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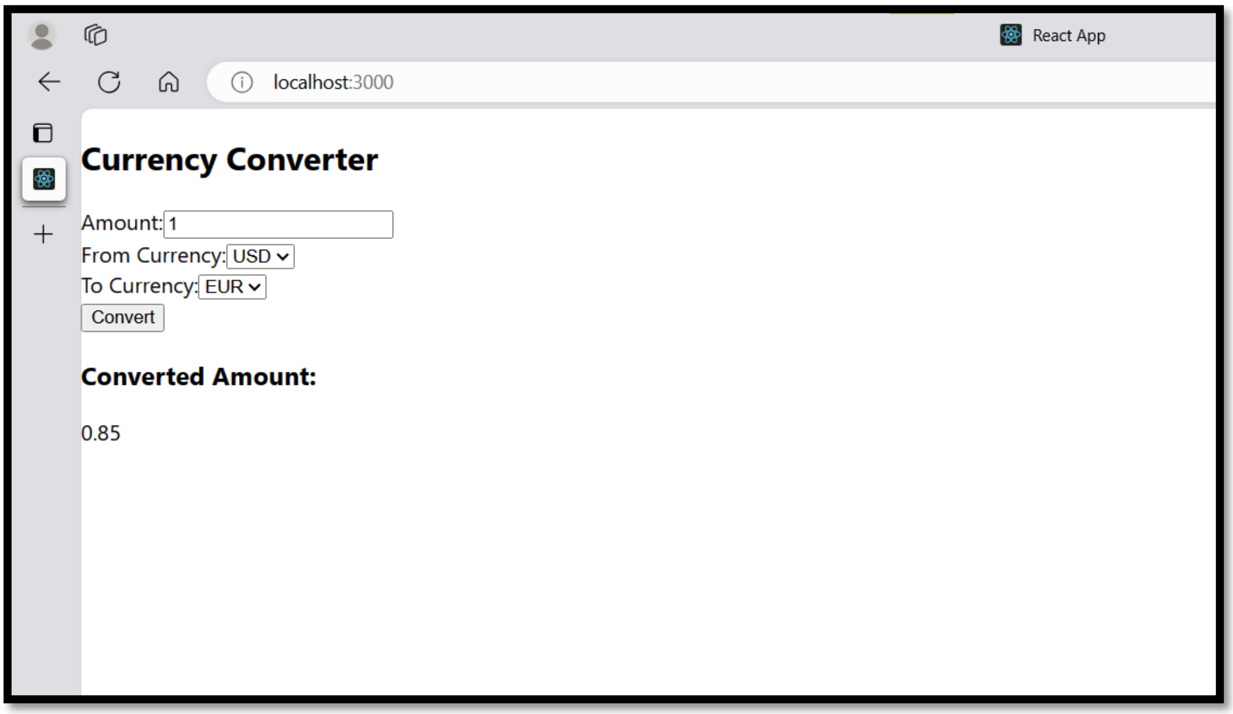
Lab Assignment – VIII

WEB TECHNOLOGY

T1. Currency converter

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

const CurrencyConverter = () => {
    const [amount, setAmount] = useState('');
    const [fromCurrency, setFromCurrency] = useState('USD');
    const [toCurrency, setToCurrency] = useState('EUR');
    const [convertedAmount, setConvertedAmount] = useState('');

    const exchangeRate = 0.85;

    const handleAmountChange = (e) => {
        setAmount(e.target.value);
    };

    const handleFromCurrencyChange = (e) => {
        setFromCurrency(e.target.value);
    };

    const handleToCurrencyChange = (e) => {
        setToCurrency(e.target.value);
    };

    const convertCurrency = () => {
        const convertedValue = amount * exchangeRate;
        setConvertedAmount(convertedValue.toFixed(2));
    };

    return (
        <div>
            <h2>Currency Converter</h2>
            <div>
                <label htmlFor="amount">Amount:</label>
                <input type="number" id="amount" value={amount}
onChange={handleAmountChange} />
            </div>
            <div>
```

```
                <label htmlFor="fromCurrency">From Currency:</label>
                <select id="fromCurrency" value={fromCurrency}
onChange={handleFromCurrencyChange}>
                    <option value="USD">USD</option>
                </select>
            </div>
            <div>
                <label htmlFor="toCurrency">To Currency:</label>
                <select id="toCurrency" value={toCurrency}
onChange={handleToCurrencyChange}>
                    <option value="EUR">EUR</option>
                </select>
            </div>
            <button onClick={convertCurrency}>Convert</button>
            <div>
                <h3>Converted Amount:</h3>
                <p>{convertedAmount}</p>
            </div>
        </div>
    );
};

