DERAS WEBSOCKET PROTOCOL V1.5

Sebelum menggunakan Websocket protokol pastikan aplikasi DERAS.EXE sudah berjalan dan terkoneksi dengan Hardware.

WEBSOCKET PROTOCOL:
URL: localhost:3030

- **Get RFID Power**
  - **Payload**:
    {event: “get-rfid-power” }
  - **Success Response:**
    {"event":"response-get-rfid-power","statusCode":1,"message":"success!","value":20}
    Error Response:
    {"event":"response-get-rfid-power","statusCode":0,"message":"failed!"}

- **Set RFID Power**
  - **Payload**:
    {event: “set-rfid-power”, “value”: 30 }
  - **Success Response:**
    {"event":"set-rfid-power","statusCode":1,"message":"success!"}
    Error Response:
    {"event":"set-rfid-power","statusCode":0,"message":"failed!"}

- **Set Buzzer on**
  - **Payload**:
    {event: “set-buzzer-on”}
  - **Success Response:**
    {"event":"response-set-buzzer-on","statusCode":1,"message":"succes: set-buzzer-on"}
    Error Response:
    {"event":"response-set-buzzer-on","statusCode":0,"message":"failed: set-buzzer-on"}

- **Set Buzzer off**
  - **Payload**:
    {event: “set-buzzer-off”}
  - **Success Response:**
    {"event":"response-set-buzzer-off","statusCode":1,"message":"succes: set-buzzer-on"}
    Error Response:
    {"event":"response-set-buzzer-off","statusCode":0,"message":"failed: set-buzzer-on"}

- **Scan RFID On**
  - Payload:
    {“event”: “scan-rfid-on”}
  - Success Response:
    {“event”: “response-scan-rfid-on”, statusCode: 1, message: “success!”}
  - Error Response:
    {event: “response-scan-rfid-on”, statusCode: 0, message: “error ____”}

setelah event “scan-rfid-on**” dikirim ke server localhost:3030, maka UHF RFID akan merespon dengan melempar data yang dibacakan dengan format “**scan-rfid-event**”.*

- **Scan RFID Off**
    - **Payload:**
      {event: “scan-rfid-off”}
    - **Success Response:**
      {event: “response-scan-rfid-off”, statusCode: 1, message: “success!”}
    - **Error Response**:
      {event: “response-scan-rfid-off”, statusCode: 0, message: “error ____”}

- **Scan RFID Single**
    - **Payload:**
      {event: “scan-rfid-single”}
    - **Success Response:**
      {event: “response-scan-rfid-single”, statusCode: 1, message: “success!”}
    - **Error Response:**
      {event: “response-scan-rfid-single”, statusCode: 0, message: “error ____”}

- **Scan Pick To Light**
    - **Payload**:
      {"event" : "scan-rfid-light-on", "value": { "tid": "E281D0152000F7196907C13C"}}
    - **Success Response:**
      { "event": "response-scan-rfid-light-on”, "statusCode": 1, "message": "success!"}
    - **Error Response:**
      { "event": "response-scan-rfid-light-on”, "statusCode": 0, "message": "Error Scan / Not Found" }

- **Scan RFID Event**
    - **Response:**
      {"event":"scan-rfid-result","type":1,"data":"739015CFEEF95761629C9D9A72992EC8" ,"data_tid":"E280117020000141C5890A71","pc":null,"user":"","ant":"1","rssi":"-60.7","sensor":null,"rfid_valid":"1"}

- **Set GPIO pin 3-4 (Turn-on)**
    - **Payload**:
      {"event" : "set-gpio-on"}
    - **Success Response:**
      {"event":"response-set-gpio-on","statusCode":1,"message":"succes: set-gpio-on"}
    - **Error Response:**
      {"event":"response-set-gpio-on","statusCode":0,"message":"error: set-gpio-on"}

