**EXPT 18: Testing single page application (Registration form) using React**.

**Index.js**

import React from 'react';

import ReactDOM from 'react-dom/client';

import './index.css';

import Home from './Home';

import reportWebVitals from './reportWebVitals';

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

root.render(

  <React.StrictMode>

    <Home />

  </React.StrictMode>

);

**App.css**

.input {

  width: 30%;

  padding: 12px 20px;

  margin: 8px 0;

  display: inline-block;

  border: 1px solid #ccc;

  border-radius: 4px;

  box-sizing: border-box;

}

**Home.js**

import { useState } from 'react';

import './App.css';

export default function Form()

{

// States for registration

const [name, setName] = useState('');

const [email, setEmail] = useState('');

const [password, setPassword] = useState('');

const [submitted, setSubmitted] = useState(false);

const handleName = (e) => {

    setName(e.target.value);

};

const handleEmail = (e) => {

    setEmail(e.target.value);

};

const handlePassword = (e) => {

    setPassword(e.target.value);

};

const handleSubmit = (e) => {

    e.preventDefault();

    if (name === '' || email === '' || password === '') {

    alert("Please enter all the fields");

    } else {

    setSubmitted(true);

    }

};

// Showing success message

const successMessage = () => {

    if(submitted)

    return (

    <div className="success" >

        <h1>User {name} successfully registered!!</h1>

    </div>

    );

};

return (

    <div className="form">

    <div>

        <h1>User Registration</h1>

    </div>

    {/\* Calling to the methods \*/}

    <div className="messages">

        {successMessage()}

    </div>

    <form>

    <fieldset>

        {/\* Labels and inputs for form data \*/}

        <label className="label">Name</label>

        <input onChange={handleName} className="input" value={name} type="text" /><br></br>

        <label className="label">Email</label>

        <input onChange={handleEmail} className="input" value={email} type="email" /><br></br>

        <label className="label">Password</label>

        <input onChange={handlePassword} className="input" value={password} type="password" /><br></br>

        <button onClick={handleSubmit} className="btn" type="submit">

        Submit

        </button>

        </fieldset>

    </form>

    </div>

);

}

**EXPT 19: Implement navigation using react router**

**Add React Router**

* To add React Router in your application, run this in the terminal from the root directory of the application:

npm i -D react-router-dom

**Index.js**

import ReactDOM from "react-dom/client";

import { BrowserRouter, Routes, Route } from "react-router-dom";

import Layout from "./pages/Layout";

import Home from "./pages/Home";

import Blogs from "./pages/Blogs";

import Contact from "./pages/Contact";

import NoPage from "./pages/NoPage";

export default function App() {

  return (

    <BrowserRouter>

      <Routes>

        <Route path="/" element={<Layout />}>

          <Route index element={<Home />} />

          <Route path="blogs" element={<Blogs />} />

          <Route path="contact" element={<Contact />} />

          <Route path="\*" element={<NoPage />} />

        </Route>

      </Routes>

    </BrowserRouter>

  );

}

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

root.render(<App />);

**Create a folder name called pages. Within a pages create following files.**

**Blogs.js**

const Blogs = () => {

    return <h1>Blog Articles</h1>;

  };

    export default Blogs;

**Contact.js**

const Contact = () => {

    return <h1>Contact Me</h1>;

  };

  export default Contact;

**Home.js**

const Home = () => {

    return <h1>Home</h1>;

  };

  export default Home;

**Layout.js**

import { Outlet, Link } from "react-router-dom";

const Layout = () => {

  return (

    <>

      <nav>

        <ul>

          <li>

            <Link to="/">Home</Link>

          </li>

          <li>

            <Link to="/blogs">Blogs</Link>

          </li>

          <li>

            <Link to="/contact">Contact</Link>

          </li>

        </ul>

      </nav>

      <Outlet />

    </>

  )

};export default Layout;

**NoPage.js**

const NoPage = () => {

    return <h1>404</h1>;

  };

    export default NoPage;

**App.css**

ul {

  list-style-type: none;

  margin: 0;

  padding: 0;

  overflow: hidden;

  background-color: #04AA6D;

}

li {

  float: left;

  border-right:1px solid #bbb;

