

MODULE: 9 ReactJs Intro

• What is React Js? •

React is an open-source front-end javascript library.
it's used for building a reusable UI component.
React was developed by "Facebook" in 2011.

• What is NPM in React Js?•

NPM fullform is "Node Package Manager". It has already registered open-source packages which help developers to make more responsive designs.

• What is Role of Node Js in react Js? •

Node js provides

- (1) The run time environment,
- (2) Node package manager(npm),
- (3) Building and serving applications,
- (4) Server side rendering without page refresh.

Node Js plays a important role in React.

• What is CLI command In React Js? •

CLI fullform is Command Line Interface

=> open your terminal, type this command: `cpx create-react-app project-name`

=> change (project0name) into your project folder name and wait for packages installation

=> then type this command: `cd project-name`

=> this is the last command for run your project: `npm start`.

• What is Components in React Js? •

React components are reusable bits of code. There are two types of components

(1) Class components, (2) Function components.

For example we need to copy the same part of code in all pages.

So we just call that component name in that place.

Example:

```
import React from 'react'
function App() {
  return (
    <div>
      <component_name/> //this is component
    </div>
  )
}
export default App
```

• What is Header and Content Components in React Js? •

Header component has top on the web page & Content component is the main component in every single web pages.

Here are some major differences between header and content component.

[Header Component]

Header Component it is almost commonly used on website every page.

Header component Navigate the web pages.

[Content Components]

it is not commonly used on Website every page. Because of every single page have different content.

Content Component is main component in web page.

• How to install React Js on Windows, Linux Operating System? How to Install NPM and How to check version of NPM? •

- 1 Go to nodejs official website "<https://nodejs.org/en/>"
 - 2 Download node recommended version and according to your windows bit capacity (32bit/64bit)
 - 3 Check version in vs code terminal / cmd : (1)node -v. (2)npm -v
 - 4 Enter commands for new Package install:
 - 1) npm i -g create-react-app
 - 2) npx create-react-app (project name)
 - 3) cd (project name)
 - 4) npm start
- /Linux installation:
- 1 Open linux terminal and install nodejs by this command:sudo apt install nodejs
 - 2 Check and verify this command:
node -v
npm -v
 - 4 install new project folder with this command : mkdir (project name) && cd project-name
 - 5 install react using this command: npx create-react-app

• How to check version of React Js? •

Follow this commands for check version of React in terminal.

- 1) node -v
- 2) npm -v

• How to change in components of React Js? •

There are three ways to change in components of React;

- 1) edit component's code
- 2) props
- 3) states

(1) edit component's code: If we have to change the component's design/ layout any more different changes we should directly change the code.

(2) props: We put props in the function component's parameter as we need and then give props value in "App.js" or any other component.

Example:

```
function Function_component ({props}) {  
  <div>  
    <h1>This is {props} example</h1>  
  </div>  
}
```

(3) states: we put state in the function component. Here is a Example

Example:

```
import React, {useState} from 'react'  
function Function_State() {  
  let [name,setName]=useState("change");  
  return (  
    <div>  
      <h1>This is {name} component</h1>  
      <button onClick={()=>setName("un changed")} >Changed component</button>  
    </div>  
  )  
}  
export default Function_State
```

• How to Create a List View in React Js? •

React List view is here;

Function_component

```
import React from 'react';
```

```
const Function_component = ({ items }) => {  
  return (  
    <div>  
      <h1>List View Example</h1>  
      <ul>  
        {items.map((item, index) => (  
          <li key={index}>{item}</li>  
        ))}  
      </ul>  
    </div>  
  );  
};
```

```
export default Function_component;
```

App component

```
import React, { Component } from 'react'  
import Function_component from './Function_component';
```

```
export default class App extends Component {  
  render() {  
    const items = ['Item 1', 'Item 2', 'Item 3'];  
    return (  
      <div>  
        <Function_component items={items} />  
      </div>  
    );  
  }  
}
```

- Create Increment decrement state change by button click?

here is code...

```
import React, { useState } from 'react';
const Fts = () => {
  const [count, setCount] = useState(0);
  const Increment = () => {
    setCount(count + 1);
  };
  const Decrement = () => {
    setCount(count - 1);
  };
  const Reset = () => {
    setCount(count == useState);
  };
  return (
    <div className='containt'>
      <div className='row'>
        <h1>React web</h1>
        <h1>Count: {count}</h1>

        <button onClick={Increment}>Increment</button>
        <button onClick={Reset}>rest</button>
        <button onClick={Decrement}>Decrement</button>
      </div>
    </div>
  );
};
export default Fts;
```