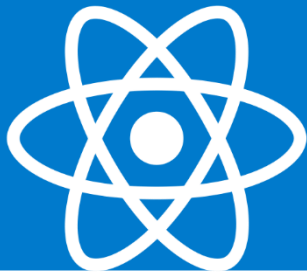




React JS Props

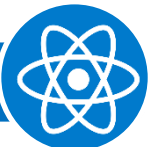
#React Notes

| React Props



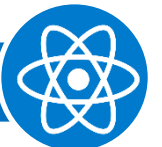
Index

- Props
- Default Props
- Children
- Props Types
- Destructuring **of** Props



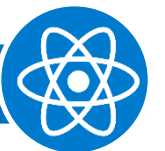
What is Props (Properties) ?

- **“Props”** is a special keyword in React, which stands for **properties** and is being used for **passing data from one component to another component** .
- But the important part here is that data with props are being passed in a **uni-directional flow**.
- one way from **parent to child**
- Props is Read-only and case sensitive.



Cont.

- Props are passed to the component in the same way as arguments passed in a function.
- They are single values or objects containing a set of values that are passed to React Components on creation using a naming convention similar to HTML-tag attributes.
 - `<input type='text' name='txt1'/>`
- Furthermore, **props data is read-only**, which means that data coming from the parent **should not** be changed by child components.
- props make it possible to **share the same data across the components** that need them.
- We can define multiple props in same component.



Props Syntax

■ Define Props

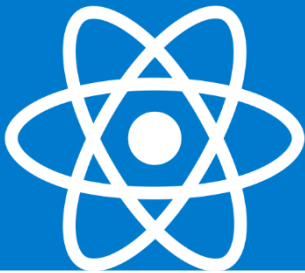
- Syntax :
 - `<ComponentName property='value'/>`
- Example
 - `<App firstname='Akash'/>`
 - Note: Firstname is Props and value is Akash

■ Access Props Value

- Class component
 - `{this.props.firstname}`
- Function component
 - `{props.firstname}`

