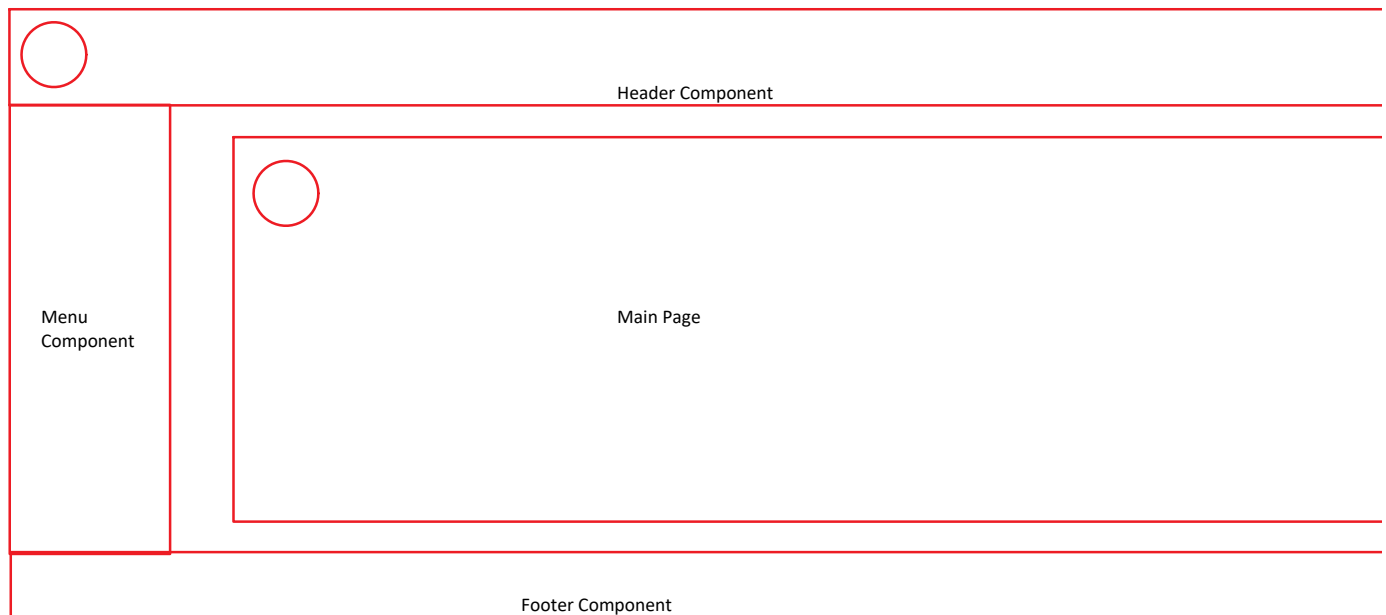# REACT

Saturday, February 15, 2025   3:03 PM

React : Single page application and everything you create it's a component in React
Script Language -- Type Script , JavaScript   (react JS)

Npm - node package manager -- installation (all libraries)
Npx- Node package execute -- dynamically collect and execute

Method :

createElement()
Render()

How we can make the normal html tags as a react tags
How to create a react app
  1.   Using CDN Links
  2.   Through command interface CLI

React Element

Js
Const message = "Hello All"

Jsx
Const message =<h1> Hello All , {attribute}, </h1>

Npm init

Create a new react app where you have three components Header , Footer and middle

In the header appply the css and display the message as header component or if possible create a menu

In the middle page add some images

In the footer apply the css and display the message as Footer component

Components :

There are two ways to create a component

1. Functional Component

```
Function function_name()
{

 return();     // html
}

Export default <function_name>
```

1. Class Component

```
Import react,{component} from 'react'

Class classname extends Component
{

Render()
{

 return(); //html
}


}
```

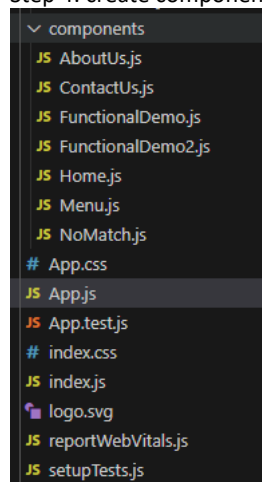Router :

 To move from one page to another page

For implementing first install the library

Step 1 : Npm install react-router-dom
Step2 : import {BrowserRouter} from 'react-router-dom';
Step3 : replace <React.StrictMode> with <BrowserRouter>

Step 4: create components:

```
v components
 JS AboutUs.js
 JS ContactUs.js
 JS FunctionalDemo.js
 JS FunctionalDemo2.js
 JS Home.js
 JS Menu.js
 JS NoMatch.js
 #  App.css
 JS App.js
 JS App.test.js
 #  index.css
 JS index.js
 🖼 logo.svg
 JS reportWebVitals.js
 JS setupTests.js
```

