# 物聯網實務第七周作業

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**Exercise 7-1 Create a chat room HTML.**
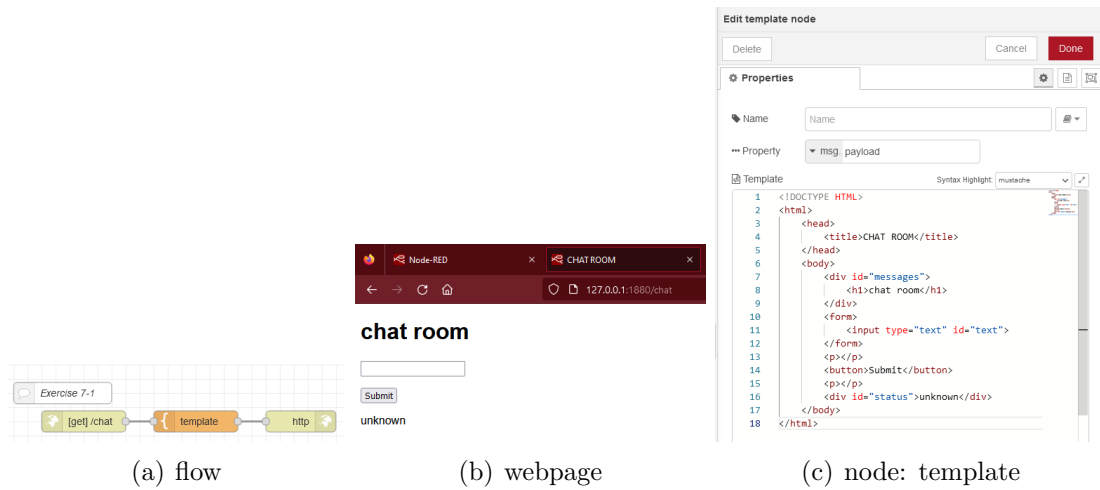


(a) flow        (b) webpage        (c) node: template

Figure 1: Exercise 7-1.

