**React JS: Core Concepts and Shopping App**

# 1. Define Props

Props (short for properties) are used in React to pass data from one component to another, typically from a parent to a child. Props are read-only and immutable, meaning a component cannot change the props it receives. They help make components reusable and dynamic.  
Example:  
<Cart itemname="Laptop" price={80000} />  
Inside Cart component:  
this.props.itemname // => "Laptop"  
this.props.price // => 80000

# 2. Explain Default Props

Default Props provide default values to component props when no value is explicitly passed by the parent. They help prevent undefined values and make components more robust.  
  
Example (Class Component):  
Cart.defaultProps = {  
 itemname: "Default Item",  
 price: 0  
};

# 3. Identify the Differences Between State and Props

|  |  |  |
| --- | --- | --- |
| Feature | Props | State |
| Definition | Passed to component from parent | Local data managed by component |
| Mutability | Immutable | Mutable using setState |
| Who sets it? | Parent component | Component itself |
| Access | this.props | this.state |
| Purpose | Configuration & data passing | Internal changes & UI control |

# 4. Explain ReactDOM.render()

ReactDOM.render() is the method used to render a React element or component into the real DOM. It is typically called once at the entry point of the application to mount the root component.  
  
Syntax:  
ReactDOM.render(<App />, document.getElementById('root'));  
  
In React 18+:  
const root = ReactDOM.createRoot(document.getElementById('root'));  
root.render(<App />);

React Shopping App - Required Code Files

# Cart.js

import React, { Component } from 'react';  
  
class Cart extends Component {  
 render() {  
 return (  
 <tr>  
 <td style={{ border: '1px solid gray', padding: '8px' }}>{this.props.itemname}</td>  
 <td style={{ border: '1px solid gray', padding: '8px' }}>{this.props.price}</td>  
 </tr>  
 );  
 }  
}  
  
export default Cart;

# OnlineShopping.js

import React, { Component } from 'react';  
import Cart from './Cart';  
  
class OnlineShopping extends Component {  
 constructor(props) {  
 super(props);  
 this.state = {  
 items: [  
 { itemname: 'Laptop', price: 80000 },  
 { itemname: 'TV', price: 120000 },  
 { itemname: 'Washing Machine', price: 50000 },  
 { itemname: 'Mobile', price: 30000 },  
 { itemname: 'Fridge', price: 70000 }  
 ]  
 };  
 }  
  
 render() {  
 return (  
 <div style={{ textAlign: 'center', marginTop: '40px' }}>  
 <h2 style={{ color: 'green' }}>Items Ordered :</h2>  
 <table  
 style={{  
 margin: '0 auto',  
 borderCollapse: 'collapse',  
 border: '1px solid gray',  
 width: '350px'  
 }}  
 >  
 <thead>  
 <tr style={{ backgroundColor: '#eaffea', color: 'green' }}>  
 <th style={{ border: '1px solid gray', padding: '10px' }}>Name</th>  
 <th style={{ border: '1px solid gray', padding: '10px' }}>Price</th>  
 </tr>  
 </thead>  
 <tbody>  
 {this.state.items.map((item, index) => (  
 <Cart key={index} itemname={item.itemname} price={item.price} />  
 ))}  
 </tbody>  
 </table>  
 </div>  
 );  
 }  
}  
  
export default OnlineShopping;

# App.js

import React from 'react';  
import OnlineShopping from './OnlineShopping';  
  
function App() {  
 return (  
 <div className="App">  
 <OnlineShopping />  
 </div>  
 );  
}  
  
export default App;

# index.js

import React from 'react';  
import ReactDOM from 'react-dom/client';  
import './index.css';  
import App from './App';  
  
const root = ReactDOM.createRoot(document.getElementById('root'));  
root.render(<App />);

# index.css

body {  
 font-family: Arial, sans-serif;  
 background-color: white;  
 margin: 0;  
 padding: 0;  
}  
  
table {  
 width: 100%;  
 border-collapse: collapse;  
}  
  
th, td {  
 border: 1px solid gray;  
 padding: 10px;  
}  
  
h2 {  
 text-align: center;  
 color: green;  
}

**Output:**



