

# **A Combination of JS Object & PLC Web Browser**

## **Sending push messages via LINE Notify**

Demo Project

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## 1. Overview & Operation

### Overview

This demo project demonstrates how to use JS Object and PLC Web Browser to obtain the Access Token, which represents the authorization from a LINE user to send push messages via LINE Notify.

LINE Notify is a push messaging service that utilizes the OAuth 2.0 authentication process. Before we proceed, let's take a look at the following roles:

#### 1. Service Provider (Message Sender)

A service provider must have a "callback" URL for OAuth 2.0 to invoke after the authentication process to obtain the Access Token. In this demo project, PLC Web Browser and JS Object are used to obtain this token.

#### 2. Authorization Grantor (LINE User)

A LINE user can authorize LINE Notify to send messages. To do so, the LINE user must have a LINE account and log in to grant authorization.

#### 3. Message Receiver

When authorizing LINE Notify, a LINE user can specify whether the message should be sent to a 1-on-1 chat or a LINE group.

### Operation

**Step 1.** Visit LINE Notify website (<https://notify-bot.line.me/en/>) and log in to your account. Add a service provider and specify a callback URL. In this demo project the callback URL <https://127.0.0.1:8000> is used. Once you have provided all necessary information, you will receive a Client ID and Client Secret.



Execute JS

Config

Name	Type	Value
config	Object (6)	
browser_current_url	Address	Browser Current URL : ...
client_id	String	Your_Client_ID
client_secret	String	Your_Client_Secret
redirect_uri	String	https://127.0.0.1:8000
token	Address	New-Token : PLW-23...
get_token_success	Address	get_token_success_bit...

Execute JS

Config

Name	Type	Value
config	Object (3)	
client_id	String	Your Client ID
destination	Address	Browser Destination URL : PL...
redirect_uri	String	https://127.0.0.1:8000

- Step 3.** Once finished, download the project to HMI.
- Step 4.** Make sure that the HMI is connected to the internet and press the [Connect With The Service] button to initiate the authorization process.

### JS Object x Web Browser

LINE users can easily receive notifications from LINE Notify's official account by connecting to this service. Please press the "Connect With The Service" button to begin the registration process.

[Connect With The Service](#)

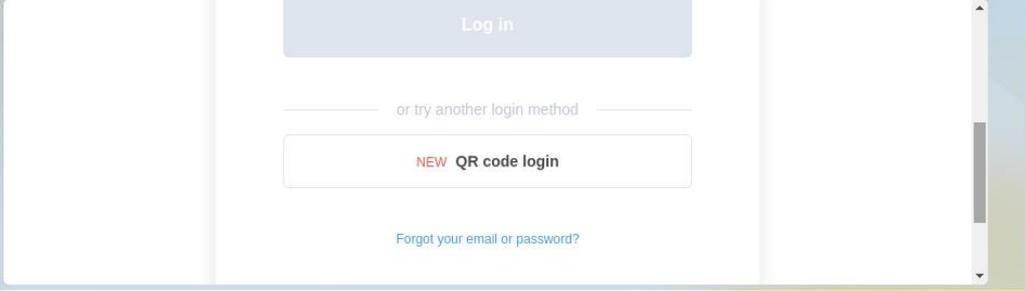
Once registered, the service owner can send notifications to LINE users who are registered in groups or 1-on-1 chats.

Please press the LINE icon located in the bottom left corner to send the messages.

- Step 5.** Log in to your LINE account.