}

li a {

  display: block;

  color: white;

  text-align: center;

  padding: 14px 16px;

  text-decoration: none;

}

li a:hover:not(.active) {

  background-color: #111;

}

**20: Build single page application (Add Product to Product List)**

**App.js**

import { useState } from "react";

import "./App.css";

function App() {

  const [list, setList] = useState([]);

  const [value, setValue] = useState("");

  const addToList = () => {

    let tempArr = list;

    tempArr.push(value);

    setList(tempArr);

    setValue("");

  };

 const deleteItem = (index) => {

 let temp = list.filter((item, i) => i !== index);

    setList(temp);

  };

  return (

    <div className="App">

        <fieldset>

        <h>Add Product to List</h><br></br>

    <input type="text" value={value} onChange={(e) => setValue(e.target.value)}/>

    <button onClick={addToList}> Click to Add </button><br></br><br></br>

    <h>Product Catalog</h><br></br>

    <ol>

        {list.map((item, i) => <li onClick={() => deleteItem(i)}>{item} </li>)}

    </ol>

    <h>Click on Product to Delete</h><br></br>

    </fieldset></div>

  );

}export default App;

**index.js**

import React from 'react';

import ReactDOM from 'react-dom/client';

import './index.css';

import App from './App';

import reportWebVitals from './reportWebVitals';

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

root.render(

  <React.StrictMode>

    <App/>

  </React.StrictMode>

);

**EXPT 21: Build single page application like shopping cart using ReactJS.**

**App.js**

import Header from "./Header";

import Products from "./Product";

import { useState } from "react";

import CartList from "./CartList";

function App() {

const [product, setproduct] = useState([

{

url:'imgs/lenovo.png',

name: 'lenovo ideapad Slim 3',

price: 57000

},

{

url: 'imgs/watch.png',

name: 'fastrack w98',

price: 1500

},

])

const [cart, setCart] = useState([])

const [showCart, setShowCart] = useState(false)

const addToCart = (data) => {

setCart([...cart, { ...data, quantity: 1 }])

}

const handleShow = (value) => {

setShowCart(value)

}

return (

<div >

<Header count={cart.length} handleShow={handleShow} />

{

showCart ?

<CartList cart={cart} /> :

<Products product={product} addToCart={addToCart} />

}

</div>

)

}

export default App;

**Product.js**

import React from 'react';

export default function Products({product,addToCart} ){

return (

<div className='flex'>{

product.map((productitem,productIndex)=>{

return(

<div>

<img src={productitem.url} width="20%" alt=""/>

<p>{productitem.name}</p>

<p>Rs.{ productitem.price}</p>

<button onClick={()=>addToCart(productitem)}>Add Cart</button>

</div>

)

})

}

</div>

)

}

**CarList.js**

import React,{useState,useEffect} from 'react';

function CartList({cart}) {

const [CART,setCART]= useState([])

useEffect(() => {

setCART(cart)

}, [cart])

return (

<div>

{

CART?.map((cartitem,cartindex)=>{

return(

<div>

<img src={cartitem.url} width={60} />

<span> {cartitem.name} </span>

<button onClick={()=>{

const \_CART= CART.map((item,index)=>{

return cartindex ===index? {...item,quantity:item.quantity>0?item.quantity-1:0}:item

})

setCART(\_CART)

}}>

- </button>

<span> {cartitem.quantity} </span>

<button onClick={()=>{

const \_CART= CART.map((item,index)=>{

return cartindex ===index? {...item,quantity:item.quantity+1}:item

})

setCART(\_CART)

}}>+ </button>

<span> Rs.{cartitem.price\* cartitem.quantity} </span>

</div>

)

})

}

<p>Total=<span>

</span>

{CART.map(item=>item.price\*item.quantity).reduce((total,value)=>total+value,0)}

</p>

</div>

)

}

export default CartList;

**Header.js**

import React from 'react'

export default function Header(props) {

return (

<div>

<div onClick={()=>props.handleShow(false)}>ShoppingCart</div>

<div onClick={()=>props.handleShow(true)}> Cart

<sup>{props.count}</sup>

</div>

</div>

)

}