

REACT JS

INTRODUCTION



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swapnilsagar



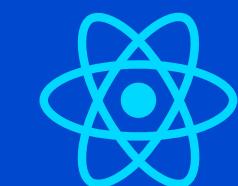
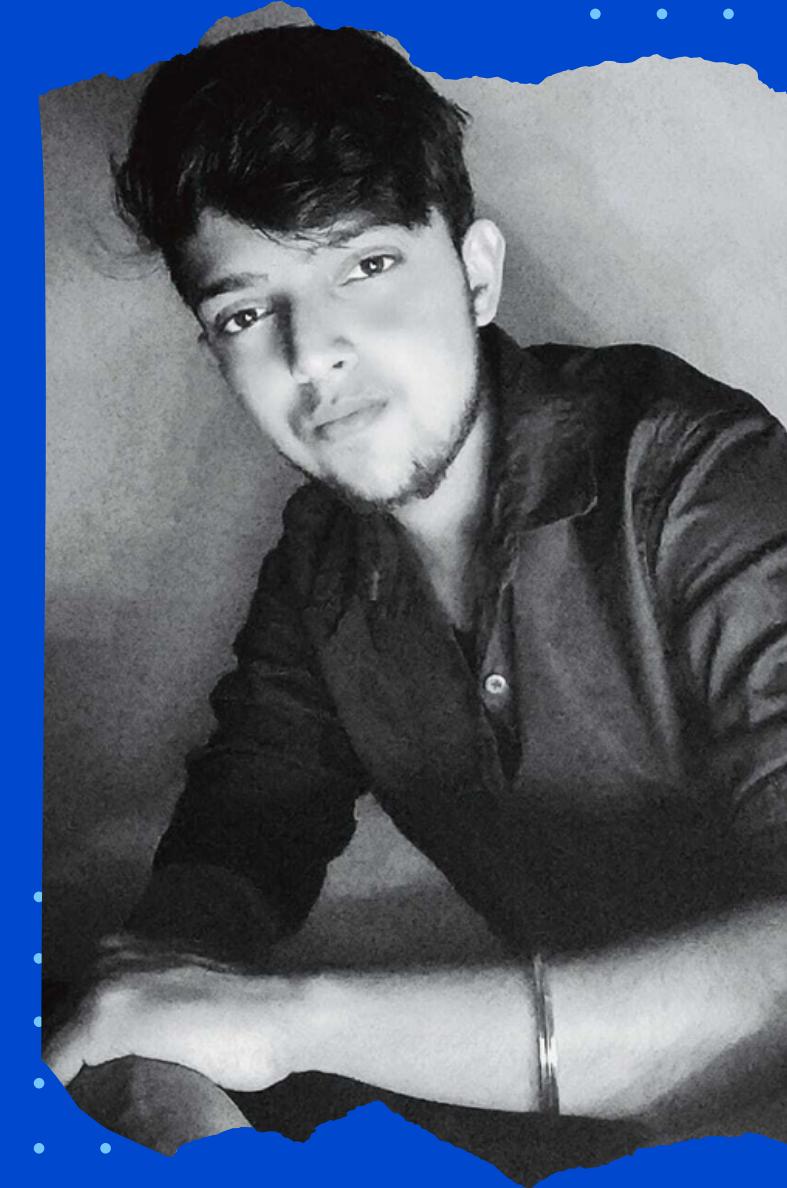
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React



Basic Learning Path...

