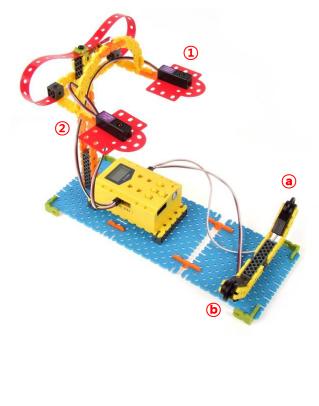
## EQ-ROBO Programming : Street Lamp

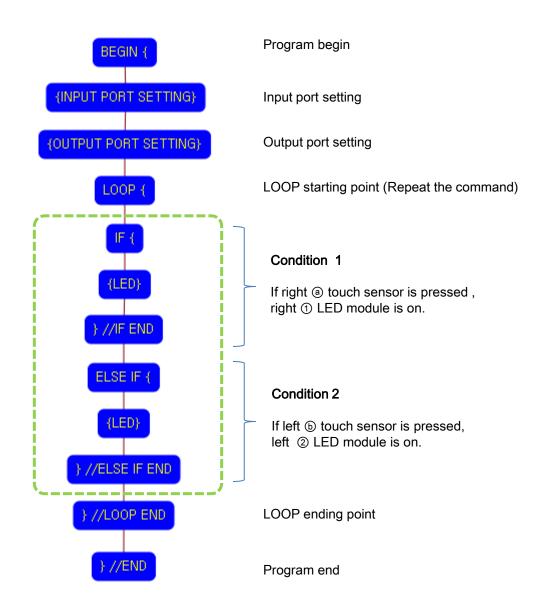




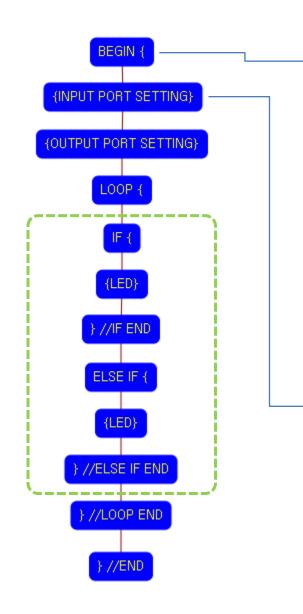
(1), (2) LED modules are on and off according to the input condition of (a), (b) touch sensors.

To repeat permanently, we have to use "LOOP" command.

