**7.ReactJs HOL**

1. **Define Props**

* Props (short for "properties") are used to pass data from one component to another in React.
* They make components reusable by changing the values passed in.
* Props are read-only, meaning they can’t be modified by the component receiving them.
* They are passed into a component like HTML attributes.  
  **Example:** <Greeting name="Poorani" /> passes a name prop to the Greeting component.

1. **Explain Default Props**

* Default props provide default values to props when none are passed.
* They help avoid undefined values in components.
* You define them using ComponentName.defaultProps.
* They make the component more robust and flexible.  
  **Example:** Greeting.defaultProps = { name: "Guest" };

1. **Identify the differences between State and Props**

|  |  |
| --- | --- |
| Props | State |
| Passed from parent component | Managed within the component itself |
| Cannot be changed by the component | Can be changed using setState() or hooks |
| Makes components reusable and configurable | Controls dynamic behavior and UI updates |
| Read-only | Read and write allowed |
| Accessed using props or this.props | Accessed using useState or this.state |

1. **Explain reactDOM.render()**

* ReactDOM.render() is used to display a React component on the web page.
* It takes two arguments: the React element and the DOM element to mount it.
* It’s the starting point of any React app.
* **Example:** ReactDOM.render(<App />, document.getElementById('root'));
* It tells React what to show and where to show it in the browser.

**Create a React Application named “shoppingapp” with a class component named “OnlineShopping” and “Cart”.**

**React App : shoppingapp**

**App.js**

import React, { Component } from 'react';

import './App.css';

class Cart extends Component {

  render() {

    return (

      <tr className="cart-row">

        <td>{this.props.itemname}</td>

        <td>{this.props.price}</td>

      </tr>

    );

  }

}

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 className="heading">Items Ordered :</h2>

        <table className="item-table">

          <thead>

            <tr>

              <th className="table-header">Name</th>

              <th className="table-header">Price</th>

            </tr>

          </thead>

          <tbody>

            {items.map((item, index) => (

              <Cart key={index} itemname={item.itemname} price={item.price} />

            ))}

          </tbody>

        </table>

      </div>

    );

  }

}

export default OnlineShopping;

**App.css**

.container {

  text-align: center;

  margin-top: 30px;

}

.heading {

  color: green;

  font-weight: bold;

}

.item-table {

  border-collapse: collapse;

  width: 300px;

  margin: 20px auto;

  font-family: Arial, sans-serif;

}

.table-header {

  background-color: white;

  color: seagreen;

  font-weight: bold;

  border: 1px solid gray;

  padding: 10px;

}

.cart-row {

  color: mediumseagreen;

  text-align: center;

}

.cart-row td {

  border: 1px solid gray;

  padding: 10px;

}

**Cart.js**

import React, { Component } from 'react';

import './App.css';

class Cart extends Component {

  render() {

    return (

      <tr className="cart-row">

        <td>{this.props.itemname}</td>

        <td>{this.props.price}</td>

      </tr>

    );

  }

}

export default Cart;

**OnlineShopping.js**

import React, { Component } from 'react';

import Cart from './Cart';

import './App.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 className="heading">Items Ordered :</h2>

        <table className="item-table">

          <thead>

            <tr>

              <th className="table-header">Name</th>

              <th className="table-header">Price</th>

            </tr>

          </thead>

          <tbody>

            {items.map((item, index) => (

              <Cart key={index} itemname={item.itemname} price={item.price} />

            ))}

          </tbody>

        </table>

      </div>

    );

  }

}

export default OnlineShopping;

**index.js**

import React from 'react';

import ReactDOM from 'react-dom/client';

import OnlineShopping from './OnlineShopping';

const root = ReactDOM.createRoot(document.getElementById('root'));

root.render(<OnlineShopping />);

**Final Output:**



