React Hands-on Lab Guide

# Objectives

* • Define SPA and its benefits
* • Define React and identify its working
* • Identify the differences between SPA and MPA
* • Explain Pros & Cons of Single-Page Application
* • Explain about React
* • Define virtual DOM
* • Explain Features of React

# Theory

## Single Page Application (SPA)

SPA is a web application that loads a single HTML page and dynamically updates it as the user interacts with the app.

Benefits:

* • Faster performance
* • Smooth user experience
* • Reduced server load
* • Efficient client-side routing

## What is React?

React is a JavaScript library for building user interfaces, developed by Facebook. It enables component-based development and uses a Virtual DOM to efficiently update the UI.

# Hands-On Lab Instructions

## Prerequisites

* • Node.js & NPM: https://nodejs.org/en/download/
* • Visual Studio Code

## Step-by-Step Guide

1. Install Create-React-App:

npm install -g create-react-app

1. Create a New React Application:

npx create-react-app myfirstreact

1. Navigate to the Application Folder:

cd myfirstreact

1. Open the Project in VS Code:

code .

1. Edit App.js:

Replace content with:

import React from 'react';  
  
function App() {  
 return (  
 <div>  
 <h1>Welcome to the first session of React</h1>  
 </div>  
 );  
}  
  
export default App;

1. Run the React App:

npm start

1. View in Browser:

<http://localhost:3000>