- **Ser GPIO pin 3-4 (Turn-off)**
    - **Payload**:
      {"event" : "set-gpio-off"}
    - **Success Response:**
      {"event":"response-set-gpio-on","statusCode":1,"message":"succes: set-gpio-off"}
    - **Error Response:**
      {"event":"response-set-gpio-on","statusCode":0,"message":"error: set-gpio-off"}

DATABASE ACCESS:

- **[READ] Get List Tags**
    - **Payload:**
      {"event": "db-storage-get-rfid-list"}
    - **Success Response:**
      {"event":"response-db-storage-get-tags","statusCode":1,"message":"success","value": [{"id":0,"tid":"E2801170200012EEE06C0B4BFD9001220D0A","status":1}, {...}, {....}]
    - **Error Response:**
      { "event": "response-db-storage-get-tags, "statusCode": 0, "message": "error: Data not found!" }

- **[CREATE] Insert Tags**
    - **Payload:**
      ```
       {"event" : "db-storage-insert-rfid-list", “value”: {
       "tid": "1234567890ABCDEF",
              "epc": "E2000017221101441890B3D4",
              "status": 1,
              "category": 2,
              "description": "Sample RFID tag description",
              "flag_alarm": 0,
              "created_time": "2023-10-10T14:48:00Z",
              "alias_antenna": "Antenna1",
              "no_sku": "SKU12345"
          }
      }
      ```
    - **Success Response:**
      ```
      {"event":"response-db-storage-insert-rfid-list","statusCode":1,"message":"success"}
      ```
    - **Error Response:**
      ```
      { "event": "response-db-storage-insert-rfid-list, "statusCode": 0, "message": "error: insert data!" }
      ```

- **[UPDATE] Update Tags**
    - **Payload:**
      ```
      {"event" : "db-storage-update-rfid-list", "value":{
       "tid": "1234567890ABCDEF",
              "epc": "E2000017221101441890B3D4",
              "status": 1,
              "category": 2,
              "description": "Sample RFID tag description",
              "flag_alarm": 0,
              "created_time": "2023-10-10T14:48:00Z",
              "alias_antenna": "Antenna1",
              "no_sku": "SKU12345"
          }
      }
      ```
    - **Success Response:**
      ```
      {"event":"response-db-storage-update-rfid-list","statusCode":1,"message":"success"}
      ```
    - **Error Response:**
      ```
      {"event":"response-db-storage-update-rfid-list","statusCode":0,"message":"error: update data!"}
      ```
- **[DELETE] Remove Tags**
    - **Payload:**
      ```
       {"event" : "db-storage-remove-rfid-list", "value": { "tid": "E280…" }}
      ```
    - **Success Response:**
      ```
      {"event":"response-db-storage-remove-rfid-list","statusCode":1,"message":"success"}
      ```
    - **Error Response:**
      ```
      {"event":"response-db-storage-remove-rfid-list","statusCode":0,"message":"error remove data!"}
      ```

DATABASE REPORT LOGS AND ALIAS ZONA:

- **GET ALIAS ZONA:**
    - **Payload:**
      ```
       {"event" : "local-get-alias-antenna"}
      ```
    - **Success Response:**
      ```
      {"event":"response-local-alias-antenna","statusCode":1,"message":"success","value":[{"ant":1,"alias":"WAREHOUSE1"},{"ant":2,"alias":"WAREHOUSE2"},{"ant":3,"alias":"WAREHOUSE3"},{"ant":4,"alias":"WAREHOUSE4"}]}
      ```
    - **Error Response:**
      ```
      {"event":"response-local-alias-antenna","statusCode":0,"message":"error get data!"}
      ```

