Web Technology

Lab Assignment – 08

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CODE-1 :-

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

function CurrencyConverter() {
  const [amount, setAmount] = useState(0);
  const [fromCurrency, setFromCurrency] = useState('USD');
  const [toCurrency, setToCurrency] = useState('EUR');
  const [convertedAmount, setConvertedAmount] = useState(0);

  // Hard-coded exchange rate
  const exchangeRate = 0.85; // 1 USD = 0.85 EUR

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

```
  };

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

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

  const convertCurrency = () => {
    const result = amount * exchangeRate;
    setConvertedAmount(result.toFixed(2)); // Round to 2 decimal places
  };

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

```
        From Currency:
        <select value={fromCurrency} onChange={handleFromCurrencyChange}>
          <option value="USD">USD</option>
          <option value="EUR">EUR</option>
        </select>
      </label>
    </div>
    <div>
      <label>
        To Currency:
        <select value={toCurrency} onChange={handleToCurrencyChange}>
          <option value="USD">USD</option>
          <option value="EUR">EUR</option>
        </select>
      </label>
    </div>
    <button onClick={convertCurrency}>Convert</button>
    <div>
      {amount} {fromCurrency} is equal to {convertedAmount} {toCurrency}
    </div>
  </div>
 );
}

export default CurrencyConverter;
```

OUTPUT :-

CODE-2

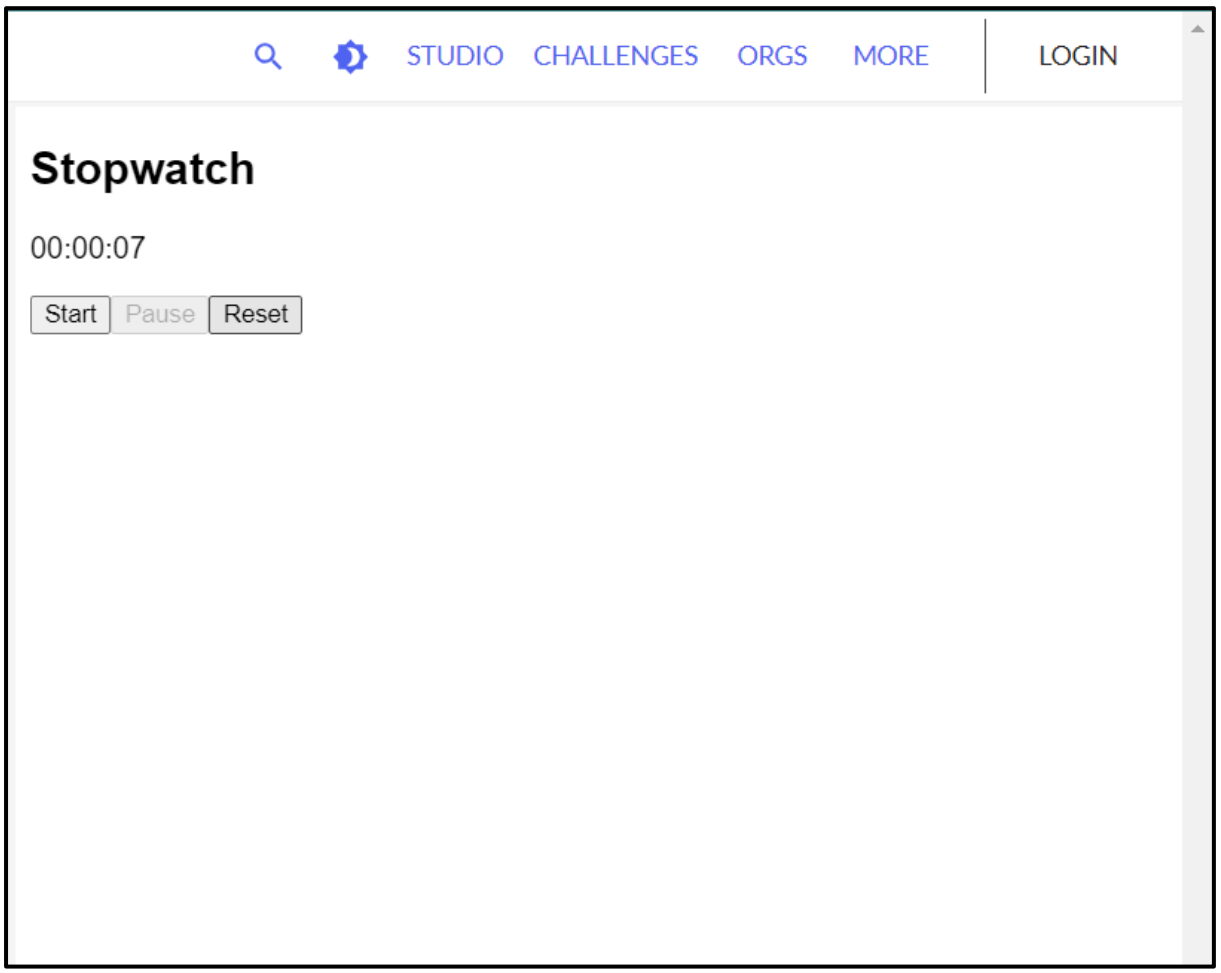
```
import React, { useState, useEffect } from 'react';


