will need to combine all the parts of React router together.

First of all we will import BrowserRouter as Router, Route and Link into our project.

Second, we will wrap our entire components in Router and wrap our anchor tags in Link.

Finally, each component will be wrapped with Route.



## React Router - example

For the purpose of this exercise, we will assume there exists three components ( HomeComponent, AboutComponent and ContactComponent).

Add this line to import React router parts into your app

```
Import {BrowserRouter as Router, Route, Link} from "react-router-dom"
```

*NB: Only the codes that will be returned in App() (app.js file) will be shown in this example steps.*



## React Router - step 1

```
<Router>  
  
<div>  
  
  {/** Steps 2 and 3 will be here*/}  
  
</div>  
  
</Router>
```

*NB: {/\*\* \*/} is a React comment*

## React Router - Step 2

```
<Router>
  <div>
    <Link to="/home">Home</Link>
    <Link to="/about">About</Link>
    <Link to="/contact">Contact</Link>
    {/** Step 3 will continue here. Make sure to put step here*/}
  </div>
</Router>
```



## React Router - Step 3

```
<Route exact={true} path="/" component={HomeComponent} />  
<Route exact={true} path="/about" component={AboutComponent} />  
<Route exact={true} path="/contact" component={ContactComponent} />
```



## React Router - Link and Route attributes

- to - this takes a url as value and changes the browser url when it is clicked
- path - this indicates the browser url path Route should be invoked for.
- component - this indicates the component the route should render when invoked.
- exact - this indicates that a route should only be invoked if the browser url matches its path value exactly.

# Let's work with react router

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## Exercise 1: instructions

1. Open your terminal or cmd. Make sure it points to you React app directory.
2. Run *yarn add react-router-dom*
3. In you app.js file, create 3 components ( HomeComponent, AboutComponent, ContactComponent) below the App componentthat return JSX of your choice.
4. Follow the example, and add routing to you application



## Exercise 2: Instructions

1. Create a create app
2. Add react router dom
3. In you app.js file, create five components each represent sections of a standard five page website. (home, about us, contacts, services, portfolio)
4. Compose all the components in App component and add routing. Dont forget the 3 parts of routing BrowserRouter, Link and Route