### JS Object x Web Browser

1. Please use the QR Code to log in to your LINE Account and select a chat to which you want to send notifications.

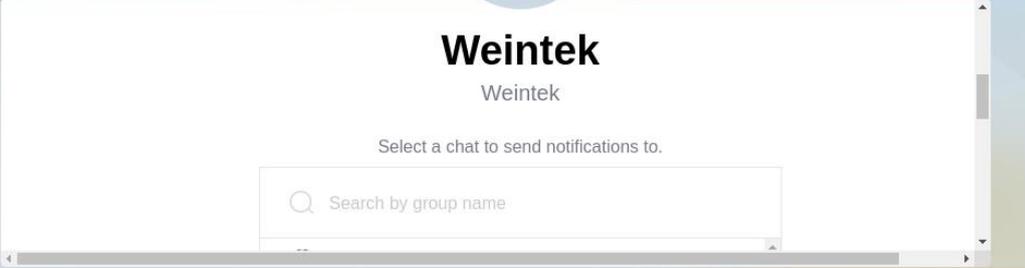


Navigation icons: Home, LINE, Search, Refresh

**Step 6.** Specify the chat window where LINE Notify should send the messages.

### JS Object x Web Browser

1. Please use the QR Code to log in to your LINE Account and select a chat to which you want to send notifications.



Navigation icons: Home, LINE, Search, Refresh

**Step 7.** Enter the service name used in the project and then press Enter.

### JS Object x Web Browser

- ✓ 1. Please use the QR Code to log in to your LINE Account and select a chat to which you want to send notifications.
- 2. Enter your name below and press Enter.

**Step 8.** Once the authorization is successful, you will be able to see the LINE users added in the Recipient list.

### JS Object x Web Browser

You have successfully added your LINE account to the recipient list.  
If you want to add another account, please exit this page and continue.

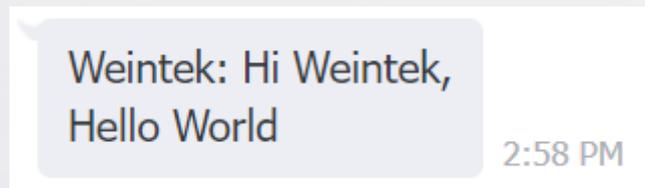
Recipient
Weintek

**Step 9.** Press the LINE icon in the lower-left corner, enter your message in the provided field, and then press the [Send Message To All Recipients] button to send your message to all recipients on the list.

