**Exercise 11: Create a React Application “eventexamplesapp”**

**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. Edit App.js**

import React, { useState } from 'react';

import './App.css';

function App() {

// State variables

const [count, setCount] = useState(0);

const [amount, setAmount] = useState('');

const [converted, setConverted] = useState('');

// Increment methods

const increment = () => {

setCount(count + 1);

sayHello();

staticMessage();

};

const sayHello = () => {

alert("Hello Member!");

};

const staticMessage = () => {

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

};

// Decrement method

const decrement = () => {

setCount(count - 1);

};

// Welcome function

const sayWelcome = (msg) => {

alert(msg);

};

// Synthetic Event

const handleClick = () => {

alert("I was clicked");

};

// Currency conversion (INR to Euro)

const handleConvert = (e) => {

e.preventDefault();

const euro = parseFloat(amount) \* 80; // 1 Euro = ~80 INR

setConverted(Converting to Euro Amount is ${euro});

};

return (

<div className="App">

<h1>React App</h1>

<h2>Count: {count}</h2>

<button onClick={increment}>Increment</button>

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

<button onClick={() => sayWelcome("Welcome!")}>Say Welcome</button>

<button onClick={handleClick}>Click on me</button>

<hr />

<h2>Currency Convertor!!!</h2>

<form onSubmit={handleConvert}>

<label>Amount (INR): </label>

<input

type="number"

value={amount}

onChange={(e) => setAmount(e.target.value)}

/>

<br /><br />

<label>Currency: </label>

<input type="text" value="Euro" disabled />

<br /><br />

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

</form>

{converted && <p>{converted}</p>}

</div>

);

}

export default App;

**3. Edit App.css**

.App {

text-align: center;

font-family: sans-serif;

}

button {

margin: 5px;

padding: 8px 16px;

font-size: 14px;

}

input {

padding: 5px;

}

**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.