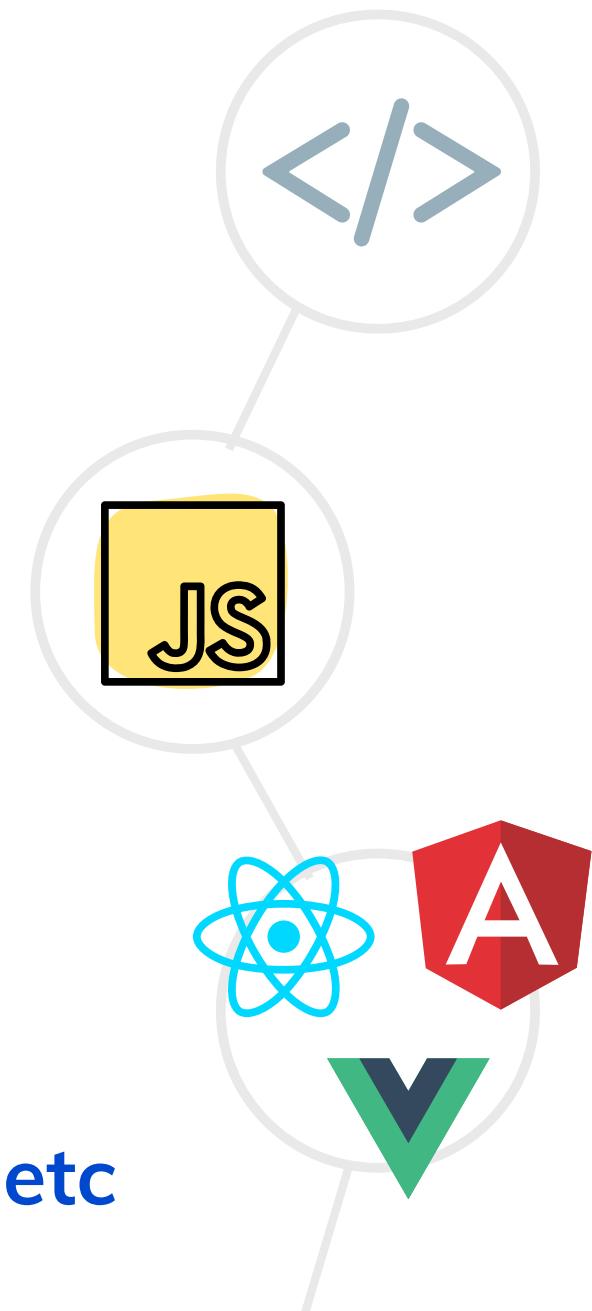
Progressive uphill approach..

1 STEP AT A TIME..

Step 1
HTML / CSS

Step 2
JavaScript

Step 3
**Lib / Frameworks like
React, Angular, VUE, etc**



Next steps



Prerequisites

Things to know before starting React.

MUST KNOW . . .

First:

Basic knowledge of HTML, CSS, and JavaScript.

Second:

Basic understanding of ES6 features.

