

1.HELLO WORLD

ex.js

```
function Hello()
{
    return(
        <div>
        <h1>Hello world</h1>
        </div>
    );
}
export default Hello;
```

Index.js

```
import React from 'react';
import ReactDOM from 'react-dom/client';
import './index.css';
import Hello from './ex';
import reportWebVitals from './reportWebVitals';

const root = ReactDOM.createRoot(document.getElementById('root'));
root.render(
    <React.StrictMode>
    <Hello />
    </React.StrictMode>
);
reportWebVitals();
```

2.CURRENT DATE AND TIME

Index.js

```
import reportWebVitals from './reportWebVitals';
function timer()
{
    var ob = new Date();
    var d = ob.toString();
    var t = ob.toTimeString();
    var element =
    <>
    <h1> Date:{d}</h1>
    <h1> Time:{t}</h1>
    </>
    root.render(element);
}
setInterval(timer,1000);
const root = ReactDOM.createRoot(document.getElementById('root'));
```

3a.FUNCTIONAL COMPONENT

Fc.js

```
import React from "react";
function FC(props)
{
    return(
        <div>
            <h1>{props.data}</h1>
        </div>
    )
}
export default FC;
```

Index.js

```
import reportWebVitals from './reportWebVitals';
var name = "xyz";
const root = ReactDOM.createRoot(document.getElementById('root'));
root.render(
    <React.StrictMode>
        <FC data = {name} />

    </React.StrictMode>
);
```

3b.CLASS COMPONENT

```
import { Component } from "react";
class App1 extends Component
{
    constructor()
    {
        super();
        this.state = {
            data : [{"name":"abc"}, {"name":"xyz"}]
        }
    }
    render(){
        return(
            <div>
                <StudentName />
                <ul>
                    {this.state.data.map((item, index) => (<List key={index}
data={item} />))}
                </ul>
            </div>
        );
    }
}

class StudentName extends Component
{
    render(){
        return(
            <div>
```

```

        <h1>Student Name</h1>
      </div> );
    }
  }
}
class List extends Component
{
  render()
  {
    return(
      <div>
        <ul>
          <li> {this.props.data.name} </li>
        </ul>
      </div>
    );
  }
}
export default App1;

```

4.DATE IN CLASS COMPONENT

Datedisplay.js

```

import { Component } from "react";

class DateDisplay extends Component
{
  constructor(props)
  {
    super(props);
    this.state = { date:props.d};
  }
  render()
  {
    return(
      <div>
        <h1>Date Display</h1>
        <p>current date:{this.state.date}</p>

      </div>
    );
  }
}
export default DateDisplay;

```

Index.js

```

import DateDisplay from './Datedisplay';
const date = "2024-27-10"
const root = ReactDOM.createRoot(document.getElementById('root'));
root.render(
  <React.StrictMode>

    <DateDisplay d = {date}/>

  </React.StrictMode>
);

```

5.LIFE CYCLE METHODS

```
import { Component } from "react";
class Lifecycle extends Component{
  constructor(props){
    super(props);
    this.state = {count:0}
  }
  stateGetDerivedStateFromProps(props,state){
    console.log("This is the getDerived state from props");
    return null;
  }
  componentDidMount(){
    console.log("this is component did mount");
  }
  shouldComponentUpdate(){
    console.log("this is should component update");
    return true;
  }
  getSnapshotBeforeUpdate(prevProps,prevState){
    console.log("this is get snap shot before update");
    console.log("Before update count",prevState);
    return null;
  }
  componentDidUpdate(prevProps,prevState){
    console.log("Component did update");
    console.log("After update count",this.state.count);
  }
  increment =()=>{
    this.setState((prevState)=>(
      {count:prevState.count+1}
    ));
  }
  decrement =()=>{
    this.setState((prevState)=>(
      {count:prevState.count-1}
    ));
  }
  render(){
    return (<div>
      <h1>Current Count:{this.state.count}</h1>
      <button onClick={this.increment}>Increase</button>
      <button onClick={this.decrement}>Decrease</button>

    </div>
    )
  }
}
```

```
export default Lifecycle;
```