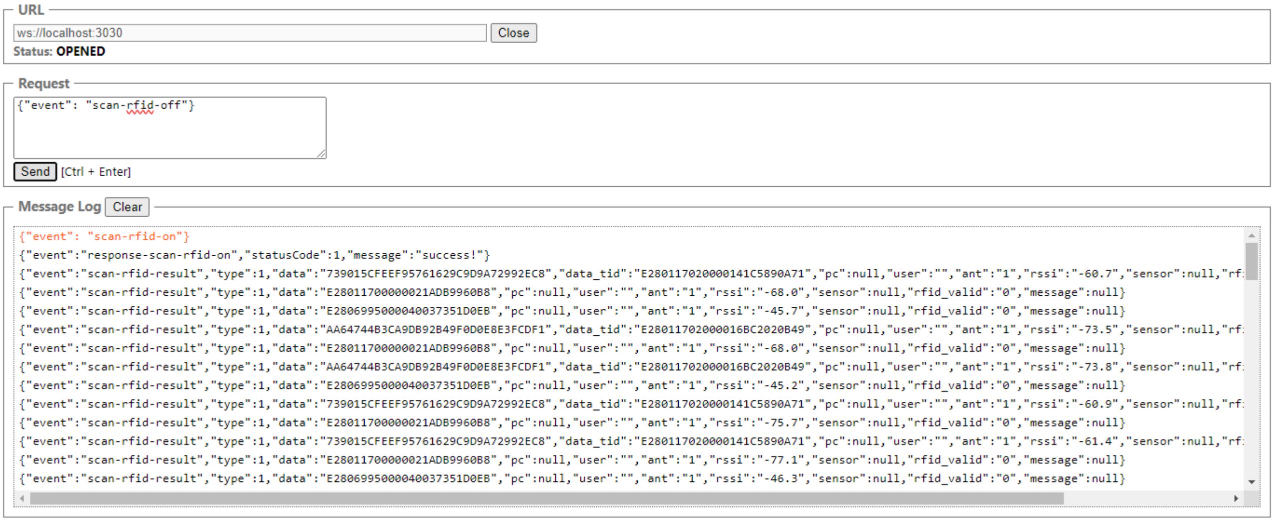
- **GET LOG REPORT HISTORY**
    - **Payload:**
      {"event": "report-logs"}
    - **Success Response:**
      {"event":"response-report-logs","statusCode":1,"message":"success","value":[{"id":0,"tid":"E280689420004025A81158A5","epc":"E280689400004025A81158A5","status":1,"created_time":"2024-11-01T16:25:15.7070625","description":"LAUNDRY TAG","category":0,"flag_alarm":0,"ant":0,"alias_antenna":"WAREHOUSE1","no_sku":"-"},{"id":0,"tid":"E280689420004025A81158A5","epc":"E280689400004025A81158A5","status":1,"created_time":"2024-11-01T16:24:11.2968277","description":"LAUNDRY TAG","category":0,"flag_alarm":0,"ant":0,"alias_antenna":"WAREHOUSE1","no_sku":"-"}]}
    - **Error Response:**
      {"event":"response-report-logs","statusCode":0,"message":"error get data!"}
    - **Payload params conditions:**
      ** you can also use conditions to find some specific data as you need, the conditions params are nullable. example:*

```
{
  event: “report-logs”,
  value: {
        conditions: {
              start_date: “....”,
              end_date: “......”,
              alias_antena : “....”,
              description: “....”,
              tid: “...”
              }
        }
}
```

- **GET LISTENER TUDI LACAK REAL-TIME:**
    - **Listener event:**

```
 {
   "event": "response-db-storage-rfid-list-check",
   "status": 1,
   "message": "success",
   "data": {
      "tid": "1234567890ABCDEF",
      "epc": "E2000017221101441890B3D4",
      "status": 1,
      "category": 2,
      "description": "Sample RFID tag description",
      "flag_alarm": 0,
      "created_time": "2023-10-10T14:48:00Z",
      "alias_antenna": "Antenna1",
      "no_sku": "SKU12345"
   }
}
```