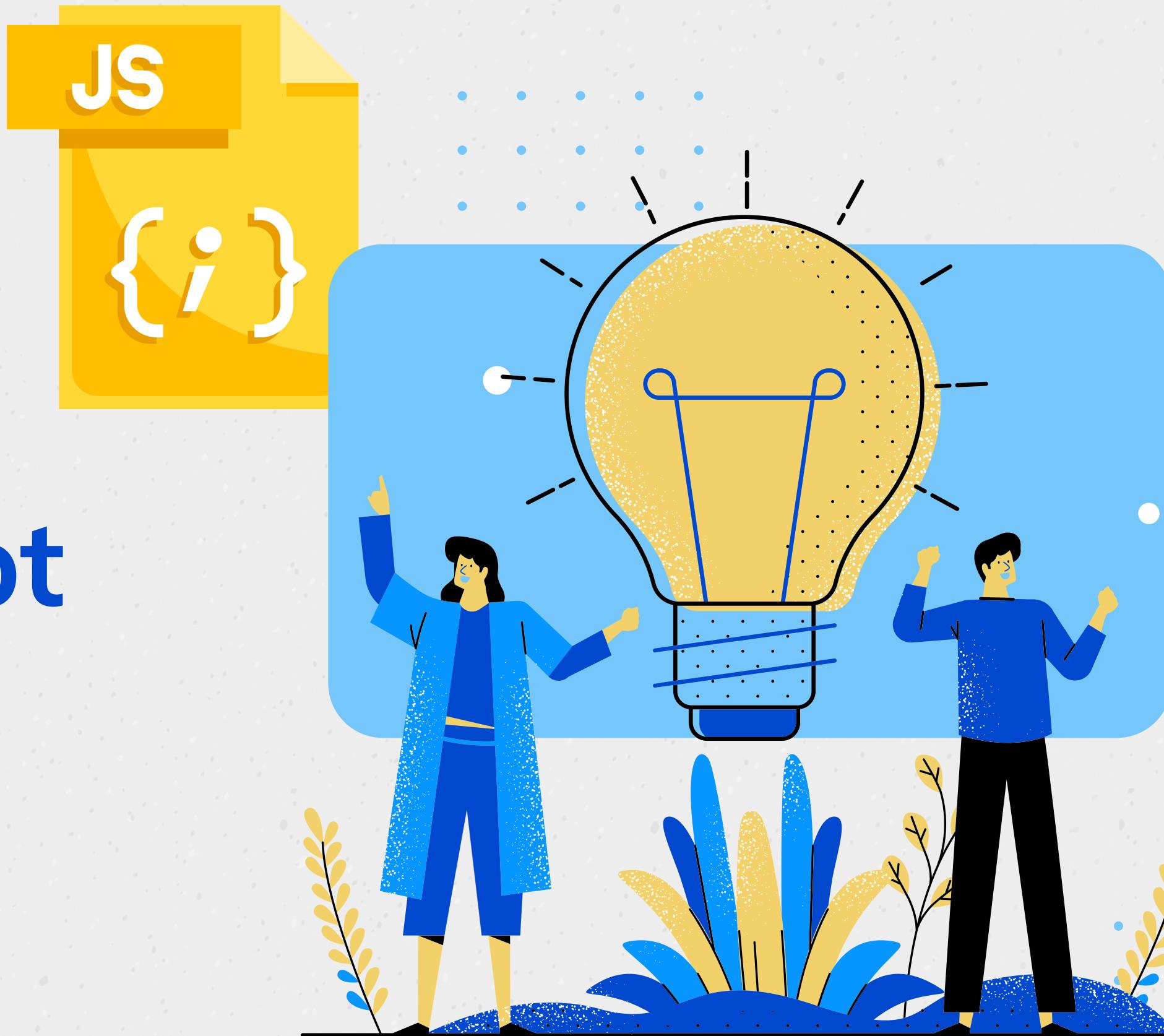
Third:

Basic understanding of how to use Node Packages (npm) and install them using CLI.



ES6 JavaScript

Js for frontend.



YE BHI ZARURI H...



ECMAScript 6

It is a significant update to
JavaScript with many useful
features ->

ECMA. : .

Some of the ES6 features
which are used in React are-

- Let
- Const
- Arrow functions
- Maps
- Default Function Parameters
- Many more...



Arrow Function ➔

```
// Old Syntax  
function oldOne() {  
  console.log("Hello World..!");  
}
```

```
// New Syntax  
var newOne = () => {  
  console.log("Hello World..!");  
}
```

There are two parts of the syntax.

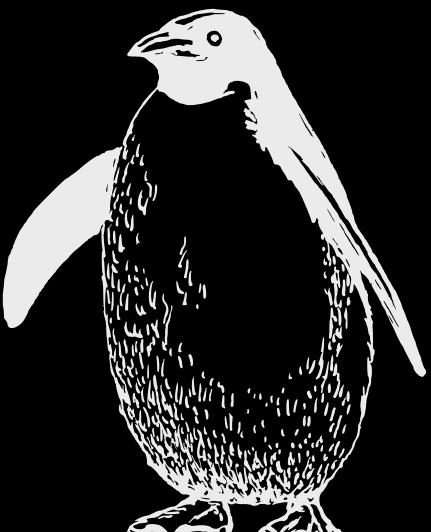
The first part is just declaring a variable and assigning the function (i.e) () to it. It just says the variable is actually a function.

Then the second part is declaring the body part of the function. The arrow part with the curly braces defines the body part.

| Map()

The map() method creates a new array with the results of calling a function for every array element.

```
var numbers = [4, 9, 16, 25];
var x = numbers.map(Math.sqrt)
console.log(x);
```



npm / npx

These stands for Node Package Manager and Node Package Executive. These are node package installers using CLI to install react packages and dependencies.