Program name : eq2-2-p14\_StreetLamp.ufc







🙇 Define Function of Node	? 🔀
SELECT FUNCTION OF NODE	BEGIN / END
<ul> <li>BEGIN { / } END</li> <li>INPUT PORT SETTING</li> <li>OUTPUT PORT SETTING</li> <li>IF {</li> <li>} // IF END</li> <li>ELSE IF {</li> <li>} // ELSE IF END</li> <li>ELSE {</li> <li>} // ELSE END</li> <li>LOOP {</li> <li>} // LOOP END</li> <li>DELAY TIMER</li> </ul>	Select "PROGRAM BEGIN" or "PROGRAM END". PROGRAM BEGIN PROGRAM END
<ul> <li>REMOTE CONTROLLER</li> <li>DC MOTOR</li> <li>SERVO MOTOR</li> <li>LED OUTPUT MODULE</li> <li>BUZZER OUTPUT MODULE</li> </ul>	
	OK Cancel
<b>M</b> Define Function of Node	
Define Function of Node     SELECT FUNCTION OF NODE	
SELECT FUNCTION OF NODE	
SELECT FUNCTION OF NODE PEGIN ( / ) END INPUT PORT SETTING UTPUT PORT SETTING IF ( ) // IF END	-INPUT PORT SETTING
SELECT FUNCTION OF NODE PEGIN ( / ) END O INPUT PORT SETTING O IF (	INPUT PORT SETTING
SELECT FUNCTION OF NODE PEGIN { / } END INPUT PORT SETTING OUTPUT PORT SETTING OF } // IF END ELSE IF { } // ELSE IF END ELSE {	INPUT PORT SETTING
SELECT FUNCTION OF NODE PEGIN ( / ) END INPUT PORT SETTING OUTPOT PORT SETTING IF ( ) // IF END ELSE IF { ) // ELSE IF END ELSE { ) // ELSE END LOOP {	INPUT PORT SETTING
SELECT FUNCTION OF NODE PEGIN { / } END INPUT PORT SETTING OUTPUT PORT SETTING FT } // IF END ELSE IF { } // ELSE IF END ELSE { } // ELSE END	INPUT PORT SETTING
SELECT FUNCTION OF NODE PEGIN ( / ) END INPUT PORT SETTING INPUT PORT SETTING IF ( ) // IF END ELSE IF { } // ELSE IF END ELSE { } // ELSE END LOOP { } // LOOP END DELAY TIMER	INPUT PORT SETTING
SELECT FUNCTION OF NODE PEGIN ( / ) END INPUT PORT SETTING INPUT PORT SETTING IF ( ) // IF END ELSE IF { } // ELSE IF END ELSE { } // ELSE END LOOP { } // LOOP END DELAY TIMER REMOTE CONTROLLER D C MOTOR	INPUT PORT SETTING
SELECT FUNCTION OF NODE PEGIN ( / ) END INPUT PORT SETTING INPUT PORT SETTING IF ( ) // IF END ELSE IF { } // ELSE IF END ELSE { } // ELSE END LOOP { } // LOOP END DELAY TIMER REMOTE CONTROLLER	INPUT PORT SETTING INPUT PORT SENSOR TRUE VALUE RCR REMOTE CONTROLLER RECEIVER VIN-1 TOUCH  0 0 VIN-2 TOUCH  0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

This means that program begins from hear.

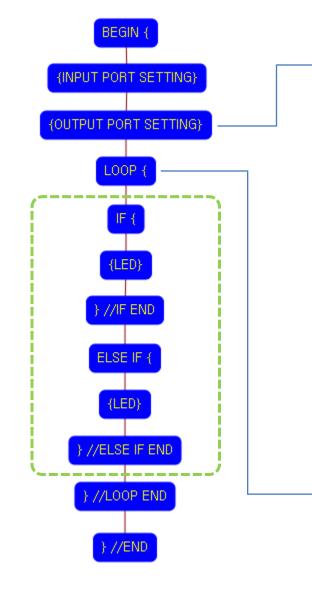
You have to place this node at the first of program.

"PROGRAM END" is not active because you did not define "PROGRAM BEGIN" yet.

This model use 2 touch sensors as input device.

You have to connect the right (a) touch sensor to the IN-1 input port and left (b) touch sensor to the IN-2 input port of main board. And check the IN-1 and IN-2 with "TOUCH" in software.

If the real connection of sensors are different to the setting on software, it will make robot to wrong operation.



Define Function of Node	017		OFTING		
SELECT FUNCTION OF NODE BEGIN { / } END INPUT POBT SETTING OUTPUT PORT SETTING		PUT PORT		E INITI	AL VALUE
Oi <b>r {</b> O} } // IF END	Ū	OUT-1	GREEN LED	~	0 😂
ELSE IF {         // ELSE IF END	E	OUT-2	RED LED	~	0 🗢
O ELSE { > // ELSE END		OUT-3	RED LED	~	0
O LOOP { } // LOOP END		OUT-4	RED LED	~	0
O DELAY TIMER		OUT-5	RED LED	~	0
<ul> <li>REMOTE CONTROLLER</li> <li>DC MOTOR</li> </ul>		OUT-6	RED LED	~	
<ul> <li>SERVO MOTOR</li> <li>LED OUTPUT MODULE</li> </ul>		OUT-7	RED LED	~	0
BUZZER OUTPUT MODULE					
Define Function of Node			(	OK	Canc
Define Function of Node SELECT FUNCTION OF NODE O BEGIN { / } END O INPUT PORT SETTING		P BEGIN ~	LOOP BEGIN C		
Define Function of Node          SELECT FUNCTION OF NODE         BEGIN { / } END         INPUT PORT SETTING         OUTPUT PORT SETTING         IF {         } // IF END         ELSE IF {         } // ELSE IF END	[ [[	D]:Seque	LOOP BEGIN C ence Number (A ME] : Select "R	OMMAND	y assigned)
Define Function of Node SELECT FUNCTION OF NODE BEGIN { / } END INPUT PORT SETTING OUTPUT PORT SETTING O IF { } // IF END ELSE IF {	[ [[	D]:Seque REPEAT TIN	ence Number (A ME ] : Select "R	OMMAND	y assigned)
Define Function of Node SELECT FUNCTION OF NODE BEGIN { / } END INPUT PORT SETTING OUTPUT PORT SETTING O IF { }// IF END ELSE IF { }// ELSE IF END ELSE { }// ELSE FEND	[ [[	D]:Seque REPEAT TIN	ence Number (A ME ] : Select "R ]	OMMAND utomaticall EPEAT TIN	y assigned)