6.EVENT LISTENER

```
import {Component} from 'react'
class Button extends Component{
  constructor(props){
    super(props);
    this.state = {msg:"Lets get Started"};
  }
  handleDateClick(){
    this.setState({msg:new Date().toString()});
  }
  handleGoodByeClick(){
    this.setState({msg:"Good Bye"});
  }
  render(){
    return (
      <div>
        <h1>{this.state.msg}</h1>
        <button onClick={this.handleDateClick.bind(this)}>Show Date
and Time</button>
        <button onClick={this.handleGoodByeClick.bind(this)}>Say
Bye</button>

      </div>
    )
  }
}
export default Button;
```

7.CALCULATOR

```
import React,{useState} from 'react';
import './Calc.css'
const Calc = () => {
  const [input,setIntput]=useState('');
  const [result, setResult] = useState('');
  const handleClick=(val)=>{
    if(val==='='){
      setResult(eval(input));
    }
    else if(val==='C'){
      setIntput('');
      setResult('');
    }
    else if(val==='X'){
      setIntput(input.slice(0,-1));
    }
    else{
```

```

        setInput(input+val);
    }
}

return (
    <div className="calc">
        <div className="container">
            <div className="input"> {input}</div>
            <div className="result">{result}</div>
        </div>
        <div className="button">
            [{ '7', '8', '9', '/', '4', '5', '6', '*', '1', '2', '3', '-', '0', '.', '=', '+', 'C', 'X' }.map((val) => (
                <button key={val} onClick={() =>
handleClick(val)}>{val}</button>
            ))}
        </div>
    </div>
);
}
export default Calc;

```

8.REGISTRATION PAGE

```

import { useState } from "react"
import './reg.css'

const Regform = () =>{
    const[formData,SetFormData] = useState({
        username : '',
        email : '',
        password : '',
        phone : '',
        gender : '',
    });
    const handleChange =(e) =>{
        const{name,value} = e.target;
        SetFormData({
            ...formData,
            [name]:value
        });
    }
    const handleSubmit = (e)=>{
        e.preventDefault();
        console.log("Form Data submitted:",formData);
    }
    return(
        <div align = 'center'>
            <h1>Registration form</h1>

```

```

        <form onSubmit={handleSubmit}>
        <div>
            <label htmlFor="username">user name:</label>
            <input type="text" id="username" name="username"
value={formData.username} onChange={handleChange} />
        </div>

        <div>
            <label htmlFor="email">email:</label>
            <input type="email" id="email" name="email"
value={formData.email} onChange={handleChange} required/>
        </div>

        <div>
            <label htmlFor="password">password:</label>
            <input type="password" id="password" name="password"
value={formData.password} onChange={handleChange} required/>
        </div>
        <div>
            <label htmlFor="phone">phone number:</label>
            <input type="tel" id="phone" name="phone"
value={formData.phone} onChange={handleChange} required/>
        </div>
        <div>
            <label>Gender:</label>

            <select id="gender" name="gender" value={formData.gender}
onChange={handleChange} required >
                <option value=" ">select gender</option>
                <option value="male">male</option>
                <option value="female">female</option>
            </select>
        </div>

        <button type="submit" >REGISTER</button>
        </form>

    </div>
    )
}
export default Regform;

```

11.WEATHER APP

WeatherService.js

```

import axios from 'axios';

const API_KEY = 'd09c179e61f7657174057032d4532734';
const BASE_URL = 'https://api.openweathermap.org/data/2.5';

// Function to fetch current weather data
export const getWeatherData = async (city) => {
    try {
        const response = await axios.get(`${BASE_URL}/weather`, {

```

```

        params: {
          q: city,
          appid: API_KEY,
        },
      });
      return response.data;
    } catch (error) {
      console.error('Error fetching weather data:', error);
      if (error.response && error.response.status === 401) {
        alert('Unauthorized: Invalid API Key');
      }
      return null;
    }
  };
};

```

WeatherApp.js

We have to install axios for this `npm i axios`

```

import React, { useState, useEffect } from 'react';
import { getWeatherData } from './WeatherService';

const WeatherApp = () => {
  const [currentWeather, setCurrentWeather] = useState(null);
  const [city, setCity] = useState(''); // Initialize city with empty string
  const [inputCity, setInputCity] = useState('New York'); // Default city
  input

  useEffect(() => {
    const fetchWeather = async () => {
      const current = await getWeatherData(inputCity);
      setCurrentWeather(current);
    };

    fetchWeather();
  }, [inputCity]);

  // Handler for city input change
  const handleCityChange = (e) => {
    setCity(e.target.value);
  };

  // Handler for form submission
  const handleFormSubmit = (e) => {
    e.preventDefault();
    setInputCity(city); // Update the inputCity state to trigger a new fetch
  };

  return (
    <div>
      <h1>Weather App</h1>

      {/* Input form for city name */}

