

LAB ASSIGNMENT – 8

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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

STUDIO

CHALLENGES

ORGS

MORE

LOGIN

Currency Converter

Amount:

From Currency:

To Currency:

Convert

1000 EUR is equal to 850.00 USD

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);  
};
```

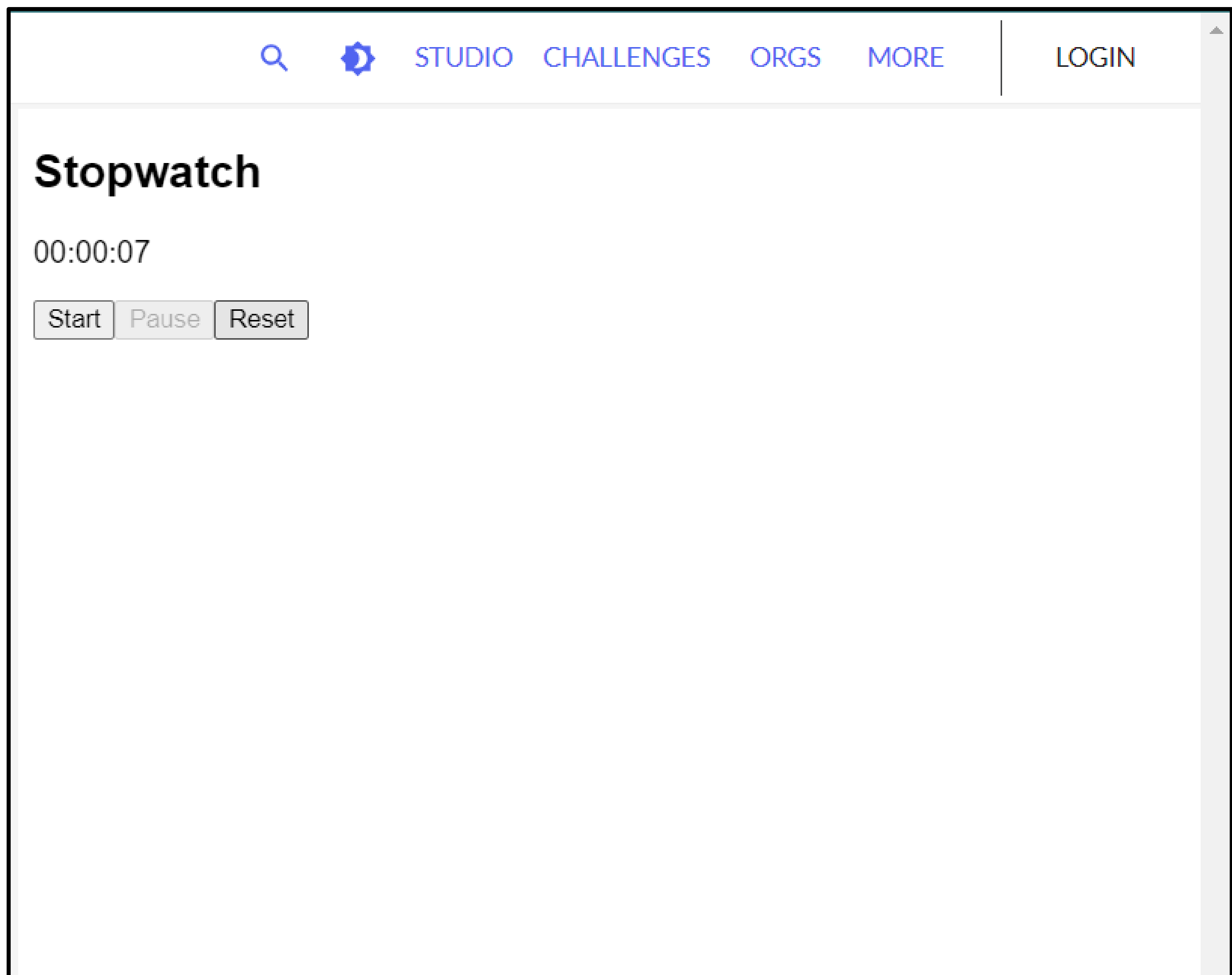
```
const formatTime = (time) => {  
  const hours = Math.floor(time / 3600);  
  const minutes = Math.floor((time % 3600) / 60);  
  const seconds = time % 60;  
  
  return `${hours.toString().padStart(2, '0')}:${minutes  
    .toString()  
    .padStart(2, '0')}:${seconds.toString().padStart(2, '0')}`;  
};
```

```
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>
</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