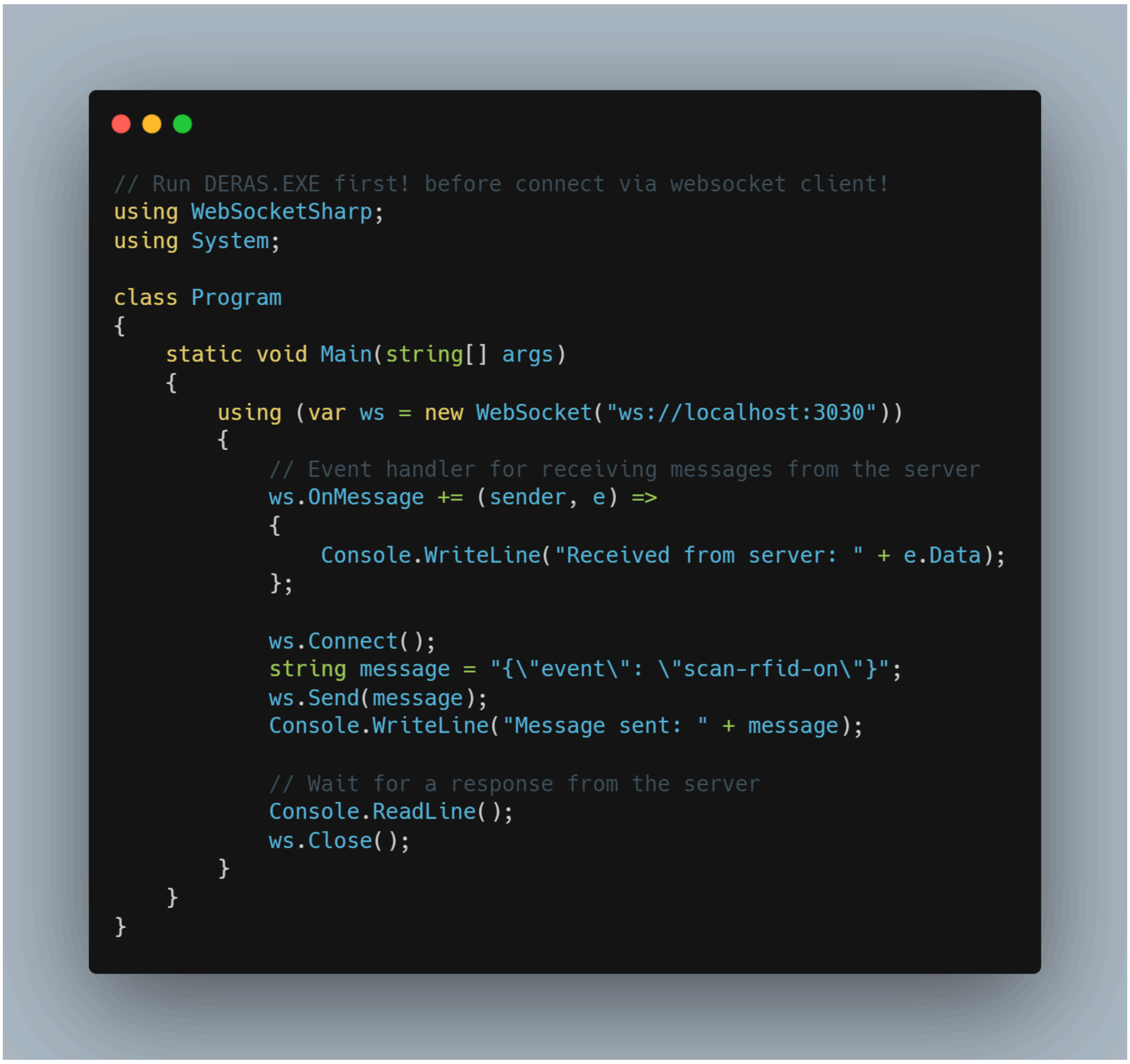
Example using websocket plugin chrome browser



```
{"event": "scan-rfid-off"}
```

```
{"event": "scan-rfid-on"}
{"event":"response-scan-rfid-on","statusCode":1,"message":"success!"}
{"event":"scan-rfid-result","type":1,"data":"739015CFEEF95761629C9D9A72992EC8","data_tid":"E280117020000141C5890A71","pc":null,"user":"","ant":"1","rssi":"-60.7","sensor":null,"rf:
{"event":"scan-rfid-result","type":1,"data":"E28011700000021ADB9960B8","pc":null,"user":"","ant":"1","rssi":"-68.0","sensor":null,"rfid_valid":"0","message":null}
{"event":"scan-rfid-result","type":1,"data":"E2806995000040037351D0EB","pc":null,"user":"","ant":"1","rssi":"-45.7","sensor":null,"rfid_valid":"0","message":null}
{"event":"scan-rfid-result","type":1,"data":"AA64744B3CA9DB92B49F0D0E8E3FCDF1","data_tid":"E2801170200016BC2020B49","pc":null,"user":"","ant":"1","rssi":"-73.5","sensor":null,"rf:
{"event":"scan-rfid-result","type":1,"data":"E28011700000021ADB9960B8","pc":null,"user":"","ant":"1","rssi":"-68.0","sensor":null,"rfid_valid":"0","message":null}