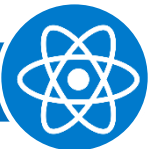


| Props Example

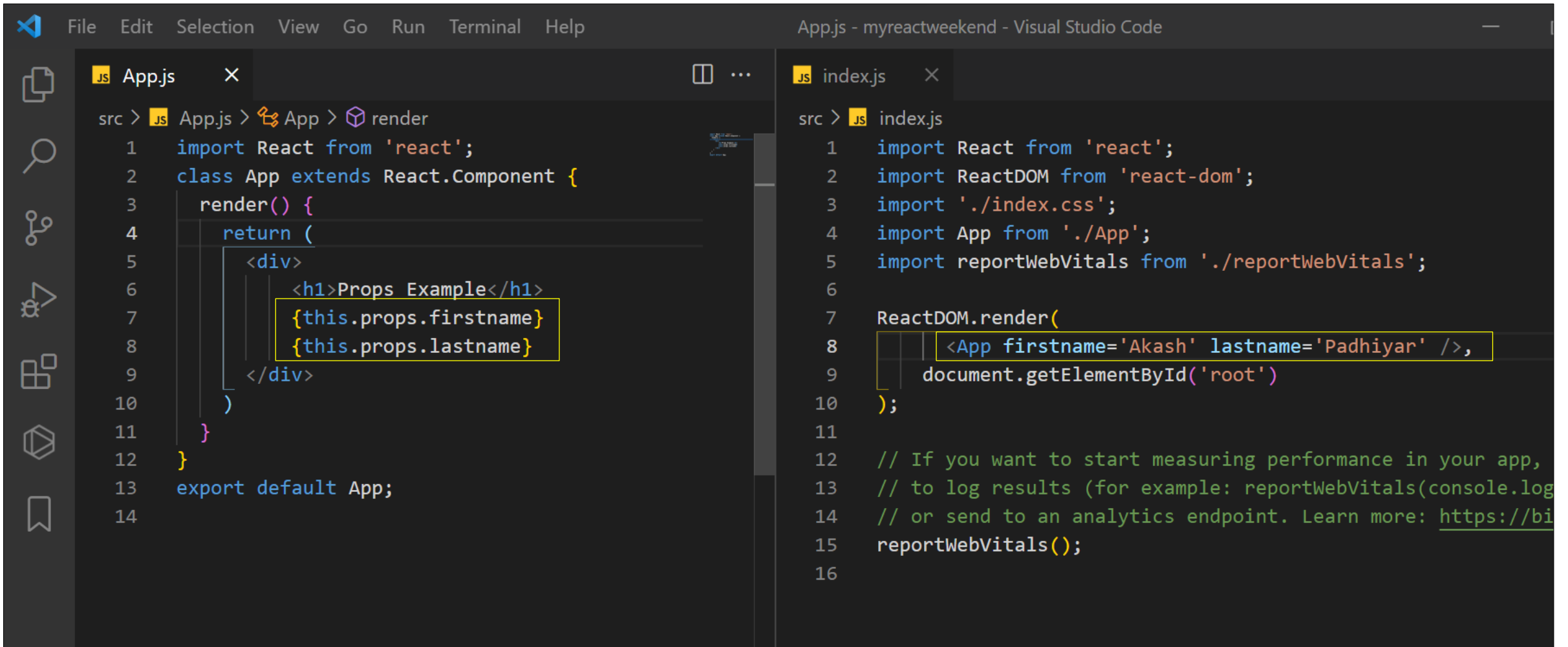


Props in Component

- We will have Demonstration on How to Pass Props in Class Component using Props.



Class Component Props Example



```
App.js
src > JS App.js > App > render
1 import React from 'react';
2 class App extends React.Component {
3   render() {
4     return (
5       <div>
6         <h1>Props Example</h1>
7         {this.props.firstname}
8         {this.props.lastname}
9       </div>
10    )
11  }
12 }
13 export default App;
14

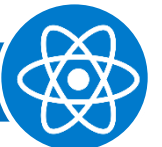
index.js
src > JS index.js
1 import React from 'react';
2 import ReactDOM from 'react-dom';
3 import './index.css';
4 import App from './App';
5 import reportWebVitals from './reportWebVitals';
6
7 ReactDOM.render(
8   <App firstname='Akash' lastname='Padhiyar' />,
9   document.getElementById('root')
10 );
11
12 // If you want to start measuring performance in your app,
13 // to log results (for example: reportWebVitals(console.log
14 // or send to an analytics endpoint. Learn more: https://bi
15 reportWebVitals();
16
```

Note : Use Class Component

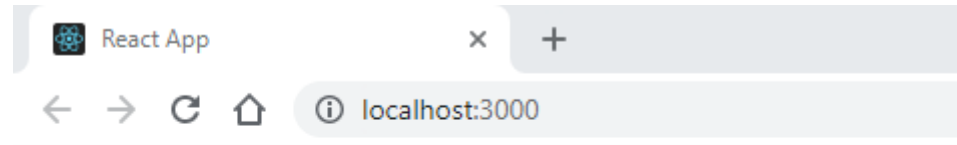


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www.akashsir.com

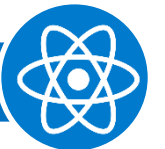


Output



Props Example

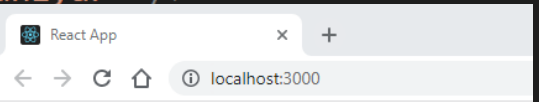
AkashPadhiyar



Function Component Example

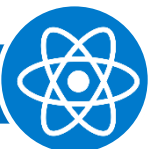
```
JS App.js M X
src > JS App.js > [default]
1 function App(props) {
2   return (
3     <div>
4       <h1>Props Example</h1>
5       {props.firstName}
6       {props.lastName}
7     </div>
8   );
9 }
10 export default App;
11

JS index.js M X
src > JS index.js > ...
1 import React from 'react';
2 import ReactDOM from 'react-dom/client';
3 import './index.css';
4 import App from './App';
5 import reportWebVitals from './reportWebVitals';
6 const root = ReactDOM.createRoot(document.getElementById('root'));
7 root.render(
8   <React.StrictMode>
9     <App firstName="Akash" lastName="Padhiyar" />
10   </React.StrictMode>
11 );
```

