**Objectives Recap**

| **Concept** | **Description** |
| --- | --- |
| **React Events** | React wraps native DOM events in a cross-browser compatible wrapper called a **SyntheticEvent** |
| **Event Handlers** | Functions that run when an event (click, submit, etc.) is triggered |
| **Synthetic Event** | React's wrapper around browser's native events (e.g. onClick, onChange) |
| **React Event Naming** | CamelCase (onClick, not onclick) |

**Lab Tasks Overview**

1. React counter using event handlers (increment, decrement).
2. Multiple methods for one event (increment + sayHello).
3. Pass argument to handler (Say Welcome).
4. Synthetic event with "I was clicked".
5. **CurrencyConvertor** component (INR to Euro and vice versa).

**1. Set Up React App**

npx create-react-app eventexamplesapp

cd eventexamplesapp

npm start

**2. Create File Structure**

Inside src/, create:

mkdir components

touch components/CurrencyConvertor.js

**3. Edit App.js**

import React, { Component } from 'react';

import CurrencyConvertor from './components/CurrencyConvertor';

class App extends Component {

constructor(props) {

super(props);

this.state = {

counter: 0,

};

// Binding 'this' for method (or use arrow functions)

this.increment = this.increment.bind(this);

this.sayHello = this.sayHello.bind(this);

this.sayWelcome = this.sayWelcome.bind(this);

}

increment() {

this.setState(prevState => ({ counter: prevState.counter + 1 }));

this.sayHello(); // multiple methods

}

decrement = () => {

this.setState(prevState => ({ counter: prevState.counter - 1 }));

};

sayHello() {

console.log("Hello! This is a static message.");

}

sayWelcome(message) {

alert(message); // argument-based event handler

}

handleSyntheticEvent = (event) => {

console.log(event); // SyntheticEvent

alert("I was clicked");

};

render() {

return (

<div style={{ padding: '30px' }}>

<h1>React Event Examples</h1>

<h2>Counter: {this.state.counter}</h2>

<button onClick={this.increment}>Increment</button>{' '}

<button onClick={this.decrement}>Decrement</button>

<br /><br />

<button onClick={() => this.sayWelcome("Welcome to React Event Handling!")}>

Say Welcome

</button>

<br /><br />

<button onClick={this.handleSyntheticEvent}>OnPress</button>

<hr />

<CurrencyConvertor />

</div>

);

}

}

export default App;

**4. CurrencyConvertor.js**

import React, { Component } from 'react';

class CurrencyConvertor extends Component {

constructor(props) {

super(props);

this.state = {

inr: '',

euro: null,

};

}

handleChange = (e) => {

this.setState({ inr: e.target.value });

};

handleSubmit = (e) => {

e.preventDefault(); // prevent form refresh

const euroRate = 0.011; // Static rate: 1 INR = 0.011 EUR

const converted = parseFloat(this.state.inr) \* euroRate;

this.setState({ euro: converted.toFixed(2) });

};

render() {

return (

<div>

<h2>Currency Converter (INR to Euro)</h2>

<form onSubmit={this.handleSubmit}>

<input

type="number"

placeholder="Enter INR"

value={this.state.inr}

onChange={this.handleChange}

/>

<button type="submit">Convert</button>

</form>

{this.state.euro && (

<p>Euro Amount: <strong>€{this.state.euro}</strong></p>

)}

</div>

);

}

}

export default CurrencyConvertor;

**Explanation of Key Concepts**

| **Concept** | **Example** |
| --- | --- |
| **React Events** | onClick={this.increment} |
| **Event Handlers** | increment(), handleSubmit() |
| **Synthetic Event** | handleSyntheticEvent(event) logs a React synthetic event |
| **Naming Convention** | onClick, onChange, etc. (CamelCase) |
| **Passing Argument** | onClick={() => this.sayWelcome("Welcome!")} |
| **Multiple Methods in One Handler** | increment() calls sayHello() |
| **Using this** | Class methods bound to this |

**Output Summary**

* Counter increments and decrements.
* Increment also logs hello message.
* Say Welcome button shows alert.
* "OnPress" button shows synthetic event alert.
* INR input field converts value to Euro.