Some important npm/npx commands for React installation are:

```
FILM KJ188 PLUS      040812      FILM KJ188 PLUS  
  
npx create-react-app my-app  
  
npm start  
  
npm run build  
  
20A ► 20 ► 21A ► 21 ►
```



What is React

A JavaScript library for building user interfaces

REACT INTRO . . .

What it does?

Renders your UI and responds to events.

What is uses ?

It also uses the concept called Virtual DOM, creates an in-memory data structure cache, enumerates the resulting differences, and then updates the browser's displayed DOM efficiently.

How it helps?

It makes web page rendering much faster.



Used By..

React is developed by Facebook and adapted by many tech giants..

facebook®



Instagram



KHANACADEMY

asana:

TERADEK

NETFLIX

 **reddit**

 **airbnb**

Features of React

JSX

JAVASCRIPT XML - IT IS USED WITH REACT TO DESCRIBE WHAT THE USER INTERFACE SHOULD LOOK LIKE. BY USING JSX, WE CAN WRITE HTML STRUCTURES IN THE SAME FILE THAT CONTAINS JAVASCRIPT CODE.

VDOM

REACT KEEPS A LIGHTWEIGHT REPRESENTATION OF THE "REAL" DOM IN THE MEMORY, AND THAT IS KNOWN AS THE "VIRTUAL" DOM (VDOM).

Components

COMPONENTS ARE THE BUILDING BLOCKS OF ANY REACT APPLICATION, AND A SINGLE APP USUALLY CONSISTS OF MULTIPLE COMPONENTS.

Components

Legos of React

COMPONENTS : :

Components are the building blocks of any React app and a typical React app will have many of these. Simply put, a component is a JavaScript class or function that optionally accepts inputs i.e. properties(props) and returns a React element that describes how a section of the UI (User Interface) should appear.

These independent and reusable bits of code. They serve the same purpose as JavaScript functions, but work in isolation and return HTML via a render() function.



Let's See how it looks in a website

The screenshot shows the Airbnb homepage with a blue header and a white main content area.

Header:

- airbnb logo
- Search bar with placeholder "Start your search" and a magnifying glass icon
- Become a host button
- User profile icon

Explore Nearby Section:

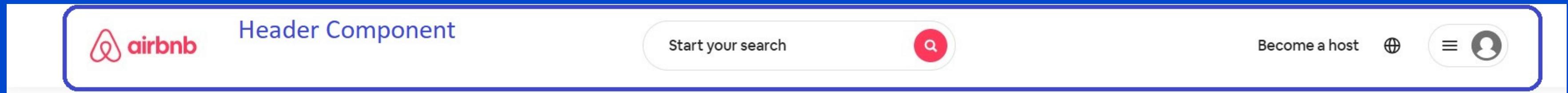
Live anywhere Section:

Four images of unique Airbnb listings are shown in a row:

- A modern wooden cabin in a forest setting.
- A floating house on a body of water.
- A large, modern A-frame cabin with a prominent triangular roof and a chimney.
- A black pug dog sitting on a bed in a bedroom.

Reacts POV..