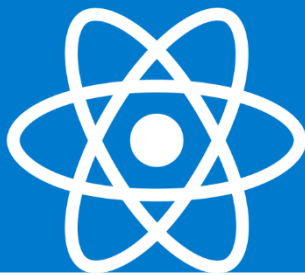


Props Example

AkashPadhiyar



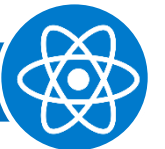
| Default Props



Default Props

- We can also specify Default Props using below method
- Use Component name.defaultProps

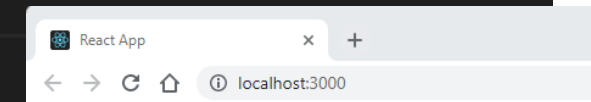
```
App.defaultProps = {  
  name: "React JS",  
}
```



Default Props (FC)

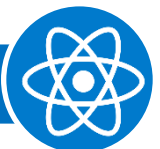
```
JS App.js M X
src > JS App.js > App > defaultProps
1 function App(props) {
2   return (
3     <div>
4       <h1>Props Example</h1>
5       {props.firstName}
6       {props.lastName}
7     </div>
8   );
9 }
10 App.defaultProps = {
11   firstName : "React"
12 }
13 export default App;
14

JS index.js M X
src > JS index.js > ...
1 import React from 'react';
2 import ReactDOM from 'react-dom/client';
3 import './index.css';
4 import App from './App';
5 import reportWebVitals from './reportWebVitals';
6
7 const root = ReactDOM.createRoot(document.getElementById('root'));
8 root.render(
9   <React.StrictMode>
10     <App lastName="Padhiyar" />
11   </React.StrictMode>
12 );
13
14
```