**Exercise 7-2 Connect with the websocket server.**
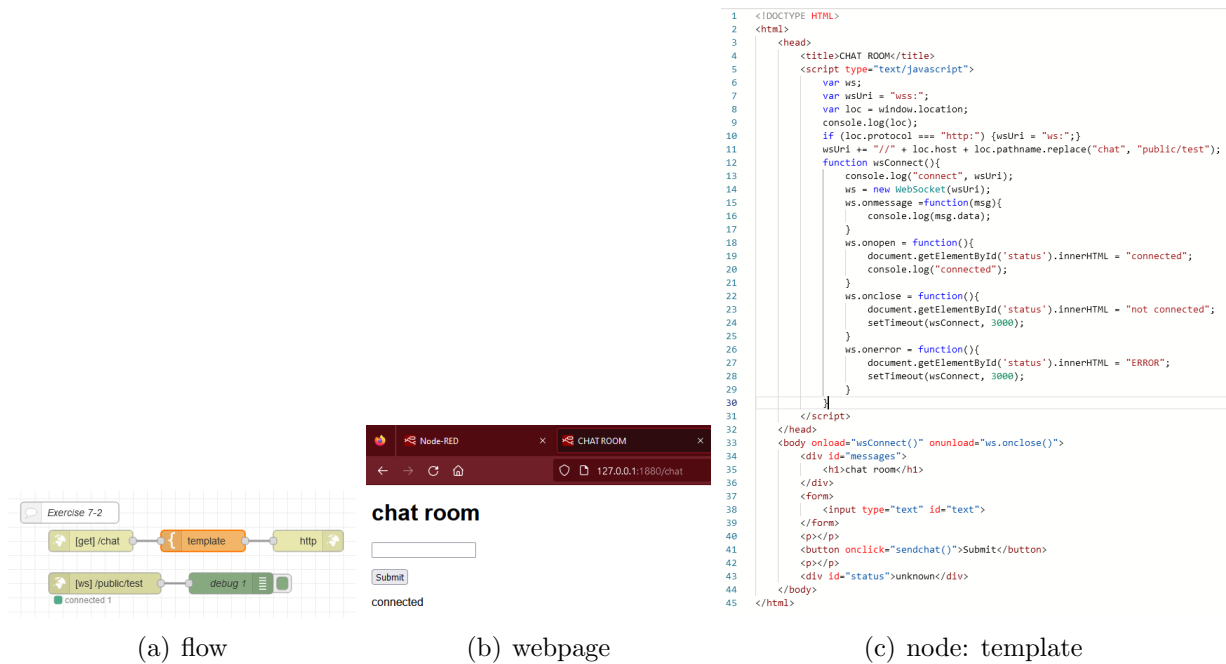


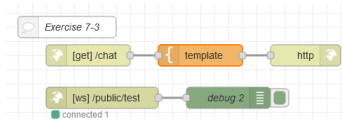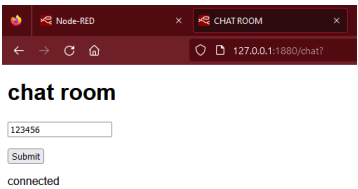(a) flow        (b) webpage        (c) node: template

Figure 2: Exercise 7-2.

1

**Exercise 7-3 Submit a message to websocket server.**



(a) flow

(b) webpage

(c) node: debug

(d) node: template

Figure 3: Exercise 7-3.