Header Component



Start your search Search icon

Become a host Globe icon

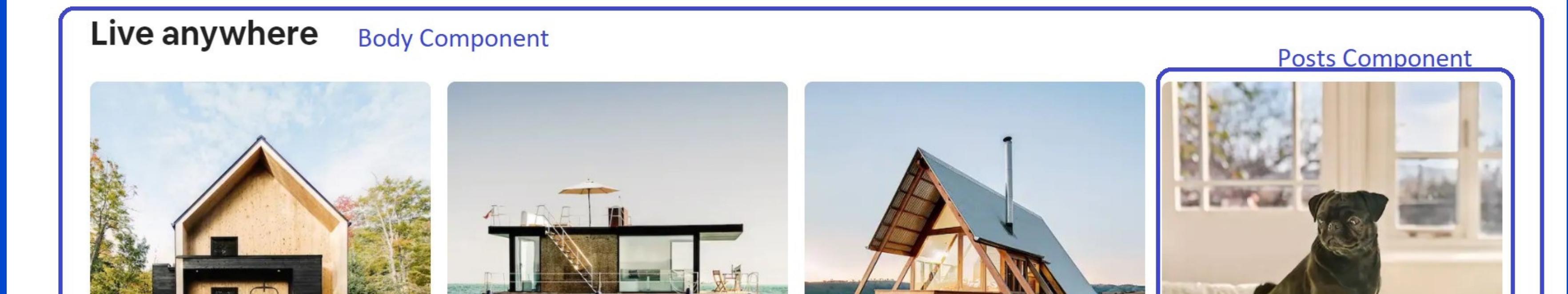
User icon

Explore Nearby Top Component

 Lonavla 45-minute drive	 Calangute 6.5-hour drive	 Alibag 2-hour drive	 Panchgani 2.5-hour drive
 Mumbai 2-hour drive	 Candolim 6.5-hour drive	 Igatpuri 3-hour drive	 Gokarna 8-hour drive