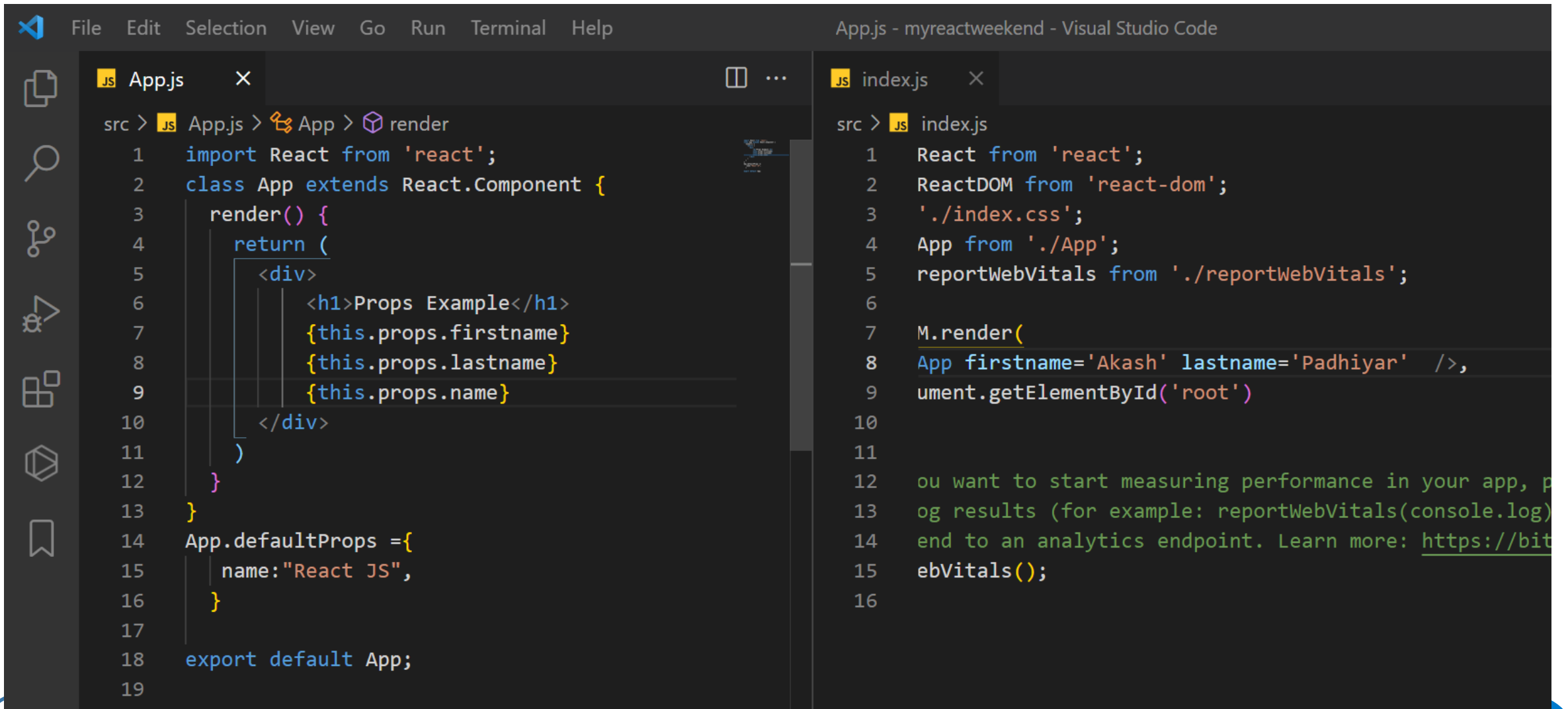


Props Example

ReactPadhiyar



Default Props (CC)



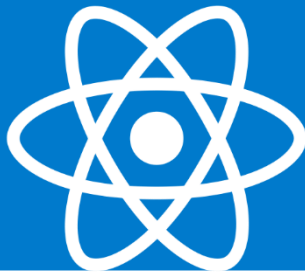
```
File Edit Selection View Go Run Terminal Help

App.js - myreactweekend - Visual Studio Code

src > JS App.js > App > render
1 import React from 'react';
2 class App extends React.Component {
3   render() {
4     return (
5       <div>
6         <h1>Props Example</h1>
7         {this.props.firstname}
8         {this.props.lastname}
9         {this.props.name}
10      </div>
11    )
12  }
13 }
14 App.defaultProps = {
15   name: "React JS",
16 }
17
18 export default App;
19

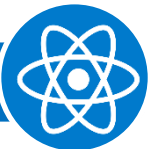
src > JS index.js
1 React from 'react';
2 ReactDOM from 'react-dom';
3 './index.css';
4 App from './App';
5 reportWebVitals from './reportWebVitals';
6
7 M.render(
8   App firstname='Akash' lastname='Padhiyar' />,
9   ument.getElementById('root')
10
11
12 ou want to start measuring performance in your app, p
13 og results (for example: reportWebVitals(console.log)
14 end to an analytics endpoint. Learn more: https://bit
15 ebVitals();
16
```

| Children



What are children?

- Children method display whatever is included in between the opening and closing tags while invoking the component.
- The component would usually be invoked from App component.



Syntax

- **Syntax**

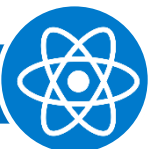
- `<ComponentName> Content </ComponentName>`

- **Define Children Value**

- `<App>I am Center Data</App>`

- **Access Props Value**

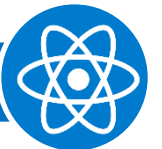
- Class component
 - `{this.props.children}`
- Function component
 - `{props.children}`



Class Component Children

```
JS App.js  ×
src > JS App.js > App > render
1  import React from 'react';
2  class App extends React.Component {
3    render() {
4      return (
5        <div>
6          <h1>Children Example</h1>
7          {this.props.children}
8        </div>
9      )
10    }
11  }
12
13  export default App;
14
15
16
17

JS index.js  ×
src > JS index.js
1  import React from 'react';
2  import ReactDOM from 'react-dom';
3  import './index.css';
4  import App from './App';
5  import reportWebVitals from './reportWebVitals';
6
7  ReactDOM.render(
8    <App>Hello I am App Component Content </App>,
9    document.getElementById('root')
10 );
11
12  // If you want to start measuring performance in your app, pa
13  // to log results (for example: reportWebVitals(console.log))
14  // or send to an analytics endpoint. Learn more: https://bit.
15  reportWebVitals();
16
```



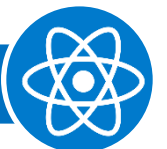
Children Example in Functional Component

```
Js App.js M X
src > Js App.js > App
1 function App(props) {
2   return (
3     <div>
4       <h1>Children Example</h1>
5       {props.children}
6     </div>
7   );
8 }
9 export default App;
10

Js index.js M X
src > Js index.js > ...
1 import React from 'react';
2 import ReactDOM from 'react-dom/client';
3 import './index.css';
4 import App from './App';
5 import reportWebVitals from './reportWebVitals';
6
7 const root = ReactDOM.createRoot(document.getElementById('root'));
8 root.render(
9   <React.StrictMode>
10     <App>I am App Component Content </App>
11   </React.StrictMode>
12 );
13
React App
localhost:3000
```