This model use 2 LED modules as output device.

You have to connect the right (1) LED module to the OUT-1 output port and left (2) LED module to the OUT-2 output port of main board. And check the OUT-1 and OUT-2 with "LED" in software.

If you set the initial value as "1", the LED is on, else "0", the LED is off.

If the real connection of output modules are different to the setting on software, it will make robot to wrong operation.

LOOP command is used to repeat the commands.

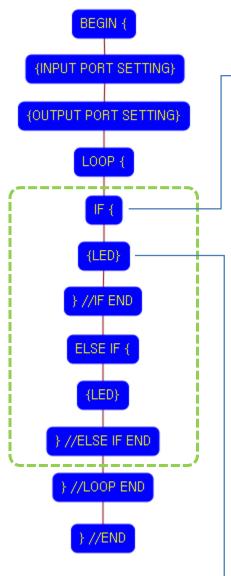
"REPEAT TIME" is the repeat number you want.

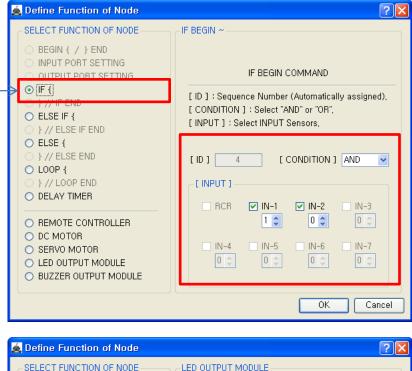
If you want permanent repetition, you have to set "0".

ID is automatically assigned. You have to set the same ID at "LOOP END".

Automatically assigned ID is different according to the sequence of making nodes.







SELECT FUNCTION OF NODE	LED OUTPUT M	ODULE
<ul> <li>BEGIN { / } END</li> <li>INPUT PORT SETTING</li> <li>OUTPUT PORT SETTING</li> </ul>	OUTPUT PORT	On TIME Off TIME REPEAT
		5 🗢 5 🗢 3 🗢
ELSE IF {  // ELSE IF END	✓ OUT-1	[ On TIME ] : Select the LED ON time
○ ELSE {	🔲 OUT-2	[ Off TIME ] : Select the LED OFF time
O } // ELSE END	🗌 OUT-3	5 : 0,5 seconds 10 : 1,0 seconds
LOOP { } // LOOP END	OUT-4	15 : 1,5 seconds
O DELAY TIMER	OUT-5	20 : 2,0 seconds
REMOTE CONTROLLER	OUT-6	[ REPEAT 1 : Select the REPEAT times
	OUT-7	(0~10)
LED OUTPUT MODULE		
		OK Cancel

"IF {" is condition command. If the condition is true, the commands which located between "IF {" and "} // IF END" are executed, else the commands are ignored.

ID is assigned automatically. [Condition] : "AND" is AND condition of INPUTs and "OR" is OR condition of INPUTs. [INPUT] : Select the inputs which you want to check.