function Stopwatch() {
  const [timer, setTimer] = useState(0);
  const [isRunning, setIsRunning] = useState(false);

  useEffect(() => {
    let intervalId;

    if (isRunning) {
```

```
    intervalId = setInterval(() => {
      setTimer((prevTimer) => prevTimer + 1);
    }, 1000);
  } else {
    clearInterval(intervalId);
  }

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

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

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

const resetTimer = () => {
  setTimer(0);
  setIsRunning(false);
};

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

```
  const seconds = time % 60;

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

 return (
  <div>
   <h2>Stopwatch</h2>
   <div>
    <p>{formatTime(timer)}</p>
   </div>
   <div>
    <button onClick={startTimer} disabled={isRunning}>
     Start
    </button>
    <button onClick={pauseTimer} disabled={!isRunning}>
     Pause
    </button>
    <button onClick={resetTimer}>Reset</button>
   </div>
  </div>
 );
}
```

export default Stopwatch;

OUTPUT :-



CODE-3

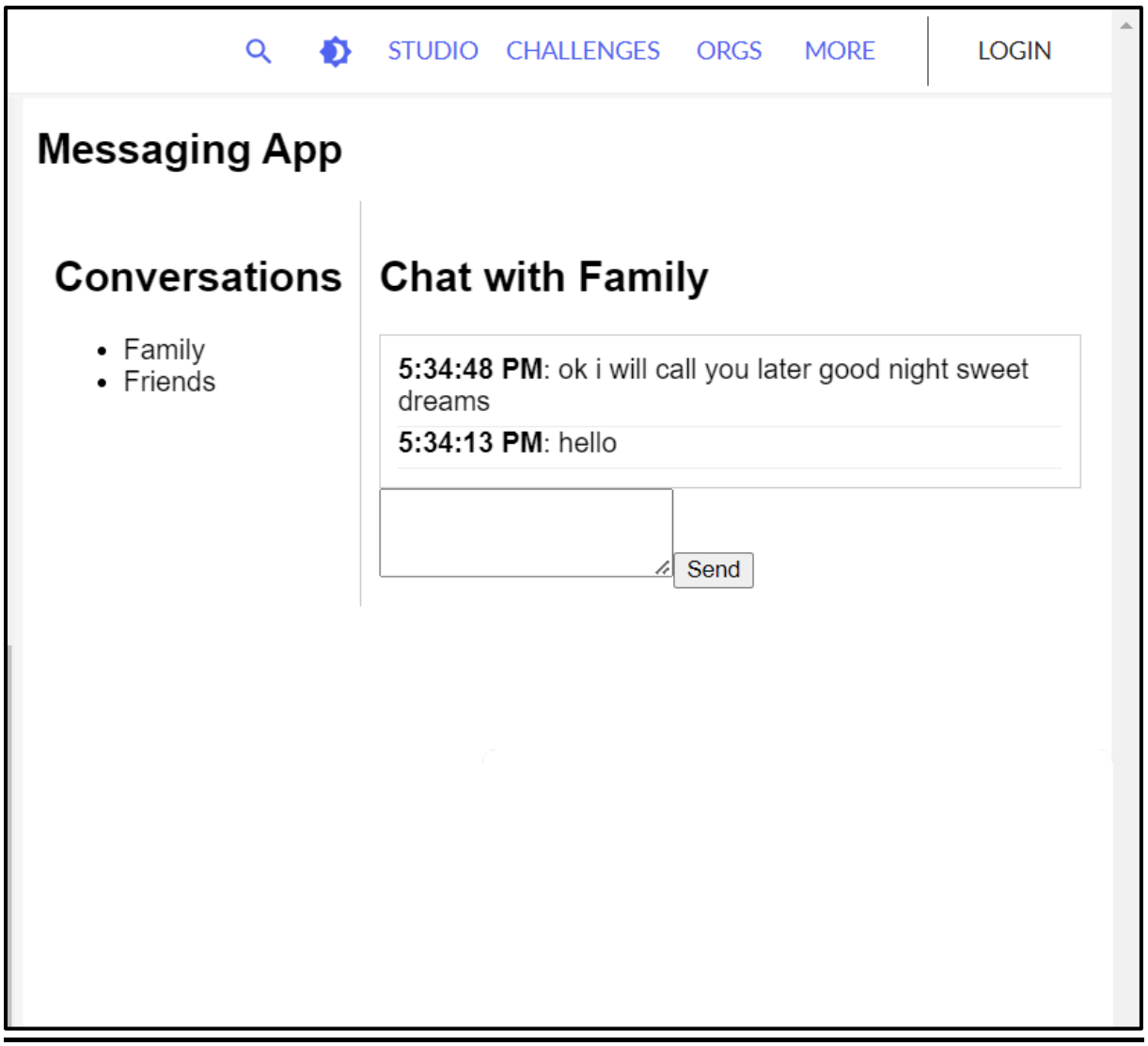
```
import React, { useState } from 'react';


const MessagingApp = () => {
  const [conversations, setConversations] = useState([
    { id: 1, name: 'Family', messages: [] },
    { id: 2, name: 'Friends', messages: [] },
  ]);
```

```
const [selectedConversation, setSelectedConversation] = useState(null);
const [newMessage, setNewMessage] = useState('');

const handleConversationClick = (conversationId) => {
  setSelectedConversation(conversationId);
};

const handleSendMessage = () => {
  if (newMessage.trim() !== '' && selectedConversation) {
    const updatedConversations = conversations.map((conversation) =>
      conversation.id === selectedConversation
        ? {
            ...conversation,
            messages: [