export default CurrencyConverter;
```



Currency Converter

Amount: 1
From Currency: USD
To Currency: EUR
Convert

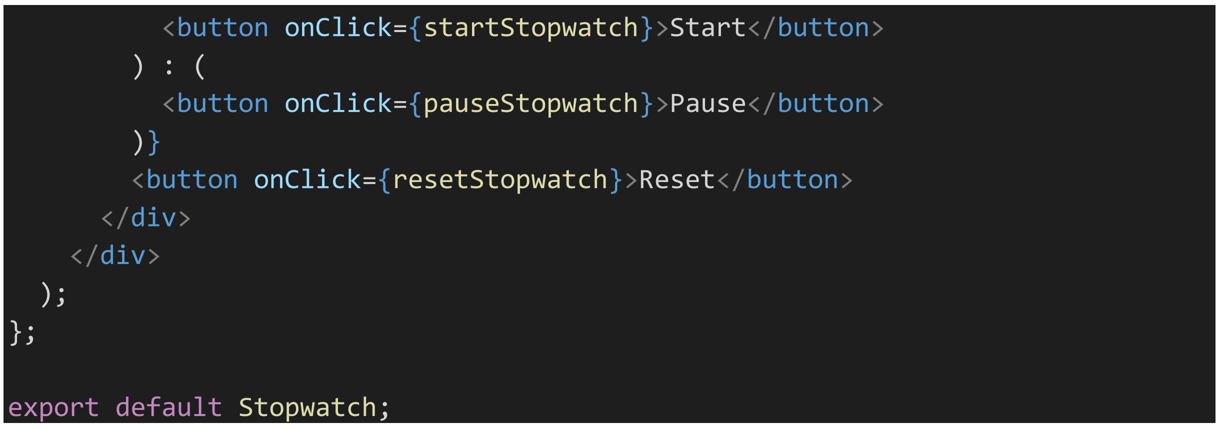
Converted Amount:

0.85

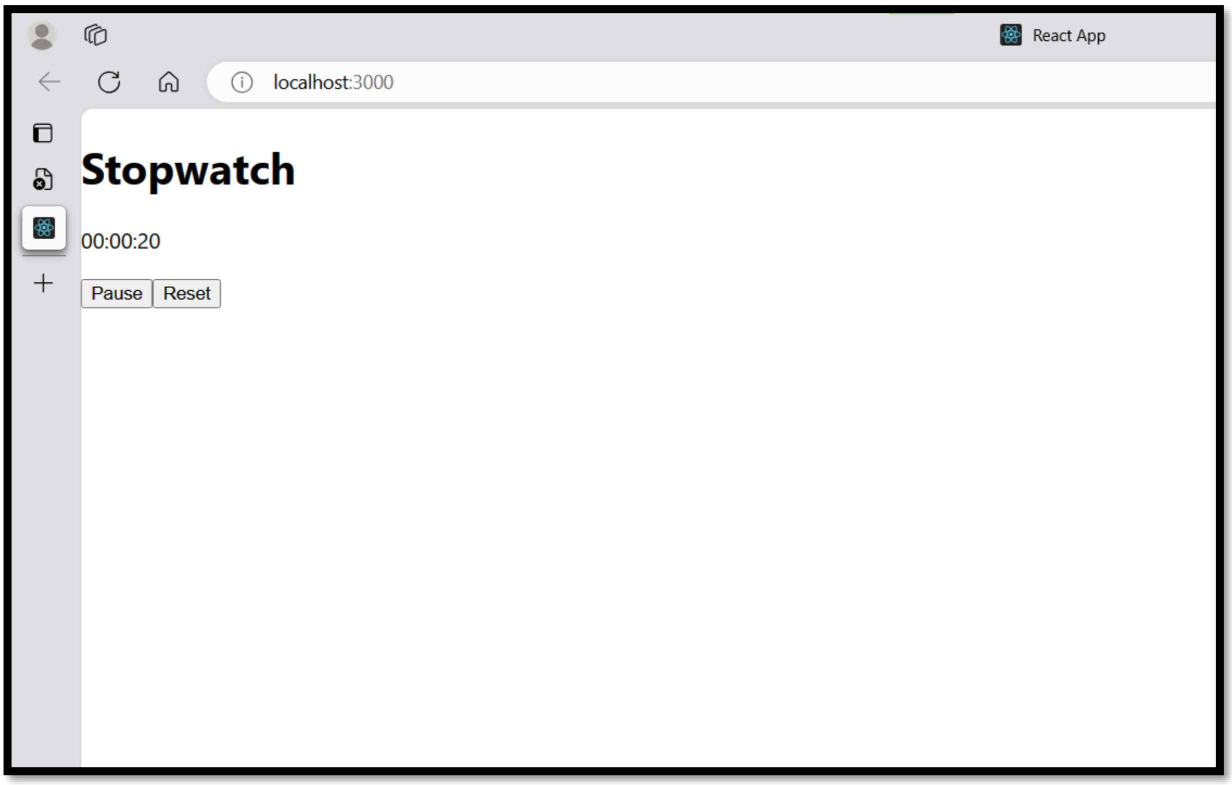
T2. Stopwatch application

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

```
const Stopwatch = () => {
  const [time, setTime] = useState(0);
  const [isRunning, setIsRunning] = useState(false);

  useEffect(() => {
    let intervalId;
    if (isRunning) {
      intervalId = setInterval(() => {
        setTime((prevTime) => prevTime + 1);
      }, 1000);
    } else {
      clearInterval(intervalId);
    }

    return () => clearInterval(intervalId);
  }, [isRunning]);

  const startStopwatch = () => {
    setIsRunning(true);
  };

  const pauseStopwatch = () => {
    setIsRunning(false);
  };

  const resetStopwatch = () => {
    setIsRunning(false);
    setTime(0);
  };

  const formatTime = (seconds) => {
    const hours = Math.floor(seconds / 3600);
    const minutes = Math.floor((seconds % 3600) / 60);
    const remainingSeconds = seconds % 60;

    return `${hours.toString().padStart(2, '0')}:${minutes
      .toString()
      .padStart(2, '0')}:${remainingSeconds.toString().padStart(2, '0')}`;
  };

  return (
    <div>
      <h1>Stopwatch</h1>
      <div>
        <p>{formatTime(time)}</p>
      </div>
      <div>
        {!isRunning ? (
```



```
          <button onClick={startStopwatch}>Start</button>
        ) : (
          <button onClick={pauseStopwatch}>Pause</button>
        )}
        <button onClick={resetStopwatch}>Reset</button>
      </div>
    </div>
  );
};

export default Stopwatch;
```



React App

localhost:3000

Stopwatch

00:00:20