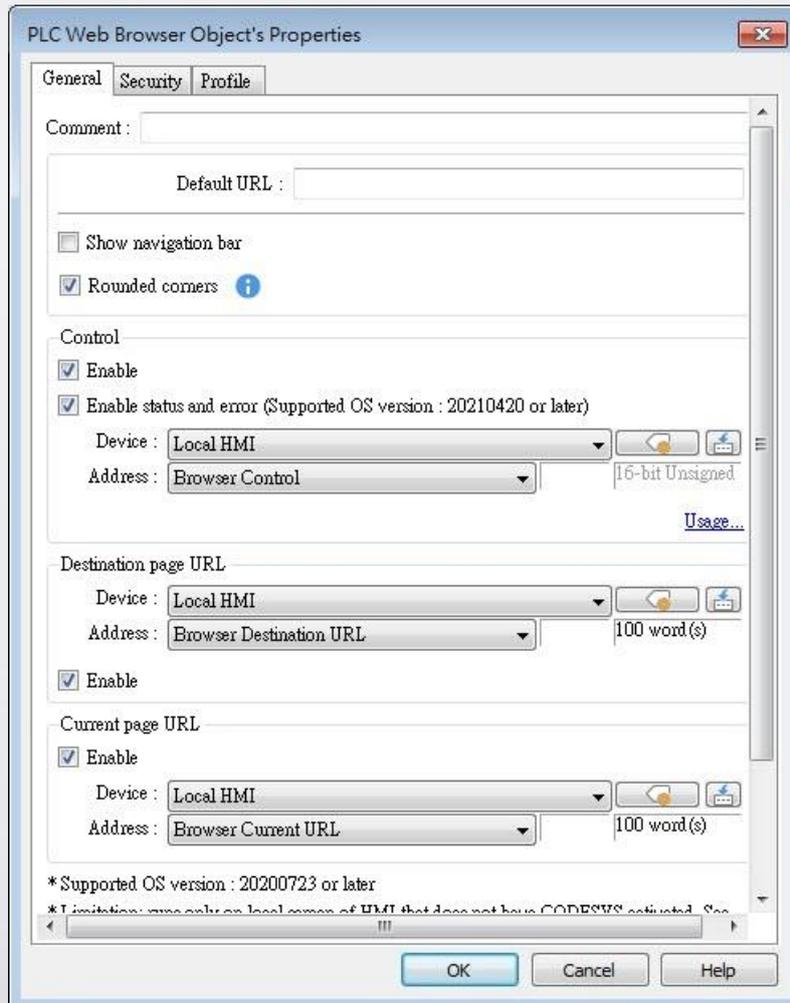


**Step 10.** All the LINE users on the recipient list in the project will receive the push message that was just sent.

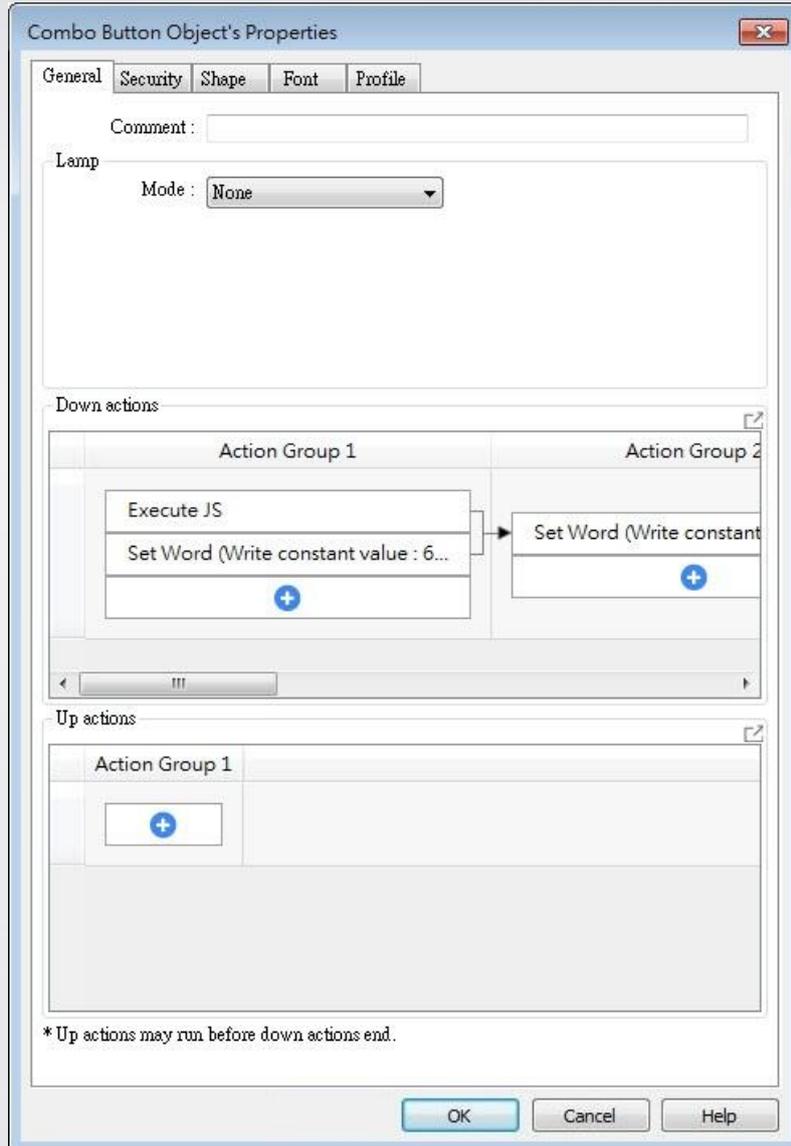


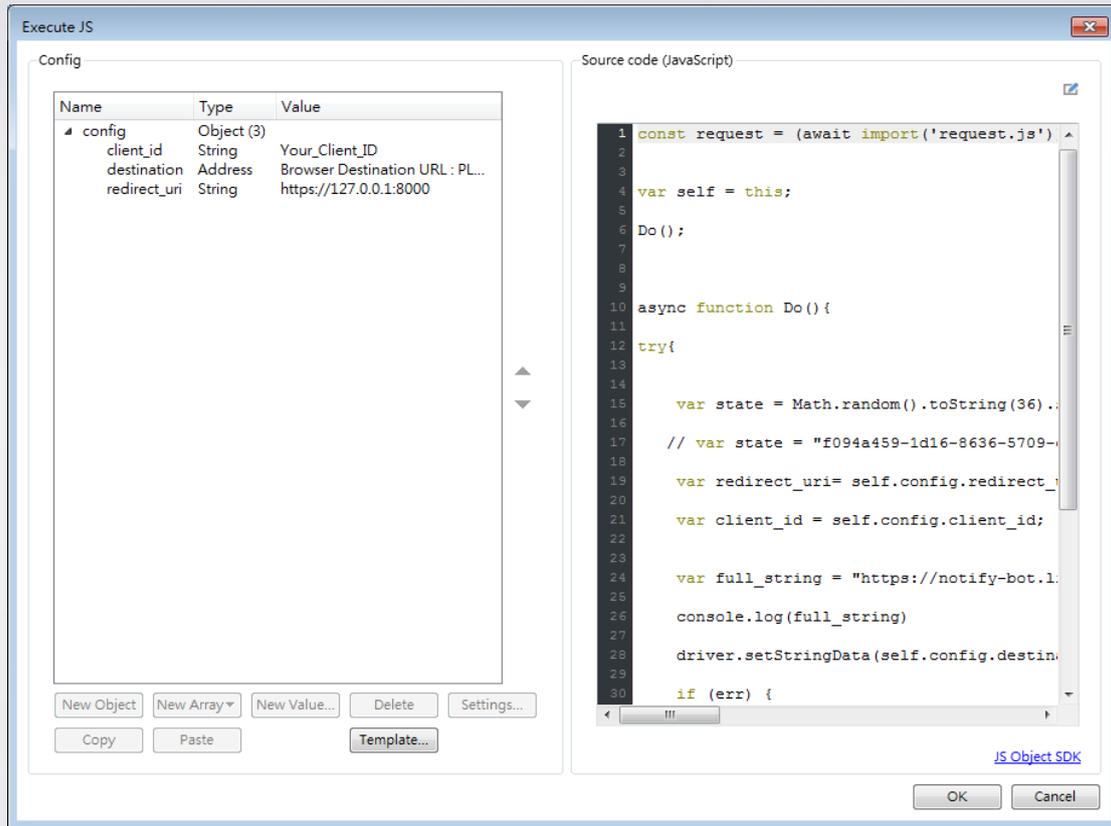
## 2. Setting up the Screen

**Step 1.** Create a PLC Web Browser object, set the control address, and complete Security settings.



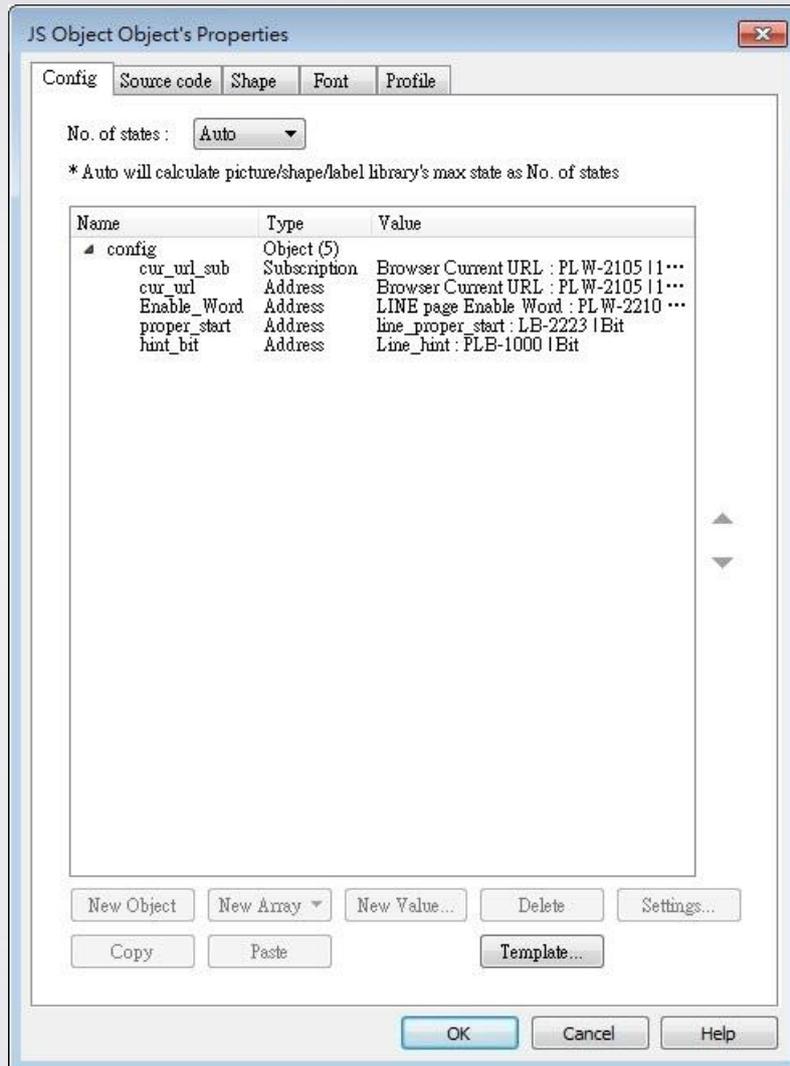
**Step 2.** Create a Combo Button and add Execute JS and Set Word actions into the Action Group. The current page URL generated by the JS object will be used as the input for the PLC Web Browser created in step 1. (The following only shows a part of the commands; for more details, please refer to the settings in Window 10, Layer 3, CB\_2 object.)





Here is only a part of the commands, please refer to the project for more details.

**Step 3.** Create a JS Object that monitors the current page URL of the PLC Web Browser. When a LINE user logs in and authorizes this project, and the authorization server redirects the browser back to the redirect URL, this JS object will change the security settings of the relevant object to display the corresponding step instructions. (The following only shows a part of the commands; for more details, please refer to the settings in Window 10, Layer 1, CO\_0 object.)



