**1. Explain React Components**

A React Component is a reusable, self-contained piece of UI that defines how a part of the screen should appear and behave.

* Each component:
  + Accepts props (input)
  + Maintains its own state (optional)
  + Returns JSX to render the UI

**2. Differences Between Components and JavaScript Functions**

| **Feature** | **React Component** | **JavaScript Function** |
| --- | --- | --- |
| Returns JSX | Yes (used for rendering UI) | No (used for logic, returns values) |
| Lifecycle Methods | Available (in class components) | Not available |
| Used in rendering | Yes, part of UI | Not directly used for UI rendering |
| Can have state (class/functional with hooks) | Yes | No |

**3. Identify the Types of Components**

React has two main types of components:

1. Class Components
2. Function Components

**4. Explain Class Component**

A Class Component is a React component defined using an ES6 class.

Example:

jsx

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import React, { Component } from 'react';

class Welcome extends Component {

render() {

return <h1>Hello from Class Component</h1>;

}

}

**5. Explain Function Component**

A Function Component is a JavaScript function that returns JSX.

Example:

jsx

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import React from 'react';

function Greet() {

return <h1>Hello from Function Component</h1>;

}

Since React 16.8, function components can use hooks like useState, useEffect, etc., making them powerful and preferred.

**6. Define Component Constructor**

The constructor in a class component is used to:

* Initialize state
* Bind methods

Syntax:

jsx

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constructor(props) {

super(props);

this.state = {

name: 'React'

};

}

Always call super(props) first to use this.props.

**7. Define render() Function**

render() is a required method in class components.  
It returns JSX that defines the UI of the component.

Example:

jsx

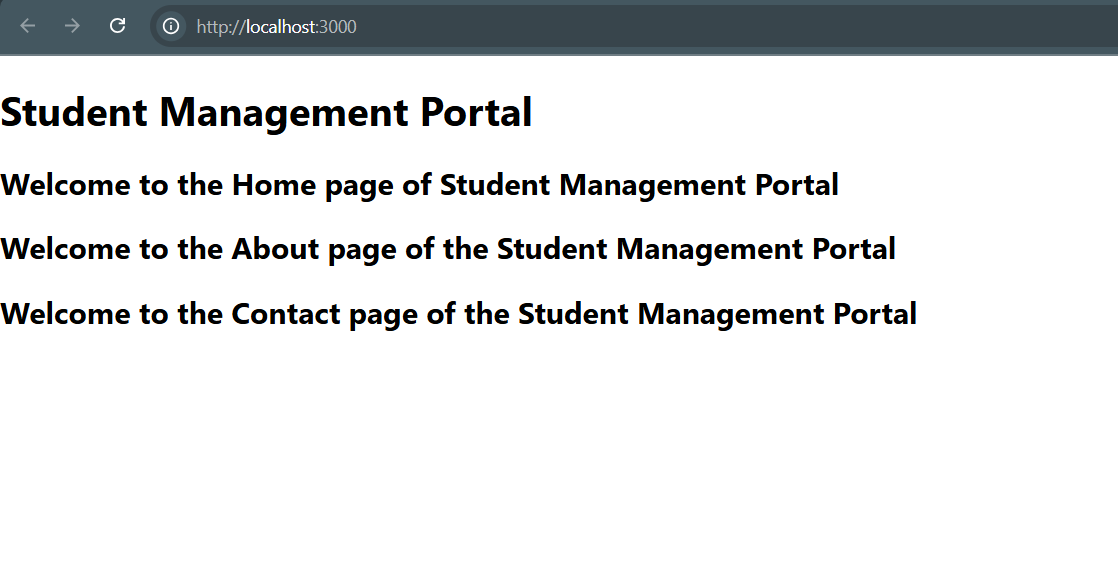
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render() {

return <div>Hello World</div>;

}

**OUTPUT:**

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