**Exercise 7-4 Broadcast to the connected clients.**
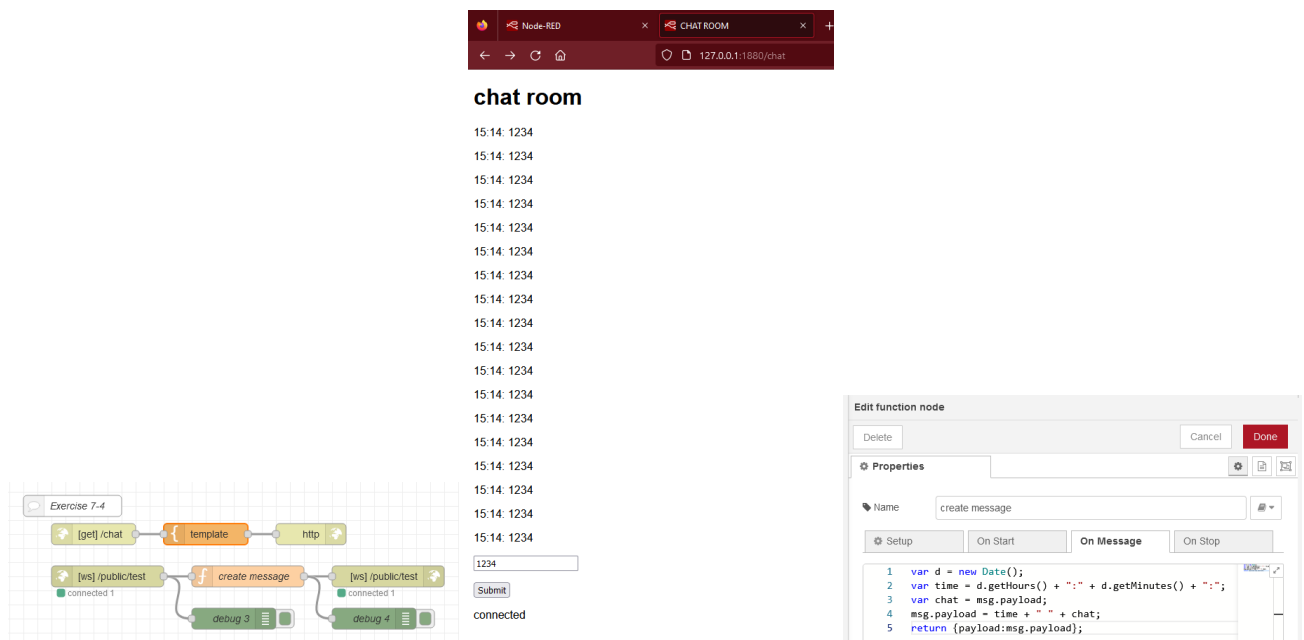


(a) flow

(b) website

(c) node: create message
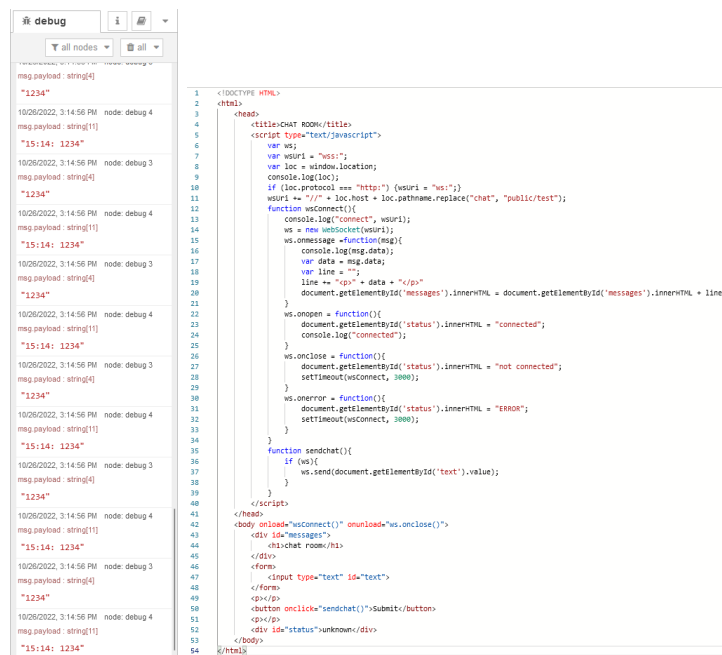


(d) node: debug

(e) node: template

Figure 4: Exercise 7-4.

**Exercise 7-5 Add input for user's name. Show time, name, and message.**



```
1  var d = new Date();
2  var time = d.getHours() + ":" + d.getMinutes();
3  var chat = msg.payload.split(' ');
4  msg.payload = time + " " + chat[0] + ": " + chat[1];
5  return {payload:msg.payload};
```
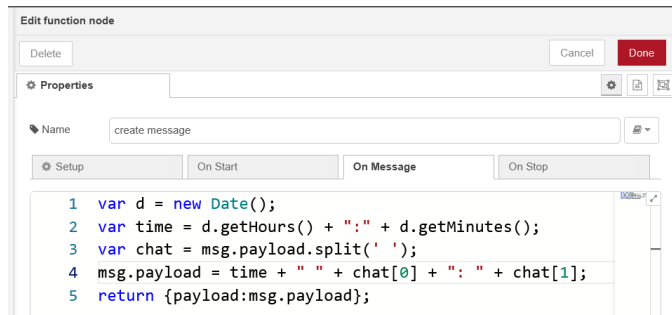
(a) node: create message
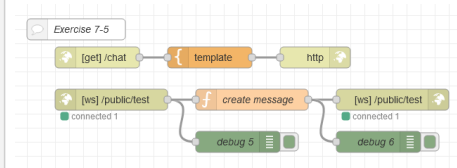