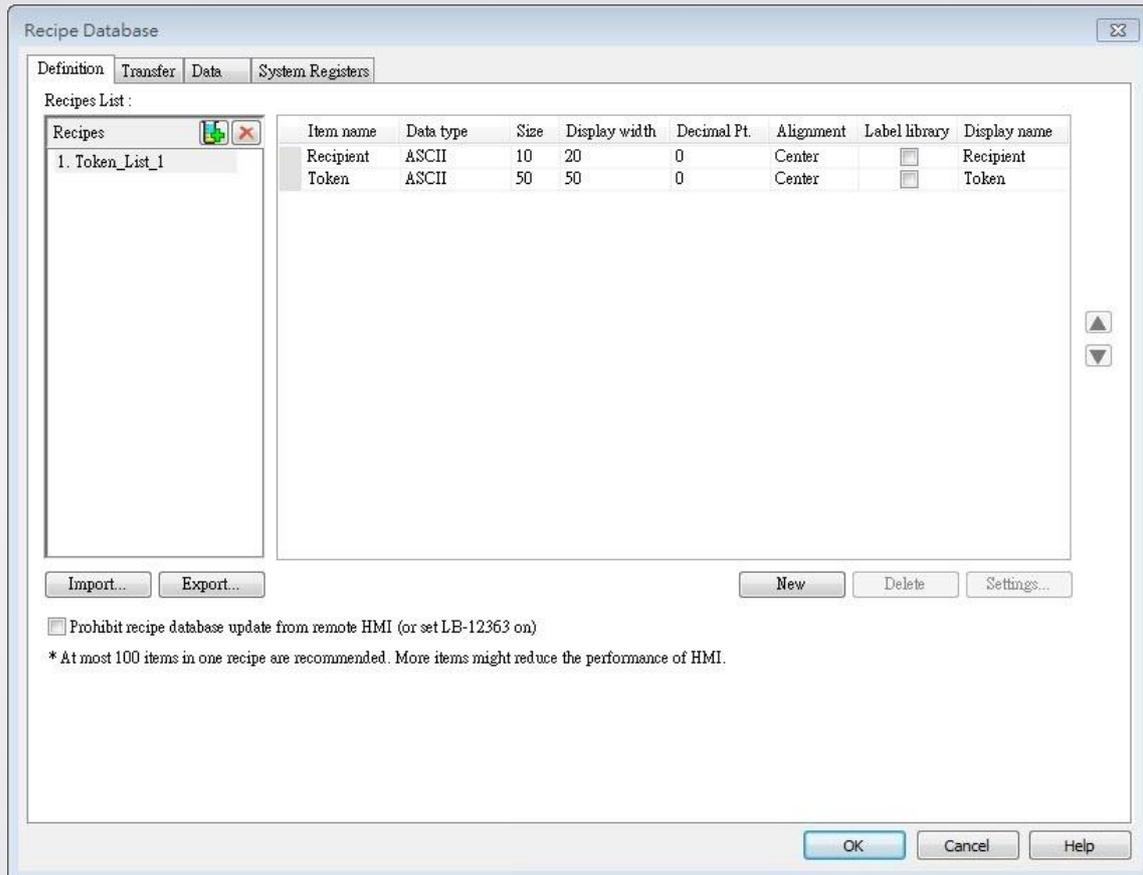
```

1 var self = this;
2
3
4 setTimeout() => {
5
6 self.config.cur_url_sub.onResponse( async(err, data) => {
7   if (err) {
8     console.log('Error:', err.message);
9   } else {
10
11
12   var url = await binary2str();
13   console.log('url:', url);
14
15   if (url.indexOf("127.0.0.1:8000/?code=") != -1 ){