              { text: newMessage, timestamp: new Date().toLocaleTimeString() },
              ...conversation.messages,
            ],
          }
        : conversation
    );
    setConversations(updatedConversations);
    setNewMessage('');
  }
};

return (
```

```
  <div>
    <h1>Messaging App</h1>

    <div style={{ display: 'flex' }}>
      {/* List of Conversations */}
      <div style={{ flex: '1', borderRight: '1px solid #ccc', padding: '10px' }}>
        <h2>Conversations</h2>
        <ul>
          {conversations.map((conversation) => (
            <li key={conversation.id} onClick={() =>
handleConversationClick(conversation.id)}>
              {conversation.name}
            </li>
          ))}
        </ul>
      </div>

      {/* Chat Interface */}
      <div style={{ flex: '3', padding: '10px' }}>
        {selectedConversation && (
          <div>
            <h2>Chat with {conversations.find((conv) => conv.id ===
selectedConversation).name}</h2>
            <div style={{ maxHeight: '300px', overflowY: 'auto', border: '1px solid
#ccc', padding: '10px' }}>
              {conversations
                .find((conv) => conv.id === selectedConversation)
```

```
            .messages.map((message, index) => (
              <div key={index} style={{ borderBottom: '1px solid #eee',
paddingBottom: '5px' }}>
                <strong>{message.timestamp}</strong>: {message.text}
              </div>
            ))}
          </div>
          <textarea
            rows="3"
            value={newMessage}
            onChange={(e) => setNewMessage(e.target.value)}
          />
          <button onClick={handleSendMessage}>Send</button>
        </div>
      )}
    </div>
  </div>
 );
};

export default MessagingApp;
```

OUTPUT :-


STUDIO
CHALLENGES
ORGS
MORE
LOGIN
Messaging App
Conversations
Family
Friends
Chat with Family
5:34:48 PM: ok i will call you later good night sweet dreams
5:34:13 PM: hello
Send