{"event":"scan-rfid-result","type":1,"data":"AA64744B3CA9DB92B49F0D0E8E3FCDF1","data_tid":"E2801170200016BC2020B49","pc":null,"user":"","ant":"1","rssi":"-73.8","sensor":null,"rf:
{"event":"scan-rfid-result","type":1,"data":"E2806995000040037351D0EB","pc":null,"user":"","ant":"1","rssi":"-45.2","sensor":null,"rfid_valid":"0","message":null}
{"event":"scan-rfid-result","type":1,"data":"739015CFEEF95761629C9D9A72992EC8","data_tid":"E280117020000141C5890A71","pc":null,"user":"","ant":"1","rssi":"-60.9","sensor":null,"rf:
{"event":"scan-rfid-result","type":1,"data":"E28011700000021ADB9960B8","pc":null,"user":"","ant":"1","rssi":"-75.7","sensor":null,"rfid_valid":"0","message":null}
{"event":"scan-rfid-result","type":1,"data":"739015CFEEF95761629C9D9A72992EC8","data_tid":"E280117020000141C5890A71","pc":null,"user":"","ant":"1","rssi":"-61.4","sensor":null,"rf:
{"event":"scan-rfid-result","type":1,"data":"E28011700000021ADB9960B8","pc":null,"user":"","ant":"1","rssi":"-77.1","sensor":null,"rfid_valid":"0","message":null}
{"event":"scan-rfid-result","type":1,"data":"E2806995000040037351D0EB","pc":null,"user":"","ant":"1","rssi":"-46.3","sensor":null,"rfid_valid":"0","message":null}
```