16
17
18
19   var state_2 = 10;
20   driver.setData(self.config.Enable_Word, state_2, (err) => {
21     if (err) {
22       console.log('Error:', err.message);
23     } else {
24       console.log('state2 write success');
25     }
26   });
27
28
29
30
31

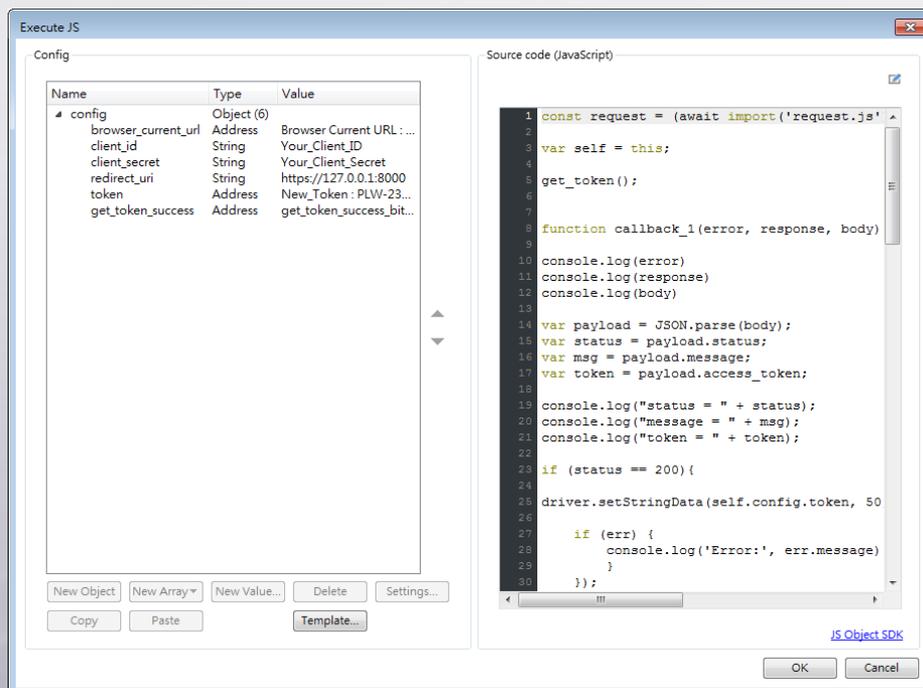
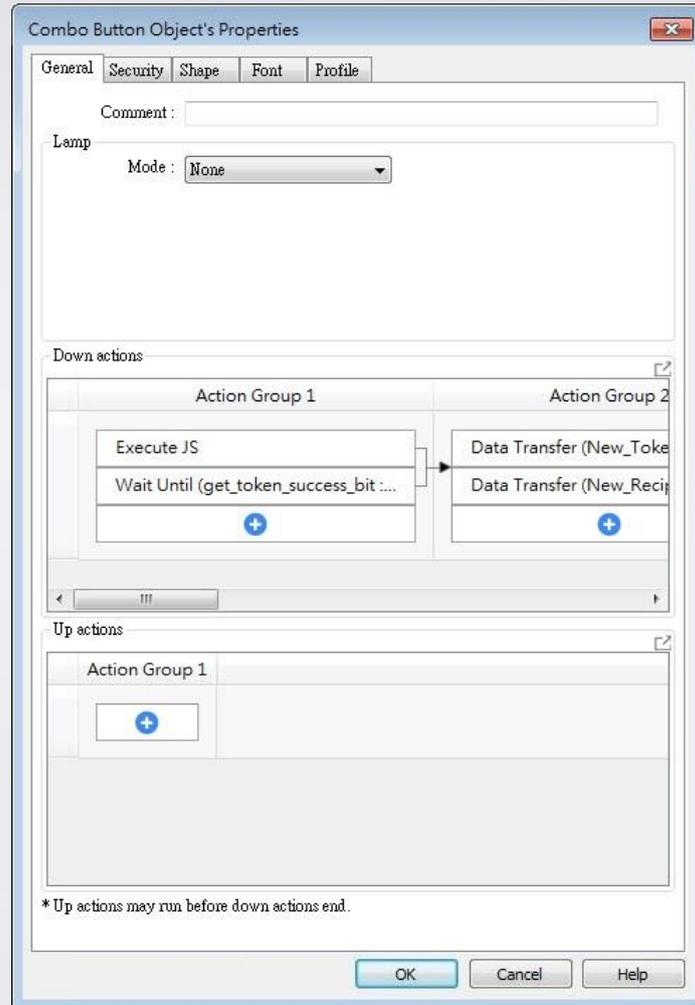
```