Children Example

I am App Component Content



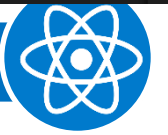
Load Component as Children

```
src > JS App.js > App
1 import React from "react";
2 class App extends React.Component {
3   render() {
4     return (
5       <>
6         <h1>Hello React</h1>
7         {this.props.children}
8       </>
9     )
10  }
11 }
12 export default App;
```

```
src > JS Header.js > Header > render
1 import React from "react";
2
3 class Header extends React.Component {
4   render() {
5     return (
6       <>
7         <h1>AkashSir.com</h1>
8       </>
9     )
10  }
11 }
12
13 export default Header;
```

```
src > JS index.js
1 import React from 'react';
2 import ReactDOM from 'react-dom';
3 import './index.css';
4 import App from './App';
5 import Header from './Header';
6
7 import reportWebVitals from './reportWebVitals';
8
9 ReactDOM.render(
10   <React.StrictMode>
11     <App> <Header/> </App>
12   </React.StrictMode>,
13   document.getElementById('root')
14 );
15
16 // If you want to start measuring performance in your app,
17 // to log results (for example: reportWebVitals) or send to an
18 // analytics endpoint. Learn more: https://developers.google.com/web/tools/lighthouse/
19 reportWebVitals();
20
```

React App
localhost:3000
Hello React
AkashSir.com



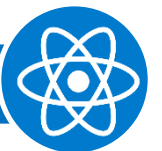
All in One Example

```
JS Home.js U x ... JS App.js M x
src > JS Home.js > Home > constructor
1 function Home(props) {
2   var a = parseInt(props.value1);
3   var b = parseInt(props.value2);
4   return (
5     <>
6     {props.children}
7     <br/>
8     A Value is {a} <br/>
9     B Value is {b} <br/>
10    C Value is {a+b} <br/>
11  )
12  </>
13 );
14 }
15
16 Home.defaultProps = {
17   value1 : 0
18 }
19 export default Home;

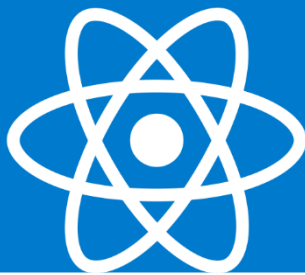
src > JS App.js > ...
1 import Home from './Home';
2 import React from 'react';
3 function App(props) {
4   return (
5     <div>
6
7     <Home value1="10" value2="20" >Sum of 2 Number</Home>
8
9     </div>
10  );
11 }
12 export default App;
13
```

React App
localhost:3000

Sum of 2 Number
A Value is 10
B Value is 20
C Value is 30

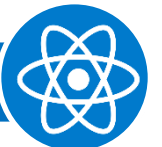


Deconstructing of Props



Destructuring of Props

- Destructuring is a characteristic of JavaScript, It is used to take out sections of data from an array or objects, We can assign them to new own variables created by the developer.



Props Value Access

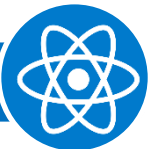
```
JS App.js X
src > JS App.js > ...
1 import React from "react";
2 function App(props) {
3   return (
4     <>
5       FirstName : {props.firstname} <br/>
6       LastName : {props.lastname}<br/>
7       Mobile : {props.mobile}
8     </>
9   )
10 }
11 export default App;
12
```

```
JS index.js X
src > JS index.js > ...
1 import React from 'react';
2 import ReactDOM from 'react-dom/client';
3 import './index.css';
4 import App from './App';
5 import reportWebVitals from './reportWebVitals';
6
7 const root = ReactDOM.createRoot(document.getElementById('root'));
8 root.render(
9   <React.StrictMode>
10     <App firstname="Akash" lastname="Padhiyar" mobile="9978621654" />
11   </React.StrictMode>
12 );
13
14
```