Example C#:



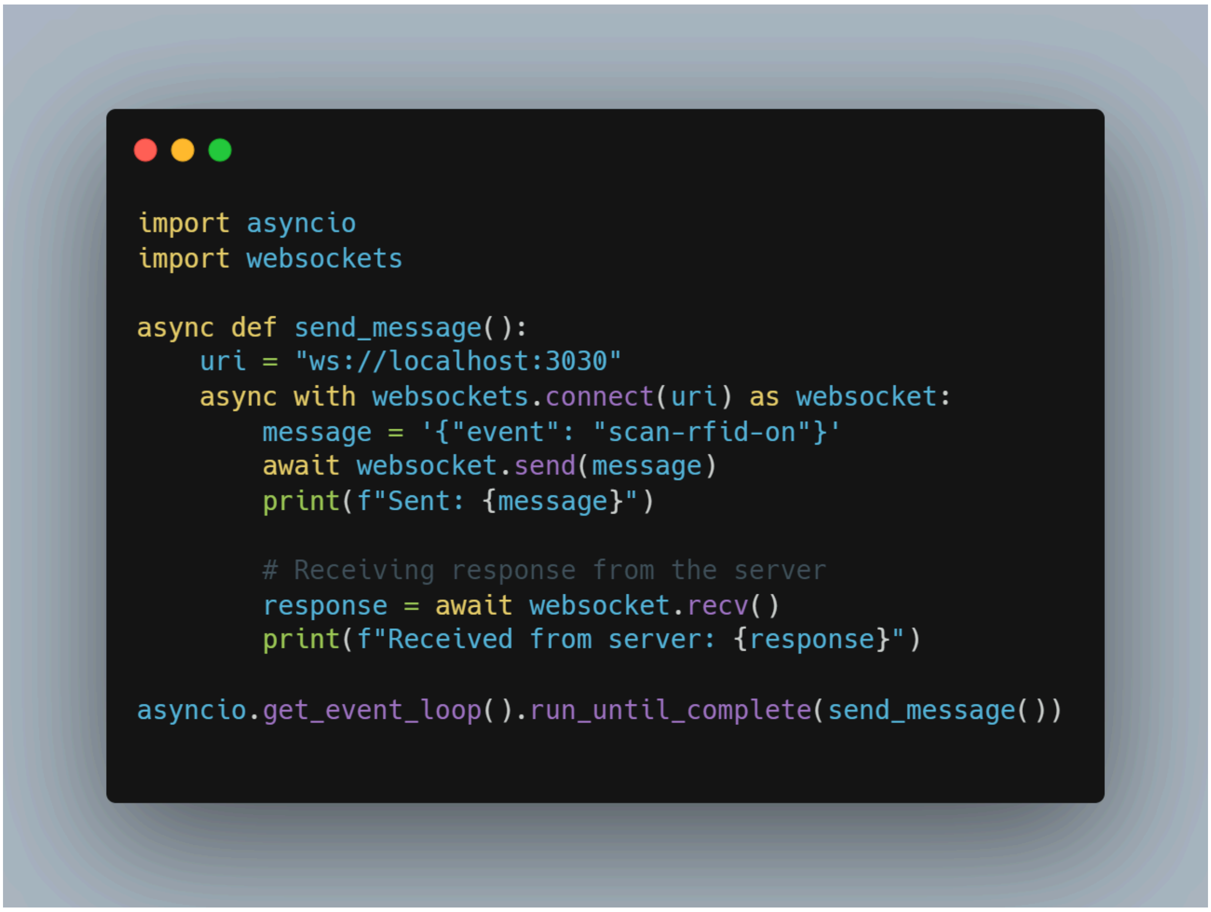
```
// Run DERAS.EXE first! before connect via websocket client!
using WebSocketSharp;
using System;

class Program
{
    static void Main(string[] args)
    {
        using (var ws = new WebSocket("ws://localhost:3030"))
        {
            // Event handler for receiving messages from the server
            ws.OnMessage += (sender, e) =>
            {
                Console.WriteLine("Received from server: " + e.Data);
            };

            ws.Connect();
            string message = "{\"event\": \"scan-rfid-on\"}";
            ws.Send(message);
            Console.WriteLine("Message sent: " + message);

            // Wait for a response from the server
            Console.ReadLine();
            ws.Close();
        }
    }
}
```

Example Python:



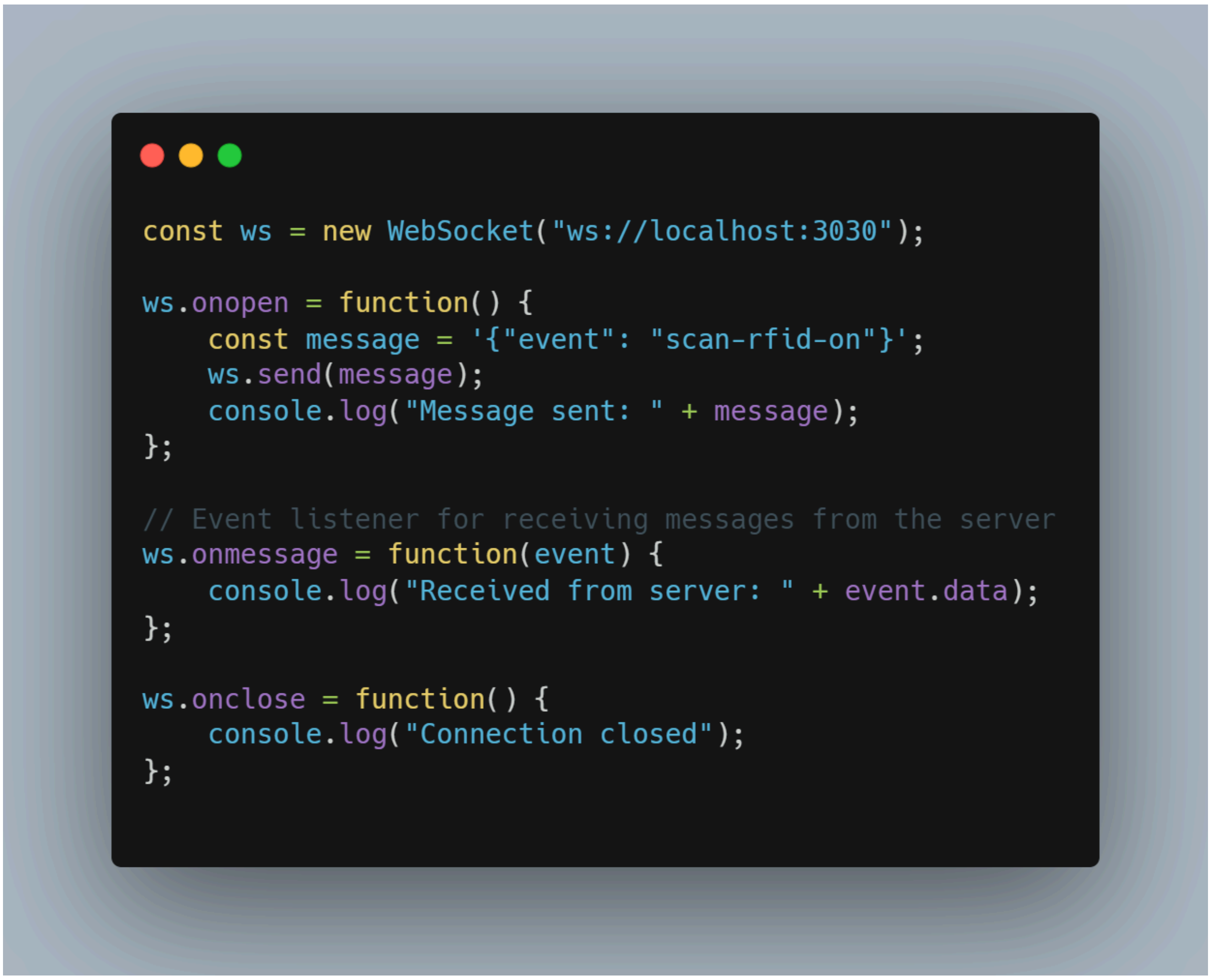
```python
import asyncio
import websockets

async def send_message():
    uri = "ws://localhost:3030"
    async with websockets.connect(uri) as websocket:
        message = '{"event": "scan-rfid-on"}'
        await websocket.send(message)
        print(f"Sent: {message}")

        # Receiving response from the server
        response = await websocket.recv()
        print(f"Received from server: {response}")

asyncio.get_event_loop().run_until_complete(send_message())
```

Example Javascript:



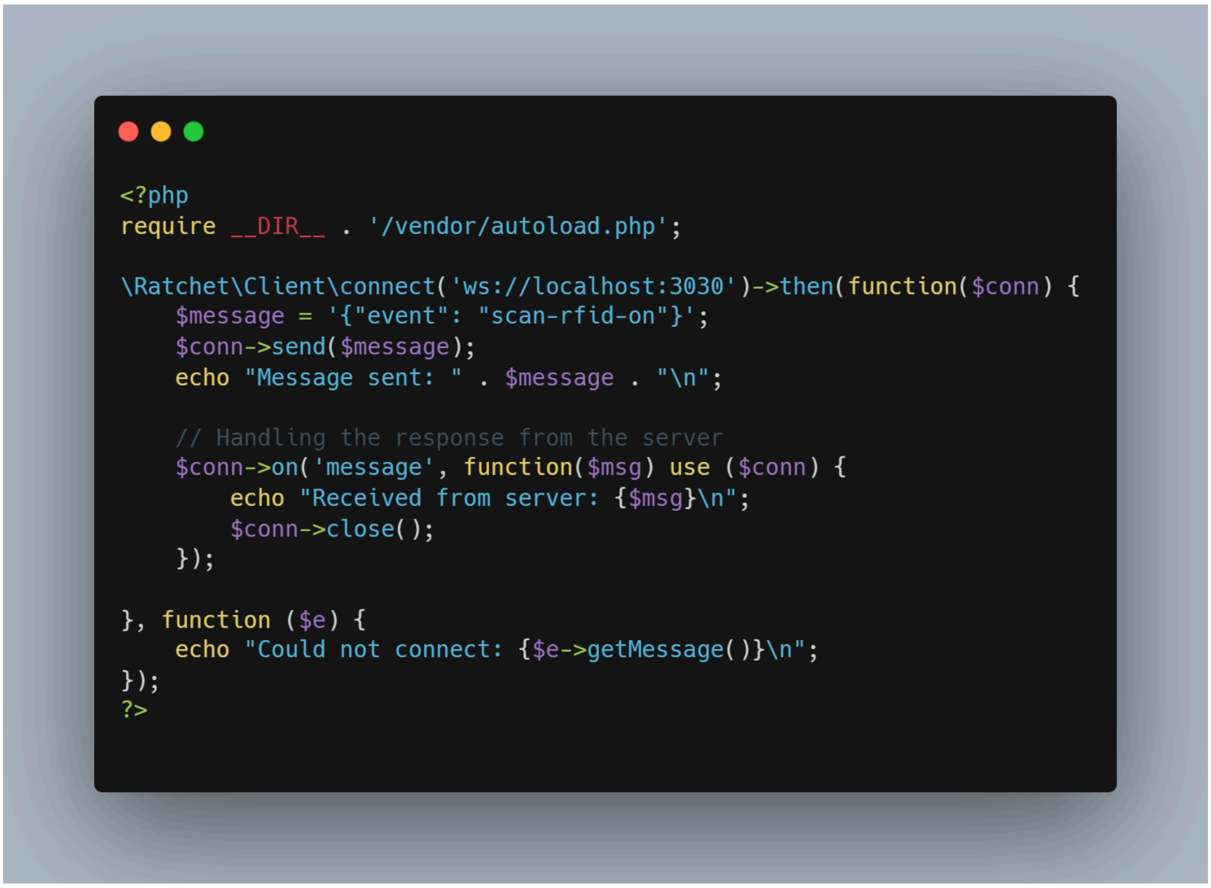
```javascript
const ws = new WebSocket("ws://localhost:3030");

ws.onopen = function() {
    const message = '{"event": "scan-rfid-on"}';
    ws.send(message);
    console.log("Message sent: " + message);
};

// Event listener for receiving messages from the server
ws.onmessage = function(event) {
    console.log("Received from server: " + event.data);
};

ws.onclose = function() {
    console.log("Connection closed");
};
```

Example PHP:



```php
<?php
require __DIR__ . '/vendor/autoload.php';

\Ratchet\Client\connect('ws://localhost:3030')->then(function($conn) {
    $message = '{"event": "scan-rfid-on"}';
    $conn->send($message);
    echo "Message sent: " . $message . "\n";

    // Handling the response from the server
    $conn->on('message', function($msg) use ($conn) {
        echo "Received from server: {$msg}\n";
        $conn->close();
    });

}, function ($e) {
    echo "Could not connect: {$e->getMessage()}\n";
});
?>
```