

Question 1:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width,
initial-scale=1.0">
  <title>Currency Converter</title>
  <style>
    /* CSS styles */
    body {
      font-family: Arial, sans-serif;
    }
    label {
      margin-right: 10px;
    }
    select {
      margin-left: 5px;
    }
  </style>
</head>
<body>
  <div id="root"></div>
  <script
src="https://unpkg.com/react@17/umd/react.development.
js"></script>
  <script
src="https://unpkg.com/react-dom@17/umd/react-dom.deve
lopment.js"></script>
```

```
<script>
  // ReactJS code
  const { useState } = React;

  function CurrencyConverter() {
    const [amount, setAmount] = useState('');
    const [fromCurrency, setFromCurrency] =
useState('USD');
    const [toCurrency, setToCurrency] =
useState('EUR');
    const exchangeRate = 0.85; // Example exchange
rate (1 USD = 0.85 EUR)

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

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

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

    const convertCurrency = () => {
      const convertedAmount = parseFloat(amount) *
exchangeRate;

```

```
        return isNaN(convertedAmount) ? '' :
convertedAmount.toFixed(2);
    };

    return React.createElement(
        'div',
        null,
        React.createElement('h1', null, 'Currency
Converter'),
        React.createElement(
            'div',
            null,
            React.createElement(
                'label',
                null,
                'Amount:',
                React.createElement('input', { type:
'number', value: amount, onChange: handleAmountChange
}))
        )
    ),
    React.createElement(
        'div',
        null,
        React.createElement(
            'label',
            null,
            'From:',
            React.createElement(
```

```
        'select',
        { value: fromCurrency, onChange:
handleFromCurrencyChange },
        React.createElement('option', { value:
'USD' }, 'USD'),
        React.createElement('option', { value:
'EUR' }, 'EUR')
    )
)
),
React.createElement(
    'div',
    null,
    React.createElement(
        'label',
        null,
        'To:',
        React.createElement(
            'select',
            { value: toCurrency, onChange:
handleToCurrencyChange },
            React.createElement('option', { value:
'USD' }, 'USD'),
            React.createElement('option', { value:
'EUR' }, 'EUR')
        )
    )
),
React.createElement(
```

```

        'div',
        null,
        React.createElement('p', null, 'Converted
Amount: ', convertCurrency())
    )
);
}

```

```

ReactDOM.render(React.createElement(CurrencyConverter)
, document.getElementById('root'));
</script>
</body>
</html>

```

.....

Question 2:

```

<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width,
initial-scale=1.0">
    <title>Stopwatch</title>
    <style>
        /* CSS styles */
        body {

```

```

    font-family: Arial, sans-serif;
  }
  button {
    margin-right: 10px;
  }
</style>
</head>
<body>
  <div id="root"></div>
  <script
src="https://unpkg.com/react@17/umd/react.development.
js"></script>
  <script
src="https://unpkg.com/react-dom@17/umd/react-dom.deve
lopment.js"></script>
  <script
src="https://cdnjs.cloudflare.com/ajax/libs/babel-stand
alone/6.26.0/babel.min.js"></script>
  <script type="text/babel">
    // ReactJS code
    const { useState, useEffect } = React;

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

      useEffect(() => {
        let interval;
        if (isActive) {

```

```
    interval = setInterval(() => {
      setTimer((prevTimer) => prevTimer + 1);
    }, 1000);
  } else {
    clearInterval(interval);
  }
  return () => clearInterval(interval);
}, [isActive]);
```

```
const handleStart = () => {
  setIsActive(true);
};
```

```
const handlePause = () => {
  setIsActive(false);
};
```

```
const handleReset = () => {
  setIsActive(false);
  setTimer(0);
};
```

```
return (
  <div>
    <h1>Stopwatch</h1>
    <div>
      <p>{timer}s</p>
    </div>
    <div>
```

```

        {!isActive ? (
            <button
onClick={handleStart}>Start</button>
        ) : (
            <button
onClick={handlePause}>Pause</button>
        ) }
        <button
onClick={handleReset}>Reset</button>
    </div>
</div>
    );
}

```

```

    ReactDOM.render(<Stopwatch />,
document.getElementById('root'));
</script>
</body>
</html>

```

.....

QUESTION 3:

```

<!DOCTYPE html>
<html>
  <head>
    <meta charset="UTF-8" />
    <title>Simple Messaging App</title>
    <style>

```