React App

localhost:3000

FirstName : Akash
LastName : Padhiyar
Mobile : 9978621654



With Destructuring

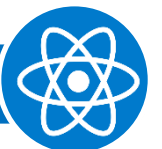
```
JS App.js ×
src > JS App.js > [⌕] default
1  import React from "react";
2  function App(props) {
3
4      const {firstname, lastname, mobile} = props;
5
6      return (
7          <>
8              FirstName : {firstname} <br/>
9              LastName : {lastname}<br/>
10             Mobile : {mobile}
11          </>
12      )
13  }
14  export default App;
15
```

```
JS index.js ×
src > JS index.js > ...
1  import React from 'react';
2  import ReactDOM from 'react-dom/client';
3  import './index.css';
4  import App from './App';
5  import reportWebVitals from './reportWebVitals';
6
7  const root = ReactDOM.createRoot(document.getElementById('root'));
8  root.render(
9      <React.StrictMode>
10         <App firstname="Akash" lastname="Padhiyar" mobile="9978621654" />
11     </React.StrictMode>
12 );
```

React App × +

localhost:3000

FirstName : Akash
LastName : Padhiyar
Mobile : 9978621654

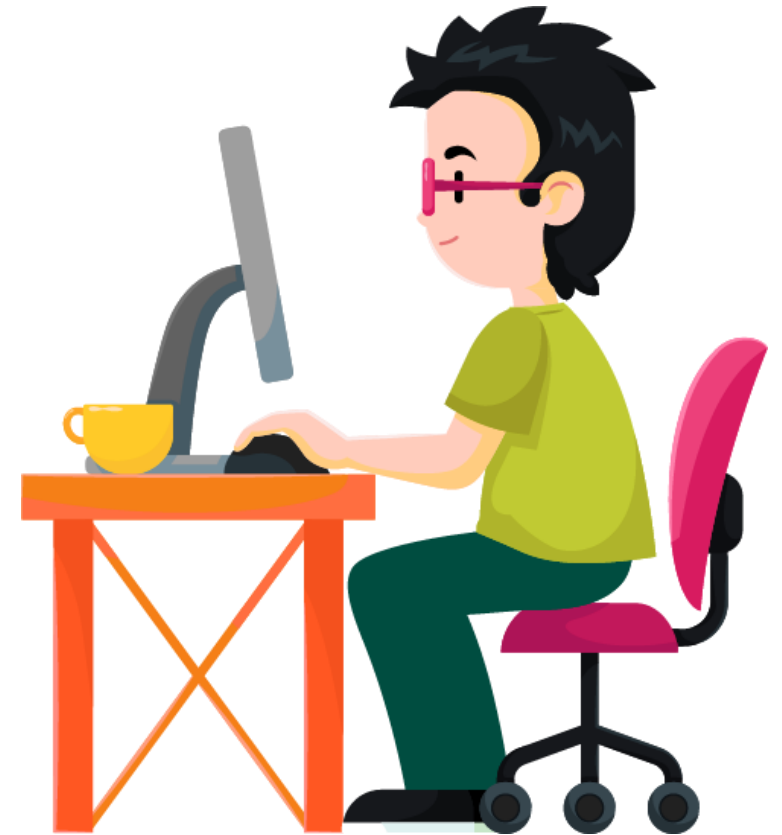


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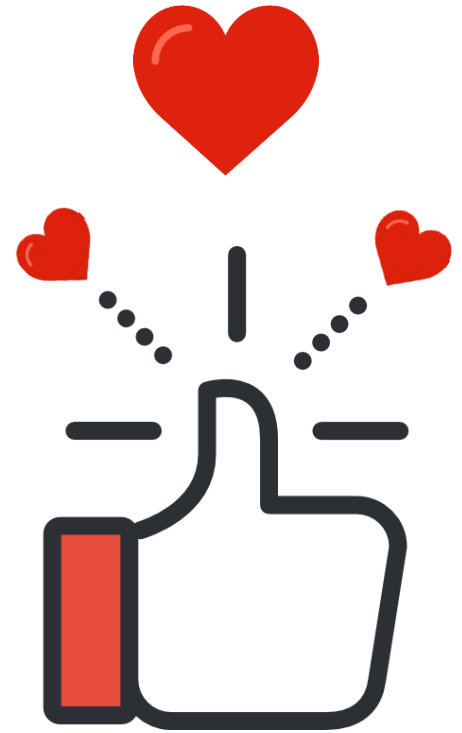
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