Saturday, 2 September 2023

Components & Props

Components are the building blocks of a React application. They represent different parts of a user interface and encapsulate the logic and rendering for those parts.

We generally divide our whole website into small blocks knows as components. Like for a simple webpage Header, body & Footer can be 3 different components. Combining these 3 components will give the whole page.

So idea in react is to divide project into components and make these components highly re-usable so that these can be used in other projects also. Like Navbar component of one project you can use in some other project so it saves time as well as effort.

Technically components is simply a function that will return you JSX.

React Components can only return a single jsx element. Means if you want to return multiple things from component first you have to wrap them under a single parent and then you can return that parent

1. Components are javascript function which will return you jsx.

```jsx
export default function Navbar() {
  return (
    <nav className="navbar navbar-expand-lg navbar-dark ">
    <Link className="navbar-brand" to="/">
      MySHOP
    </Link>
    <button
      className="navbar-toggler"
      type="button"
      data-bs-toggle="collapse"
      data-bs-target="#navbarToggleDemo2"
      aria-controls="navbarSupportedContent"
      aria-expanded="false"
      aria-label="Toggle navigation"
    >
      <span className="navbar-toggler-icon" />
    </button>

  </nav>
  )
}
```
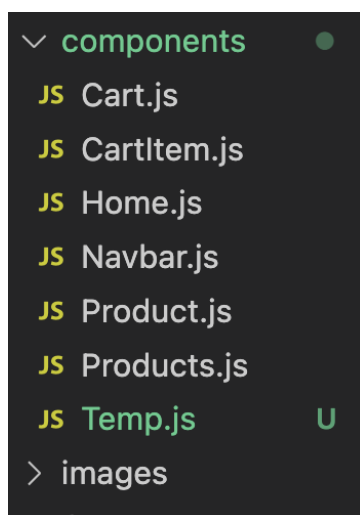
2. Creating a component is not enough we have to export it also so that it can be reused in other files by importing.

```
10    import Navbar from './components/Navbar';
11
```

3. Components are used like jsx elements

```
return (
    <div>
        <Navbar />
    </div>

);
}
```

Good practice is to create a separate components folder and store all your component files in that folder only. The name of file must start with Capital letter.

```
∨ components            ●
  JS  Cart.js
  JS  CartItem.js
  JS  Home.js
  JS  Navbar.js
  JS  Product.js
  JS  Products.js
  JS  Temp.js          U
  > images
```

Read More about Components

https://www.w3schools.com/react/react_components.asp

Props

Props are the way to pass data to components. Props allows you to send any kind of data from parent to child component. Props makes the component completely reusable.
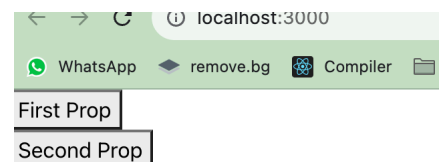
Technically props are just parameters of the function. You have to fullfill these props while using a component.

As you can see in following example we are passing the text button component using props. So that every time you use this component it can have different text.

```
1   import React from 'react'
2
3   export default function Button({content}) {
4     return (
5       <div>
6           <button>{content}</button>
7       </div>
8     )
9   }
0
```

How to fullfill props while using component ?

```
import React from 'react'
import Button from './components/Button'
export default function App() {
  return (
    <div>
      <Button content="First Prop" />
      <Button content="Second Prop" />
    </div>
  )
}
```

In props you can pass anything like number, boolen, strings, objects , array etc.

Read More at: https://www.w3schools.com/react/react_props.asp