```



```

    <form onSubmit={handleFormSubmit}>
      <input
        type="text"
        value={city}
        onChange={handleCityChange}
        placeholder="Enter city"
      />
      <button type="submit">Get Weather</button>
    </form>

    {currentWeather && (
      <div>
        <h2>Current Weather in {currentWeather.name}</h2>
        <p>Temperature: {(currentWeather.main.temp -
273.15).toFixed(2)} °C</p>
        <p>Weather: {currentWeather.weather[0].description}</p>
      </div>
    )}
  </div>
);
};

export default WeatherApp;

```

12.TODO

App.js

```

import React, { useState } from 'react';
import TodoForm from './components/TodoForm';
import TodoList from './components/TodoList';

function App() {
  const [todos, setTodos] = useState([]);

  const addTodo = (task) => {
    const newTodo = { id: Date.now(), task, completed: false };
    setTodos([...todos, newTodo]);
  };

  const toggleComplete = (id) => {
    setTodos(todos.map(todo => (
      todo.id === id ? { ...todo, completed: !todo.completed } : todo
    )));
  };

  const deleteTodo = (id) => {
    setTodos(todos.filter(todo => todo.id !== id));
  };

  return (
    <div className="App">
      <h1>TODO App</h1>
      <TodoForm addTodo={addTodo} />
      <TodoList todos={todos} toggleComplete={toggleComplete}
deleteTodo={deleteTodo} />
    </div>
  );
}

```

```

    );
  }

export default App;

```

TodoForm.js

```

import React, { useState } from 'react';

function TodoForm({ addTodo }) {
  const [task, setTask] = useState('');

  const handleSubmit = (e) => {
    e.preventDefault();
    if (task.trim()) {
      addTodo(task);
      setTask('');
    }
  };

  return (
    <form onSubmit={handleSubmit}>
      <input
        type="text"
        value={task}
        onChange={(e) => setTask(e.target.value)}
        placeholder="Add new task"
      />
      <button type="submit">Add Task</button>
    </form>
  );
}

export default TodoForm;

```

TodoList.js

```

import React from 'react';

function TodoList({ todos, toggleComplete, deleteTodo }) {
  return (
    <ul>
      {todos.map(todo => (
        <li key={todo.id} style={{ textDecoration: todo.completed ? 'line-through' : 'none' }}>
          {todo.task}
          <button onClick={() => toggleComplete(todo.id)}>
            {todo.completed ? 'Undo' : 'Complete'}
          </button>
          <button onClick={() => deleteTodo(todo.id)}>Delete</button>
        </li>
      ))}
    </ul>
  );
}

```

```
export default TodoList;
```

9&10.BOOK STORE

App.js

```
import React from 'react';
import { BrowserRouter as Router, Route, Routes } from 'react-router-dom';
import Home from './Home';
import Product from './Product';
import Checkout from './Checkout';
import Cart from './Cart';
import Header from './Header'; // Import the Header component

const App = () => {
  return (
    <Router>
      <Header />
      <Routes>
        <Route path="/" element={<Home />} />
        <Route path="product/:id" element={<Product />} />
        <Route path="/cart" element={<Cart />} />
        <Route path="/checkout" element={<Checkout />} />
      </Routes>
    </Router>
  );
};

export default App;
```

Home.js

```
import React from 'react';
import { Link } from 'react-router-dom';
import './Home.css'; // Import the CSS file

const Home = () => {
  const books = [
    {
      id: 1,
      title: 'The Great Gatsby',
      description: 'A classic novel by F. Scott Fitzgerald.',
      imageUrl: 'pic3.jpg' // Path relative to the public folder
    },
    {
      id: 2,
      title: 'A Silent Valley',
      description: 'A dystopian novel by George Orwell.',
      imageUrl: 'pic2.jpg' // Path relative to the public folder
    },
    {
      id: 3,
      title: 'To Kill a Mockingbird',
      description: 'A novel by Harper Lee.',
      imageUrl: 'pic1.webp' // Path relative to the public folder
    },
  ];
};
```

```

return (
  <div>
    <h1>Book Store</h1>
    <div className="card-container">
      {books.map((book) => (
        <div className="card" key={book.id}>
          <Link to={` /product/${book.id}`}>
            <img
              src={book.imageUrl}
              alt={book.title}
            />
            <div className="card-content">
              <h2 className="card-title">{book.title}</h2>
            </div>
          </Link>
        </div>
      ))}
    </div>
  </div>
);
};
export default Home;

