**React JS**

**Handson - 1**

**• Define SPA and its benefits  
A Single Page Application (SPA) loads a single HTML page and dynamically updates content without reloading.  
Benefits include faster navigation, better user experience, and reduced server load.**

**• Define React and identify its working**React is a JavaScript library for building user interfaces using components.  
It updates the UI efficiently using a virtual DOM and state management.

**• Identify the differences between SPA and MPA**SPA loads one HTML page and updates content dynamically; MPA loads multiple pages from the server.  
SPA is faster and smoother; MPA is better for SEO and complex sites.

**• Explain Pros & Cons of Single-Page Application**Pros: Fast performance, seamless UX, less server load.  
Cons: Poor SEO, initial load time high, harder to secure.

**• Explain about React**React is a component-based JavaScript library maintained by Meta for building UIs.  
It uses JSX syntax and virtual DOM to render updates efficiently.

**• Define virtual DOM**The virtual DOM is a lightweight JavaScript copy of the real DOM.  
React compares it with the actual DOM and updates only the changed parts.

**• Explain Features of React**React offers component-based architecture, virtual DOM, unidirectional data flow, and JSX.  
It supports reusable code, fast rendering.

**1. Created a new React Application with the name “myfirstreact”.**

**App.js:**

function App()

{

   return <h1>Welcome to my first react app</h1>

}

export default App;

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**Handson – 2**

**1. Created new react application with name “studentapp”.**

**2. Created Components for Home, About and Contact pages.**

**Home.js**

import React, {Component} from "react";

class Home extends Component{

    render()

    {  return(

       <div>

        <h3>Welcome to the Home Page of Student Management System</h3>

       </div>

    )

    }

}

export default Home;’

**About.js**

import React, {Component} from 'react';

class About extends Component

{

    render() { return(

    <div>

        <h1>Welcome  to About Page of Student Management System</h1>

        </div>)}

}

export default About;

**Contact.js**

import React,{Component} from 'react';

class Contact extends Component

{

    render()

    {

        return(<div> <h1>Welcome to Contact Page of Student Management System</h1></div>)

    }

}

export default Contact;

**3. Imported those components into App.js and created instances for them in JSX.**

**App.js**

import React,{Component} from 'react';

class Contact extends Component

{

    render()

    {

        return(<div> <h1>Welcome to Contact Page of Student Management System</h1></div>)

    }

}

export default Contact;

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