```
body {
    font-family: Arial, sans-serif;
}
#conversations {
    list-style-type: none;
    padding: 0;
    margin: 0;
}
#conversations li {
    padding: 10px;
    border-bottom: 1px solid #ddd;
    cursor: pointer;
}
#conversations li:hover {
    background-color: #f5f5f5;
}
#messages {
    list-style-type: none;
    padding: 0;
    margin: 0;
    height: 300px;
    overflow-y: auto;
}
#messages li {
    padding: 10px;
    border-bottom: 1px solid #ddd;
}
#message-input {
    width: 100%;
```

```
        padding: 10px;
    }
    #send-button {
        padding: 10px;
        background-color: #4CAF50;
        color: white;
        border: none;
        cursor: pointer;
    }
    #send-button:hover {
        background-color: #45a049;
    }
</style>
</head>
<body>
    <h1>Simple Messaging App</h1>
    <ul id="conversations"></ul>
    <ul id="messages"></ul>
    <input id="message-input" type="text"
placeholder="Type a message..." />
    <button id="send-button">Send</button>
    <script
src="https://unpkg.com/react@16.13.1/umd/react.develop
ment.js"></script>
    <script
src="https://unpkg.com/react-dom@16.13.1/umd/react-dom
.development.js"></script>
```

```
<script
src="https://unpkg.com/babel-standalone@6.26.0/babel.m
in.js"></script>
<script
src="https://unpkg.com/push.js@1.0.12/push.min.js"></s
cript>
<script type="text/babel">
  class Conversation extends React.Component {
    constructor(props) {
      super(props);
      this.state = {
        messages: [],
      };
      this.sendMessage =
this.sendMessage.bind(this);
    }
    componentDidMount() {
      this.getMessages();
      this.interval = setInterval(() =>
this.getMessages(), 1000);
    }
    componentWillUnmount() {
      clearInterval(this.interval);
    }
    getMessages() {
      fetch(`/api/conversations/${this.props.conversation.id
}/messages`)
        .then((response) => response.json())
```

```

        .then((data) => {
            this.setState({ messages: data });
        });
    }
    sendMessage() {
        const message = {
            text:
document.getElementById("message-input").value,
        };

        fetch(`/api/conversations/${this.props.conversation.id
}/messages`, {
            method: "POST",
            headers: {
                "Content-Type": "application/json",
            },
            body: JSON.stringify(message),
        })
        .then((response) => response.json())
        .then((data) => {
            this.getMessages();

document.getElementById("message-input").value = "";
            Push.create("New message", {
                body: data.text,
                timeout: 4000,
            });
        });
    }
}

```

```

render() {
  return (
    <div>
      <h2>{this.props.conversation.name}</h2>
      <ul id="messages">
        {this.state.messages.map((message) =>
(
          <li
key={message.id}>{message.text}</li>
          ) ) }
      </ul>
      <input
        id="message-input"
        type="text"
        placeholder="Type a message..."
        onPress={(event) => {
          if (event.key === "Enter") {
            this.sendMessage();
          }
        }}
      />
      <button id="send-button"
onClick={this.sendMessage}>
        Send
      </button>
    </div>
  );
}
}

```

```

class Conversations extends React.Component {
  constructor(props) {
    super(props);
    this.state = {
      conversations: [],
    };
  }
  componentDidMount() {
    fetch("/api/conversations")
      .then((response) => response.json())
      .then((data) => {
        this.setState({ conversations: data });
      });
  }
  render() {
    return (
      <ul id="conversations">

{this.state.conversations.map((conversation) => (
      <li key={conversation.id} onClick={()
=> this.props.onSelect(conversation)}>
        {conversation.name}
      </li>
    ))}
      </ul>
    );
  }
}

class App extends React.Component {

```

```

        constructor(props) {
            super(props);
            this.state = {
                selectedConversation: null,
            };
            this.onSelectConversation =
this.onSelectConversation.bind(this);
        }
        onSelectConversation(conversation) {
            this.setState({ selectedConversation:
conversation });
        }
        render() {
            return (
                <div>
                    <Conversations
onSelect={this.onSelectConversation} />
                    {this.state.selectedConversation && (
                        <Conversation
conversation={this.state.selectedConversation} />
                    )}
                </div>
            );
        }
    }

    ReactDOM.render(<App />,
document.getElementById("root"));
</script>
</body>

```

</html>

.....