7. ReactJS-HOL

# Objectives

**• Define Props**  
Props (short for "properties") are read-only attributes used to pass data from a parent component to a child component in React. They enable component reusability by allowing dynamic data to be rendered based on the input provided.

**• Explain Default Props**  
Default Props provide fallback values for props that are not explicitly passed by the parent component. This ensures that the child component can still render properly even if certain data is missing.

**• Identify the Differences between State and Props**

|  |  |  |
| --- | --- | --- |
| Feature | Props | State |
| Mutability | Immutable | Mutable |
| Ownership | Passed from parent | Managed inside component |
| Purpose | Communication between components | Handle component behavior |
| Modification | Cannot be modified by child | Can be modified internally |

**• Explain ReactDOM.render()**  
ReactDOM.render() is the method used to render React elements into the DOM. In modern React (with React 18+), we use createRoot to initialize the root element and then call .render().

Example:

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

# Hands-on Lab - ShoppingApp

## index.js

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

## App.js

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

## OnlineShopping.js

import React, { Component } from 'react';  
import Cart from './Cart';  
import './Shopping.css';  
  
class OnlineShopping extends Component {  
 render() {  
 const items = [  
 { itemname: 'Laptop', price: 80000 },  
 { itemname: 'TV', price: 120000 },  
 { itemname: 'Washing Machine', price: 50000 },  
 { itemname: 'Mobile', price: 30000 },  
 { itemname: 'Fridge', price: 70000 }  
 ];  
  
 return (  
 <div className="container">  
 <h2>Items Ordered :</h2>  
 <table className="item-table">  
 <thead>  
 <tr>  
 <th>Name</th>  
 <th>Price</th>  
 </tr>  
 </thead>  
 <tbody>  
 {items.map((item, index) => (  
 <Cart key={index} itemname={item.itemname} price={item.price} />  
 ))}  
 </tbody>  
 </table>  
 </div>  
 );  
 }  
}  
  
export default OnlineShopping;

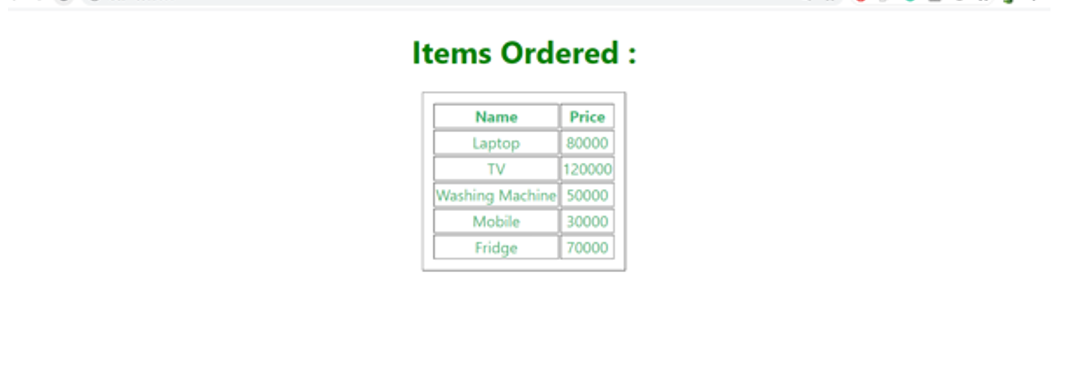
## Cart.js

import React, { Component } from 'react';  
  
class Cart extends Component {  
 render() {  
 const { itemname, price } = this.props;  
 return (  
 <tr>  
 <td>{itemname}</td>  
 <td>{price}</td>  
 </tr>  
 );  
 }  
}  
  
export default Cart;

## Shopping.css

.container {  
 text-align: center;  
 margin-top: 40px;  
}  
  
h2 {  
 color: green;  
 font-weight: bold;  
}  
  
.item-table {  
 margin: 0 auto;  
 border-collapse: collapse;  
 width: 300px;  
}  
  
.item-table th,  
.item-table td {  
 border: 1px solid #ccc;  
 padding: 10px;  
 color: green;  
 text-align: center;  
}  
  
.item-table th {  
 background-color: #f5f5f5;  
 font-weight: bold;  
}

**OUTPUT:**

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