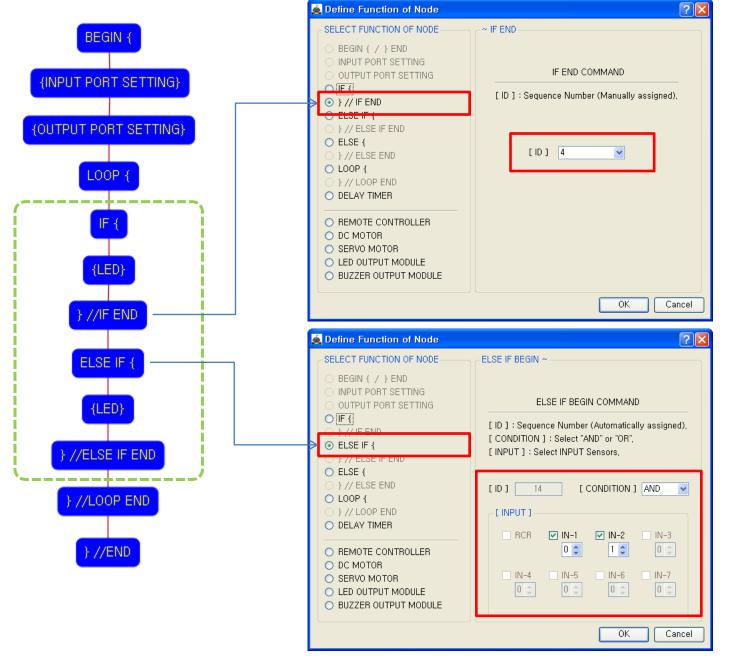
In this case, the true condition is the IN-1(Touch sensor) is pressed and the IN-2(Touch sensor) is released simultaneously.

This LED command is executed only if the above "IF {"condition is true.

The right LED module(OUT-1) turns on 0.5 seconds and turns off 0.5 seconds for 3 times.

On TIME : On time of LED Off TIME: Off time of LED REPEAT: Repetition number





USER CREATIVE ROBOT

The end point of "IF {" condition.

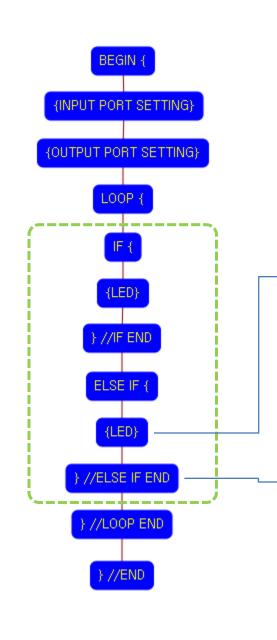
You have to assigned the ID of paired "IF {" condition.

(It is necessary to know that which "IF {" among the many "IF {" conditions in program.

If you want to another condition except above "IF {" condition, you can use "ELSE IF {" condition.

In this case, the true condition is the IN-2(Touch sensor) is pressed and the IN-1(Touch sensor) is released simultaneously.

If the "ELSE IF {" condition is true, the commands between "ELSE IF {" and "} // ELSE IF END" are executed.