Step 5: Routes

```
import AboutUs from './components/AboutUs';
import ContactUs from './components/ContactUs';
import Home from './components/Home';
import NoMatch from './components/NoMatch';
import {Routes , Route} from 'react-router-dom';
import Menu from './components/Menu';

function App() {
  return (
    <>
    <Menu />
     <Routes>
         <Route path='/about' element={<AboutUs></AboutUs>}></Route>
         <Route path='/contact' element={<ContactUs></ContactUs>}></Route>
         <Route path='/' element={<Home></Home>}></Route>
         <Route path='*' element={<NoMatch></NoMatch>}></Route>
     </Routes>
```

```
        </>

    );
  }
```

Menu.Js (For hyperlinks)

```
 2   import React  from "react";
 3   class Menu extends React.Component
 4   {
 5   render()
 6   {
 7
 8       return(
 9
10   <div>
11       <a href ="/">Home</a>
12       <a href ="/about">About Us</a>
13       <a href ="/contact">Contact Us</a>
14   </div>
15
16       );
17   }
18
19   }
20   export default Menu;
```

Calling props in class component

```
EXPLORER                    ...    index.js      JS Menu.js  ●   JS AboutUs.js    JS ContactUs.js    JS Home.js    JS NoMatch.js
UNTITLED (WORKSPACE)               ReactPrograms > myapp > src > classcomponents > JS ClassDemo1.js > ⅔ ClassDemo1 > ⓥ render
∨ ReactPrograms                        1
  ∨ myapp                              2     import React from 'react';
    > node_modules                     3
    > public                           4     class ClassDemo1 extends React.Component
    ∨ src                              5     {
      ∨ classcomponents                6
        JS ClassDemo1.js               7         render()
      ∨ components                     8         {
        JS AboutUs.js                  9
        JS ContactUs.js               10             return <h1> You have visited : {this.props.sitevisited}</h1>;
        JS FunctionalDemo.js          11         }
        JS FunctionalDemo2.js         12
        JS Home.js                    13
        JS Menu.js                    14
        JS NoMatch.js                 15     }
      # App.css                       16
      JS App.js                       17     export default ClassDemo1;
```

Calling props in functional component

```
TLED (WORKSPACE)             ReactPrograms > myapp > src > components > JS FunctionalDemo.js > ⓥ Demo
eactPrograms                  2     import Fdemo2 from './FunctionalDemo2';
myapp                         3
node_modules                  4     import ClassComponent from '../classcomponents/ClassDemo1'
public                        5     function Demo(props)
src                           6     {
∨ classcomponents             7
JS ClassDemo1.js              8
∨ components                  9
JS AboutUs.js                10        return (
JS ContactUs.js              11
JS FunctionalDemo.js         12           <div>
JS FunctionalDemo2.js        13           <ClassComponent />
JS Home.js                   14            <h1>Heading of functional Component</h1>
JS Menu.js                   15           <h2>Hi ! {props.username} your department is : {props.dept}</h2>
JS NoMatch.js                16           <h2> Functional Demo</h2>
# App.css                    17           <Fdemo2 />
S App.js                     18           </div>
S App.test.js                19
# index.css                  20        );
S index.js                   21
                             22     }
                             23
```

Activity: (add logo or image)

```
┌──────────────────────────────────────────────────────┐
│                                                        │
│     HEADER            About us            Contact Us   │
│                                                        │
└──────────────────────────────────────────────────────┘
```

```
┌──────────────────────────────────────────────────────┐
│                                                        │
│                                                        │
│      MAIN SECTION                                      │
│                                                        │
│                                                        │
│                                                        │
└──────────────────────────────────────────────────────┘
```

FOOTER
```
┌──────────────────────────────────────────────────────┐
│                                                        │
│  .                                                     │
│                                                        │
└──────────────────────────────────────────────────────┘
```

State -- when there is a change

Import r from 'react'
Class mycomponent extends r.component
{
Constructor(props)
{
Super(props)
This.state ={
Counter =0;
}

}
}

Counter 1
Counter 2

```
import r from 'react'
class StateComponent extends r.Component
{
constructor(props)
{
super(props);
this.state  = {
    counter : 0
};
this.handleClick = this.handleClick.bind(this); // we are binding the even handler with the current class
}
handleClick()
{

    this.setState({counter :this.state.counter+1}); // To update
    console.log("Counter Value"+ this.state.counter);
}
render()
{
    let {counter} =this.state;
  return(
    <div>

        <button onClick={this.handleClick}> Press to continue</button>
        <div> Counter variable has incremented {counter}</div>

    </div>

    )
  }
```

```
}
export default StateComponent;
```

Input type text == even for username
For password

Const user = data.find(user => 'Admin' === username && 'pass123' === password);
If(user)
{
Window.location.href = '/admin';

}
Else
Alert ("Invalid credentials"
)

Attempt History   ×

Q No: 12   Incorrect Answer

                                                    Marks: 0/1

What does myReactApp refer to in the following command?

npx create-react-app myReactApp

○ The directory to create the new app in

○ A reference to an existing app   Correct Option

○ The type of app to create

◉ The name you want to use for the new app   You Selected