```

Product.js

```

import React from 'react';
import { useParams } from 'react-router-dom';
import './Product.css'; // Import the CSS file

const Product = () => {
  const { id } = useParams();
  const books = [
    {
      id: 1,
      title: 'The Great Gatsby',
      description: 'A classic novel by F. Scott Fitzgerald where he explore',
      imageUrl: 'pic3.jpg'
    },
    {
      id: 2,
      title: 'A Silent Valley',
      description: 'A dystopian novel by George Orwell where the prota',
      imageUrl: 'pic2.jpg'
    },
    {
      id: 3,
      title: 'To Kill a Mockingbird',
      description: 'A novel by Harper Lee where the hero pursues a vi',
      imageUrl: 'pic1.webp'
    },
  ],
  // Find the book based on the ID from the URL
  const book = books.find((b) => b.id === parseInt(id));

```

```

if (!book) {
  return <div>Book not found</div>;
}

const handleAddToCart = () => {
  let cart = JSON.parse(localStorage.getItem('cart')) || [];
  const existingItem = cart.find((item) => item.id === book.id);

  if (existingItem) {
    existingItem.quantity += 1;
  } else {
    cart.push({ ...book, quantity: 1 });
  }

  localStorage.setItem('cart', JSON.stringify(cart));
};

return (
  <div className="card-container">
    <div className="card">
      <img
        src={` ${process.env.PUBLIC_URL}/${book.imageUrl}`}
        alt={book.title}
      />
      <h1>{book.title}</h1>
      <p>{book.description}</p>
      <button onClick={handleAddToCart}>Add to Cart</button>
    </div>
  </div>
);
};
export default Product;

```

Cart.js

```

import React, { useState, useEffect } from 'react';
import { Link } from 'react-router-dom';
import './Cart.css'; // Import the CSS file

const Cart = () => {
  const [cart, setCart] = useState([]);

  useEffect(() => {
    const savedCart = JSON.parse(localStorage.getItem('cart')) || [];
    setCart(savedCart);
  }, []);

  return (
    <div className="cart-container">
      <h1>Your Cart</h1>
      <ul>
        {cart.map((item) => (
          <li key={item.id}>
            {item.title} - Quantity: {item.quantity}
          </li>
        ))}
      </ul>
    </div>
  );
};

```

```

    ))}
  </ul>
  <Link to="/checkout" className="link-button">
    <button>Proceed to Checkout</button>
  </Link>
</div>
);
};

```

```
export default Cart;
```

Checkout.js

```

import React, { useState, useEffect } from 'react';
import './Checkout.css'; // Import the CSS file

const Checkout = () => {
  const [cart, setCart] = useState([]);

  useEffect(() => {
    // Fetch cart data from localStorage
    const savedCart = JSON.parse(localStorage.getItem('cart')) || [];
    setCart(savedCart);
  }, []);

  const handlePrint = () => {
    window.print();
  };

  return (
    <div className="checkout-container">
      <h1>Checkout</h1>
      <h2>Invoice</h2>
      <ul>
        {cart.map((item) => (
          <li key={item.id}>
            {item.title} - Quantity: {item.quantity}
          </li>
        ))}
      </ul>
      <button onClick={handlePrint}>Print Invoice</button>
    </div>
  );
};

export default Checkout;

```

Header.js

```

// Header.js
import React, { useState, useEffect } from 'react';
import { Link } from 'react-router-dom';
import './Header.css'; // Import the CSS file

const Header = () => {
  const [itemCount, setItemCount] = useState(0);

```

```
useEffect(() => {
  // Fetch cart data from localStorage
  const savedCart = JSON.parse(localStorage.getItem('cart')) || [];
  // Calculate the total number of items
  const totalItems = savedCart.reduce((acc, item) => acc + item.quantity,
0);
  setItemCount(totalItems);
}, []);

return (
  <header className="header">
    <nav>
      <ul className="nav-list">
        <li><Link to="/">Home</Link></li>
        <li><Link to="/cart">Cart {itemCount > 0 &&
`(${itemCount})`}</Link></li>
        <li><Link to="/checkout">Checkout</Link></li>
      </ul>
    </nav>
  </header>
);
};

export default Header;
```