Location Component

Live anywhere Body Component

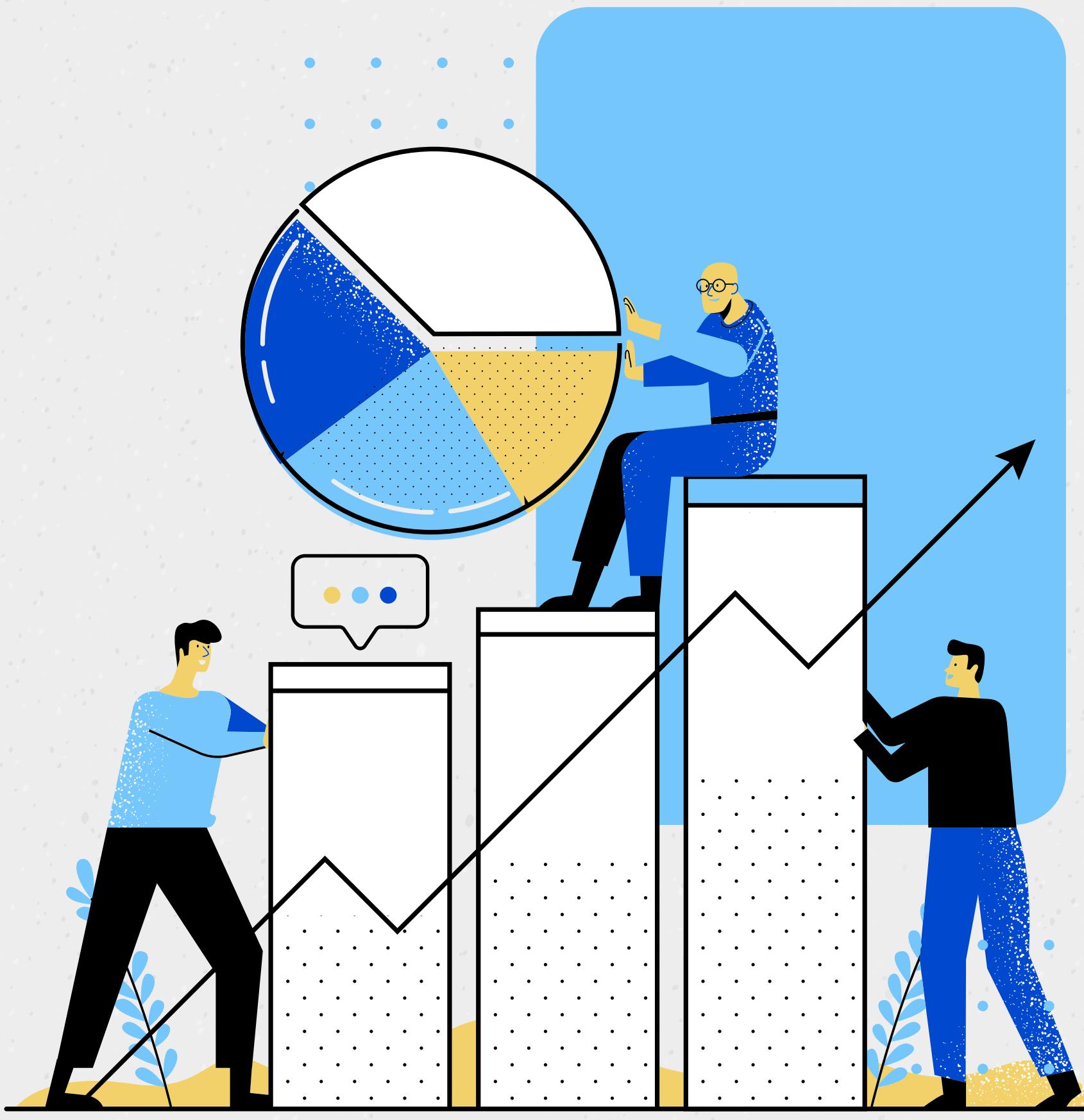


Posts Component

Types of Components...

There are two types of Components in React

- Functional Components
- Class Components



USE IT WISELY...

Functional Components

Stateless Component

WHAT IS IT...

In simple words, Functional components are javascript functions. By writing a javascript function, we can create a functional component in React Apps. To make React app efficient, we use functional component only when we are sure that our component does not require to interact with any other components.

EXAMPLE:

```
function Title()
{
    return <h1>I am Title</h1>;
}
```

...
...



Class Components

Stateful Component

WHAT IS IT...

The class components are similar to the functional component but has some additional features that makes class component a little more complex than the functional components. The functional components do not care about the other components in your app whereas the class components can work with each other. We can pass data from one class component to other class component.

EXAMPLE:

```
class Title extends React.Component
{
  render() {
    return <h1>I am Title</h1>;
  }
}
```

When to Use..

Class Components

need to manage local state



need to add lifecycle methods to your component



need to add logic for event handlers



Functional Components



Otherwise Use It..



Props

Or Properties..

WHAT IS IT...

Props are React's way of making components easily and dynamically customizable. They provide a way of passing properties/data down from one component to another, typically from a parent to a child component (unidirectional dataflow).

accessed via `this.props`

EXAMPLE:

```
const Greeting = props => <h1>Hello {props.name}</h1>;
ReactDOM.render(
  <Greeting name={'Edmond'} />,
  document.getElementById('root')
);
```

States

Or Properties..

WHAT IS IT...

The heart of every React component is its “state”, an object that determines how that component renders & behaves. In other words, “state” is what allows you to create components that are dynamic and interactive.