Here is only a part of the commands, please refer to the project for more details.

**Step 4.** Create a Recipe Database named Token\_List\_1 and add Recipient and Token into the list as shown below.

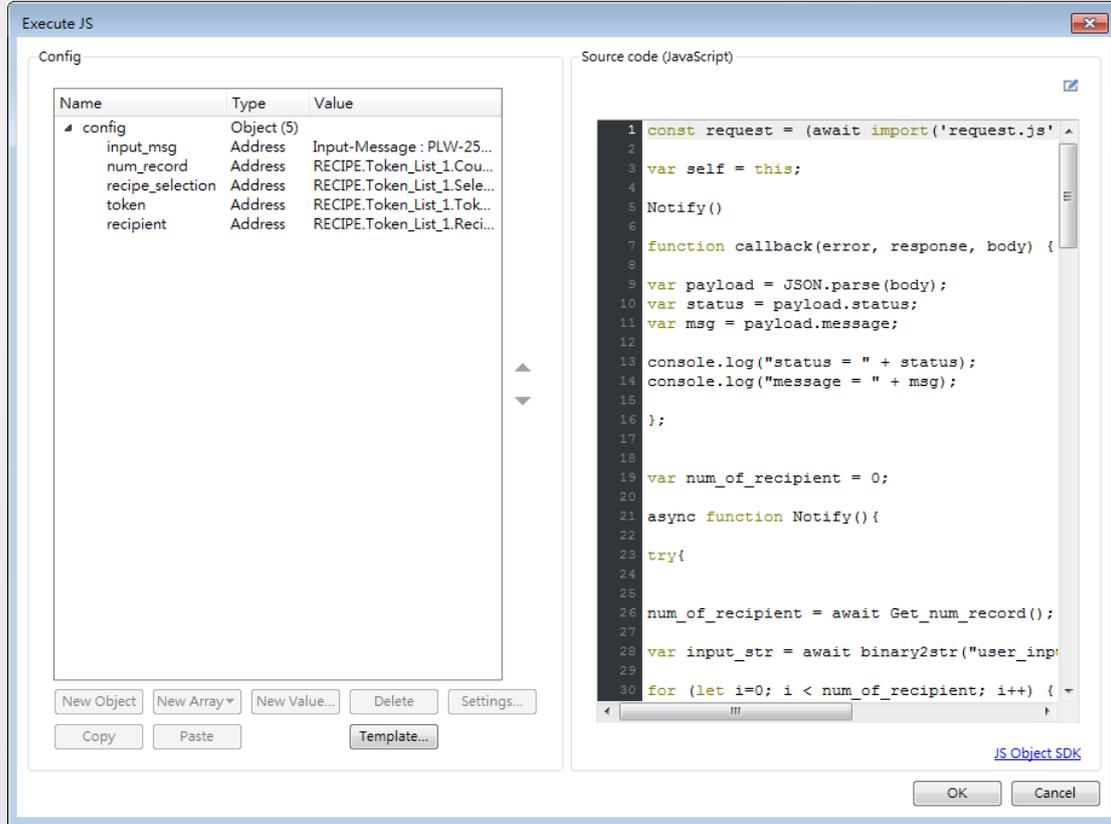


**Step 5.** Create a Combo Button. After a LINE user has authorized the project, and the authentication server has returned the Authentication Grant information to the Redirect URL in step 3, it is necessary to exchange this Authentication Grant for an Access Token from the authentication server, and then store the token in Recipe Database. (The following only shows a part of the commands; for more details, please refer to the settings in Window 10, Layer 2, CB\_1 object.)



Here is only a part of the commands, please refer to the project for more details.

**Step 6.** Create a Combo Button that executes JS and uses the Token saved in Recipe Database to send push messages to LINE users. (The following only shows a part of the commands; for more details, please refer to the settings in Window 16, CB\_0 object.)



### 3. Addresses

The addresses of key objects used in this demonstration are listed below, please adjust as necessary.

Object	Address	Object ID	Description
<b>Window 10</b>			
<b>PLC Web Browser</b>	PLW-2000 PLW-2005 PLW-2105	WB_0	Used for browsing web pages.
<b>JS Object</b>	PLW-2105 PLW-2210 LB-2223 PLB1000	CO_0	Monitors the current page URL.
<b>Combo Button</b>	PLW-2105 PLW-2310 PLB-2221	CB_1	Gets Access Token.
<b>Combo Button</b>	PLW-2005	CB_2	Generates URL.
<b>Window 16</b>			
<b>ASCII</b>	PLW-2500	AE_0	Used for entering push messages.
<b>Combo Button</b>	PLW-2500	CB_0	Sends push messages to LINE users.