

LAB-8

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1.

CODE:

```
import React, { useState } from 'react';
import './App.css';

const CurrencyConverter = () => {
  const [amount, setAmount] = useState('');
  const [convertedAmount, setConvertedAmount] =
useState('');
  const exchangeRate = 0.85; // 1 USD = 0.85 EUR

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

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

  return (
    <div className="currency-converter-container">
      <h1 className="converter-title">Currency
Converter</h1>
      <div className="input-container">
```

```

        <label htmlFor="amount" className="label-
text">
            Enter Amount in USD:
        </label>
        <input
            type="number"
            id="amount"
            value={amount}
            onChange={handleAmountChange}
            className="input-field"
        />
    </div>
    <div className="button-container">
        <button onClick={convertCurrency}
className="convert-button">
            Convert
        </button>
    </div>
    {convertedAmount && (
        <div className="result-container">
            <p className="result-text">Converted
Amount: {convertedAmount} EUR</p>
        </div>
    )}
    </div>
);
};

function App() {
    return (
        <div className="app-container">
            <CurrencyConverter />
        </div>
    );
}

export default App;

```

```
.currency-converter-container {
  max-width: 400px;
  margin: auto;
  padding: 20px;
  border: 1px solid #ccc;
  border-radius: 5px;
  box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);
}

.converter-title {
  text-align: center;
  color: #333;
}

.input-container {
  margin-bottom: 15px;
}

.label-text {
  display: block;
  margin-bottom: 5px;
  color: #555;
}

.input-field {
  width: 100%;
  padding: 8px;
  border: 1px solid #ccc;
  border-radius: 4px;
}

.button-container {
  text-align: center;
}

.convert-button {
  padding: 10px;
  background-color: #4caf50;
  color: #fff;
  border: none;
  border-radius: 4px;
  cursor: pointer;
}
```

```
}  
  
.result-container {  
  margin-top: 20px;  
}  
  
.result-text {  
  color: #333;  
}
```

Output:

Currency Converter

Enter Amount in USD:

Converted Amount: 24.65 EUR

2.

Code:

```
import React, { useState, useRef } from 'react';
import './App.css';

function App() {
  const [time, setTime] = useState(0);
  const [isRunning, setIsRunning] =
useState(false);
  const timerRef = useRef();

  const startTimer = () => {
    if (!isRunning) {
      timerRef.current = setInterval(() => {
        setTime((prevTime) => prevTime + 1);
      }, 1000);
      setIsRunning(true);
    }
  };

  const pauseTimer = () => {
    clearInterval(timerRef.current);
    setIsRunning(false);
  };

  const resetTimer = () => {
    clearInterval(timerRef.current);
    setTime(0);
    setIsRunning(false);
  };

  return (
    <div className="stopwatch-container">
      <h1>Stopwatch</h1>
    </div>
  );
}
```

```

    <div
className="timer">{formatTime(time)}</div>
    <div className="controls">
      <button onClick={startTimer}
disabled={isRunning}>
        Start
      </button>
      <button onClick={pauseTimer}
disabled={!isRunning}>
        Pause
      </button>
      <button onClick={resetTimer}>Reset</button>
    </div>
  </div>
);
}

function formatTime(seconds) {
  const minutes = Math.floor(seconds / 60);
  const remainingSeconds = seconds % 60;
  return `${String(minutes).padStart(2,
'0')}:${String(remainingSeconds).padStart(2, '0')}`;
}

export default App;

```

```

.stopwatch-container {
  max-width: 300px;
  margin: auto;
  text-align: center;
}

.timer {
  font-size: 2em;
  margin: 10px 0;
}

```

```
.controls button {  
  font-size: 1em;  
  margin: 5px;  
  padding: 10px;  
  cursor: pointer;  
}  
  
.controls button:disabled {  
  cursor: not-allowed;  
}
```

Output:



3.

Code:

```
// src/App.js
```

```
import React, { useState, useEffect } from 'react';
import { auth, firestore } from '../firebase';
import Conversations from
'./components/Conversations';
import Chat from './components/Chat';
import { useCollectionData } from 'react-firebase-
hooks/firestore';

const App = () => {
  const [user, setUser] = useState(null);
  const [selectedConversation,
setSelectedConversation] = useState(null);

  useEffect(() => {
    const unsubscribe =
auth.onAuthStateChanged((user) => {
      setUser(user);
    });

    return () => unsubscribe();
  }, []);

  const conversationsRef =
firestore.collection('conversations');
  const [conversations] =
useCollectionData(conversationsRef, { idField: 'id'
});

  const messagesRef = selectedConversation
    ?
conversationsRef.doc(selectedConversation.id).colle
ction('messages')
    : null;
  const [messages] = useCollectionData(messagesRef,
{ idField: 'id' });

  const sendMessage = () => {
```



```

    // Implement message sending logic
  };

  return (
    <div>
      {user ? (
        <>
          <button onClick={() =>
auth.signOut()}>Sign Out</button>
          <Conversations
conversations={conversations}
onSelectConversation={setSelectedConversation} />
            {selectedConversation && <Chat
messages={messages} sendMessage={sendMessage} />}
          </>
        ) : (
          <button onClick={() =>
auth.signInAnonymously()}>Sign In
Anonymously</button>
        )}
      </div>
    );
  };

export default App;

// src/firebase.js
import firebase from 'firebase/app';
import 'firebase/auth';
import 'firebase/firestore';

const firebaseConfig = {
  // Your Firebase Config Object
};

firebase.initializeApp(firebaseConfig);

```

```

export const auth = firebase.auth();
export const firestore = firebase.firestore();

// src/components/Chat.js
import React from 'react';

const Chat = ({ messages, sendMessage }) => {
  return (
    <div>
      <h2>Chat</h2>
      <div>
        {messages.map((message) => (
          <div key={message.id}>
            <strong>{message.sender}</strong>
            {message.text}
          </div>
        ))}
      </div>
      <div>
        <input type="text" placeholder="Type your message" />
        <button onClick={sendMessage}>Send</button>
      </div>
    </div>
  );
};

export default Chat;

// src/components/Conversations.js
import React from 'react';

const Conversations = ({ conversations,
onSelectConversation }) => {
  return (
    <div>

```

```
    <h2>Conversations</h2>
    <ul>
      {conversations.map((conversation) => (
        <li key={conversation.id} onClick={() =>
onSelectConversation(conversation)}>
          {conversation.name}
        </li>
      ))}
    </ul>
  </div>
);
};

export default Conversations;
```

Output:

Conversations

Friend 1

Friend 2

Chat

Friend 1

What are you doing ?

You - 3/5/2024, 5:24:18 PM

Hello

You - 3/5/2024, 5:24:06 PM

Hello!

Friend 1 - 3/5/2024, 5:23:57 PM

Hi there!

You - 3/5/2024, 5:23:57 PM