(b) flow
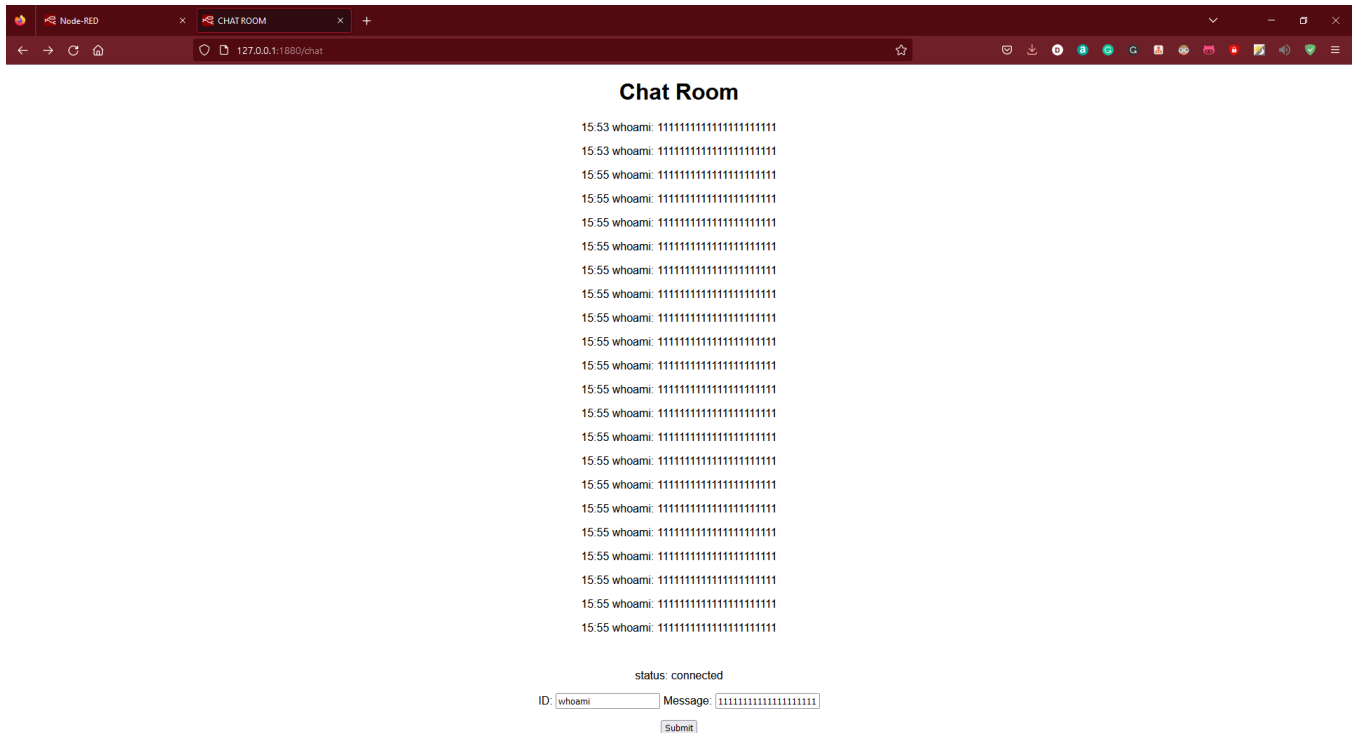


(c) node: webpage

Figure 5: Exercise 7-5.

```html
1  <!DOCTYPE HTML>
2  <html>
3      <head>
4          <style>
5          h1 {text-align: center;}
6          p {text-align: center;}
7          div {text-align: center;}
8          form {text-align: center;}
9          body {text-align: center;}
10         </style>
11         <title>CHAT ROOM</title>
12         <script type="text/javascript">
13             var ws;
14             var wsUri = "wss:";
15             var loc = window.location;
16             console.log(loc);
```

```
17        if (loc.protocol === "http:") {wsUri = "ws:";}
18        wsUri += "//" + loc.host + loc.pathname.replace("chat", "public/test
   ");
19        function wsConnect(){
20            console.log("connect", wsUri);
21            ws = new WebSocket(wsUri);
22            ws.onmessage =function(msg){
23                console.log(msg.data);
24                var data = msg.data;
25                var line = "";
26                line += "<p>" + data + "</p>"
27                document.getElementById('messages').innerHTML = document.
   getElementById('messages').innerHTML + line;
28            }
29            ws.onopen = function(){
30                document.getElementById('status').innerHTML = "status:
   connected";
31                console.log("connected");
32            }
33            ws.onclose = function(){
34                document.getElementById('status').innerHTML = "status: not
   connected";
35                setTimeout(wsConnect, 3000);
36            }
37            ws.onerror = function(){
38                document.getElementById('status').innerHTML = "status: ERROR
   ";
39                setTimeout(wsConnect, 3000);
40            }
41        }
42        function sendchat(){
43            if (ws){
44                ws.send(
45                    document.getElementById('user_id').value +
46                    " " +
47                    document.getElementById('user_msg').value
48                    );
49            }
50        }
51    </script>
52  </head>
53  <body onload="wsConnect()" onunload="ws.onclose()">
54    <div id="messages">
55        <h1>Chat Room</h1>
56    </div>
57    <br><p></p>
58    <div id="status">unknown</div>
59    <p></p>
60    <form>
61        <label for="user_id">ID:</label>
62        <input type="text" id="user_id">
```

```html
            <label for="user_msg">Message:</label>
            <input type="text" id="user_msg">
        </form>
        <p></p>
        <button onclick="sendchat()">Submit</button>
    </body>
</html>
```

Listing 1: node: template