	SELECT FUNCTION OF NODE	LED OUTPUT M	ODULE				
	BEGIN { / } END     INPUT PORT SETTING     OUTPUT PORT SETTING	OUTPUT PORT	On TIME	Off TIME	REPEAT		
			5 🗘	5 🗘	3 🗘		
	ELSE IF {         // ELSE IF END     }	☐ OUT-1 ✓ OUT-2		: Select the LED ON time : Select the LED OFF time			
	ELSE {         // ELSE END         // ELSE END	OUT-2	[ 011 111112 ]	5 : 0,5 seconds 10 : 1.0 seconds			
	LOOP { } // LOOP END	OUT-4		15 : 1,5 seco	1,5 seconds		
	O DELAY TIMER	OUT-5		20 : 2,0 seco	nds		
	REMOTE CONTROLLER     DC MOTOR	☐ OUT-6 ☐ OUT-7	[ REPEAT ]	: Select the RE (0~10)	EPEAT times		
	<ul> <li>SERVO MOTOR</li> <li>LED OUTPUT MODULE</li> </ul>			(0 10)			
				ОК	Cancel		
Ź	Define Function of Node				? 🗙		
é	Define Function of Node - SELECT FUNCTION OF NODE	←~ ELSE IF END-			? 🛛		
é	- SELECT FUNCTION OF NODE	~ ELSE IF END-			?×		
Ś	SELECT FUNCTION OF NODE		ELSE IF END C	COMMAND	?×		
é	- SELECT FUNCTION OF NODE BEGIN { / } END INPUT PORT SETTING	E		COMMAND (Manually as:			
	SELECT FUNCTION OF NODE BEGIN { / } END INPUT PORT SETTING OUTPUT PORT SETTING [F] }// IF END ELSE IF {	E					
	SELECT FUNCTION OF NODE BEGIN { / } END INPUT PORT SETTING OUTPUT PORT SETTING [F] }// IF END ELSE IF { }// ELSE IF END ELSE {	[ ID ] : Sequ	ence Number	(Manually as:			
	SELECT FUNCTION OF NODE BEGIN { / } END INPUT PORT SETTING OUTPUT PORT SETTING [IF] } // IF END ELSE IF { } // ELSE IF END ELSE { } // ELSE END	E	ence Number				
	SELECT FUNCTION OF NODE BEGIN { / } END INPUT PORT SETTING OUTPUT PORT SETTING IF { FLSE IF { FLSE IF { CLSE { LOOP { LOOP END	[ ID ] : Sequ	ence Number	(Manually as:			
	SELECT FUNCTION OF NODE BEGIN { / } END INPUT PORT SETTING OUTPUT PORT SETTING [F] }// IF END ELSE IF { }// ELSE IF END ELSE { }// ELSE END LOOP {	[ ID ] : Sequ	ence Number	(Manually as:			
	SELECT FUNCTION OF NODE         BEGIN { / } END         INPUT PORT SETTING         OUTPUT PORT SETTING         FLSE IF {         FLSE IF {         } // ELSE IF END         ELSE {         } // ELSE END         LOOP {         } // LOOP END         DELAY TIMER	[ ID ] : Sequ	ence Number	(Manually as:			
	SELECT FUNCTION OF NODE         BEGIN { / } END         INPUT PORT SETTING         OUTPUT PORT SETTING         FLSE IF {         > // IF END         ELSE IF {         > // ELSE IF END         ELSE {         > // LOOP END         DELAY TIMER         OREMOTE CONTROLLER         DC MOTOR	[ ID ] : Sequ	ence Number	(Manually as:			
	SELECT FUNCTION OF NODE         BEGIN { / } END         INPUT PORT SETTING         OUTPUT PORT SETTING         FLSE IF {         > // IF END         ELSE IF {         > // ELSE IF END         ELSE {         > // LOOP END         DELAY TIMER         O REMOTE CONTROLLER         D C MOTOR	[ ID ] : Sequ	ence Number	(Manually as:			
	SELECT FUNCTION OF NODE         BEGIN { / } END         INPUT PORT SETTING         OUTPUT PORT SETTING         FLSE IF {         > // IF END         ELSE IF {         > // ELSE IF END         ELSE {         > // LOOP END         DELAY TIMER         OREMOTE CONTROLLER         DC MOTOR         SERVO MOTOR         LED OUTPUT MODULE	[ ID ] : Sequ	ence Number	(Manually as:			

🙇 Define Function of Node



This LED command is executed only if the above "ELSE IF {"condition is true.

**?**×

The left LED module (OUT-2) turns on 0.5 seconds and turns off 0.5 seconds for 3 times.

On TIME : On time of LED Off TIME: Off time of LED REPEAT: Repetition number

The end point of "ELSE IF {" condition.

You have to assigned the ID of paired "ELSE IF {" condition.

(It is necessary to know that which "ELSE IF {" among the many "ELSE IF {" conditions in program.