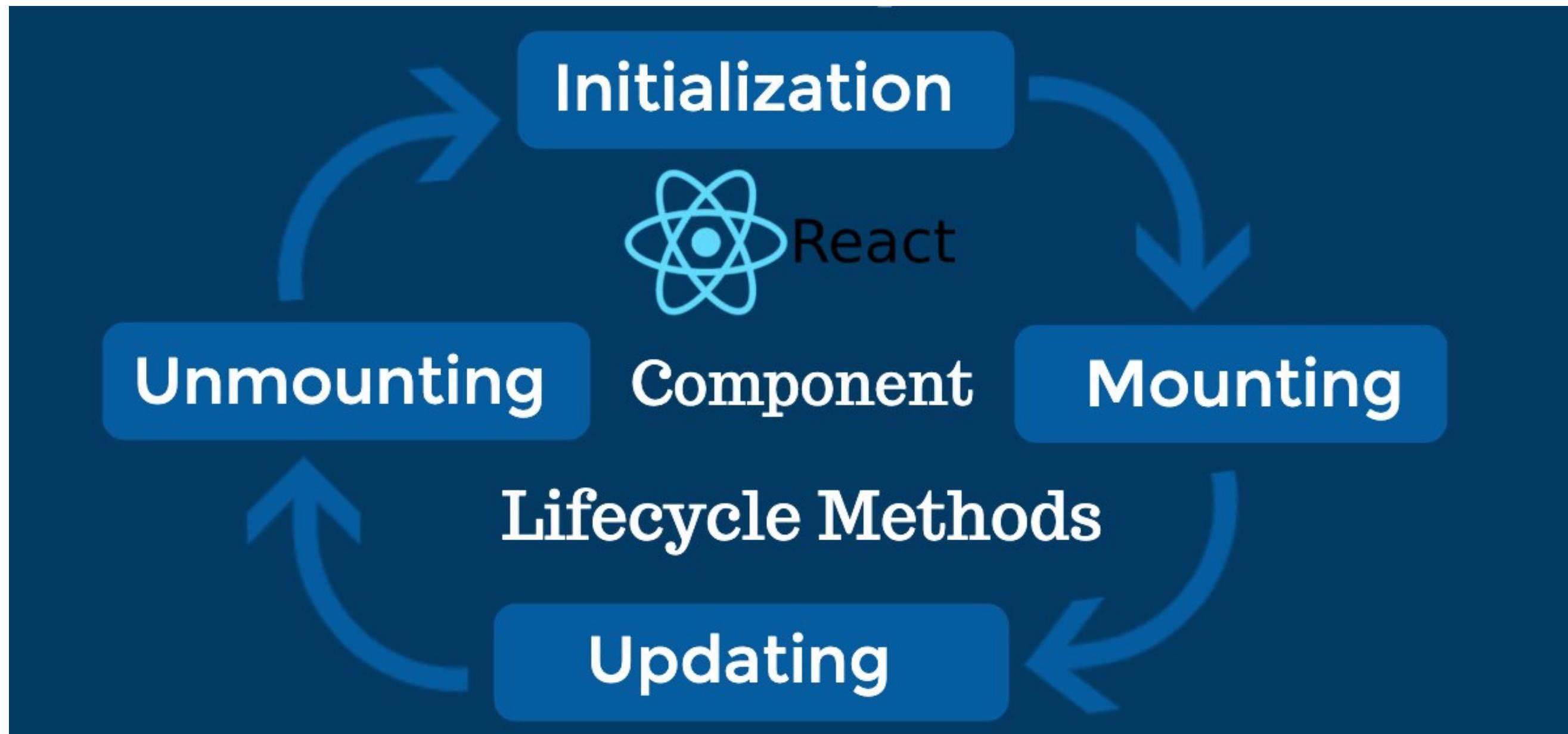
Accessed via **this.state**

EXAMPLE:

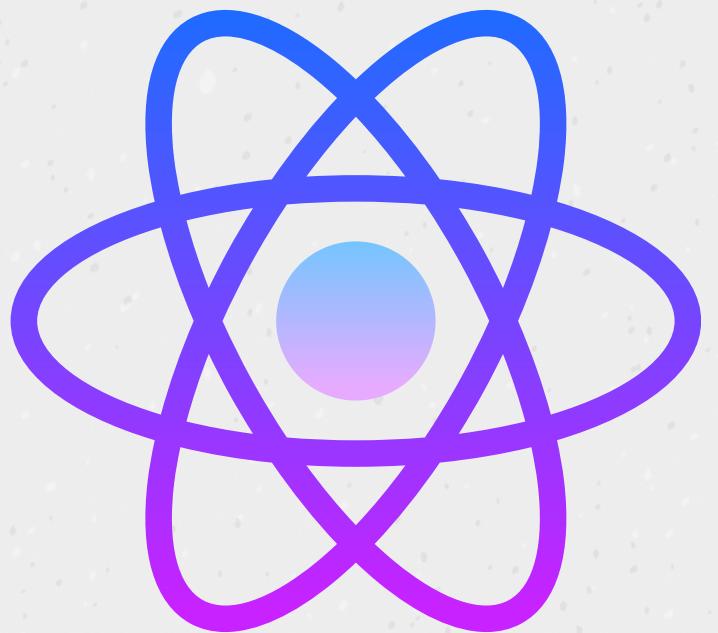
```
class Car extends  
React.Component {  
  constructor(props) {  
    super(props);  
    this.state = {brand: "Ford"};  
  }  
  render() {  
    return (  
      <div>  
        <h1>My Car  
        {this.state.brand}</h1>  
      </div>  
    );  
  }  
}
```

React LifeCycle Methods...

LIFECYCLE METHODS...



Thank You...



DYN: AVERAGE SALARY OF REACT
DEVELOPER IS 9LPA.....JUST SAYING

