EQ-ROBO Programming : Sword robot

BEGIN {

{INPUT PORT SETTING}

{OUTPUT PORT SETTING}

LOOP {

{REMOTE CONTROLLER}

{DC MOTOR}

{REMOTE CONTROLLER}

{DC MOTOR}

{REMOTE CONTROLLER}

{SERVO MOTOR}

{REMOTE CONTROLLER}

{SERVO MOTOR}

{REMOTE CONTROLLER}

{SERVO MOTOR}

Program begin

Input port setting

Output port setting

LOOP starting point (Repeat the command)

Input: Remote signal receiver
Output: DC motor, Servo motor
Work: Moving, waist swing and hacking

Case 1
Key of remote controller :
 LEFT UP
Robot goes forward

Case 2
Key of remote controller :
 LEFT DOWN
Robot goes backward

Case 3
Key of remote controller :
 RIGHT UP
Robot hacks the sword

Case 4
Key of remote controller :
 RIGHT DOWN
Robot hangs up the sword

Case 5
Key of remote controller : F2
Robot faced front side

{REMOTE CONTROLLER}

{SERVO MOTOR}

{REMOTE CONTROLLER}

{SERVO MOTOR}

{REMOTE CONTROLLER}

{DC MOTOR}

{REMOTE CONTROLLER}

{DC MOTOR}

{REMOTE CONTROLLER}

{SERVO MOTOR}

} //LOOP END

} //END

① Go backward
② Go forward
③ Swing the waist to the left side
④ Swing the waist to the front side
⑤ Swing the waist to the right side
⑥ Hacking the sword
⑦ Hanging up the sword
⑧ Turning the right side
⑨ Initialize the position
⑩ Turning the left side
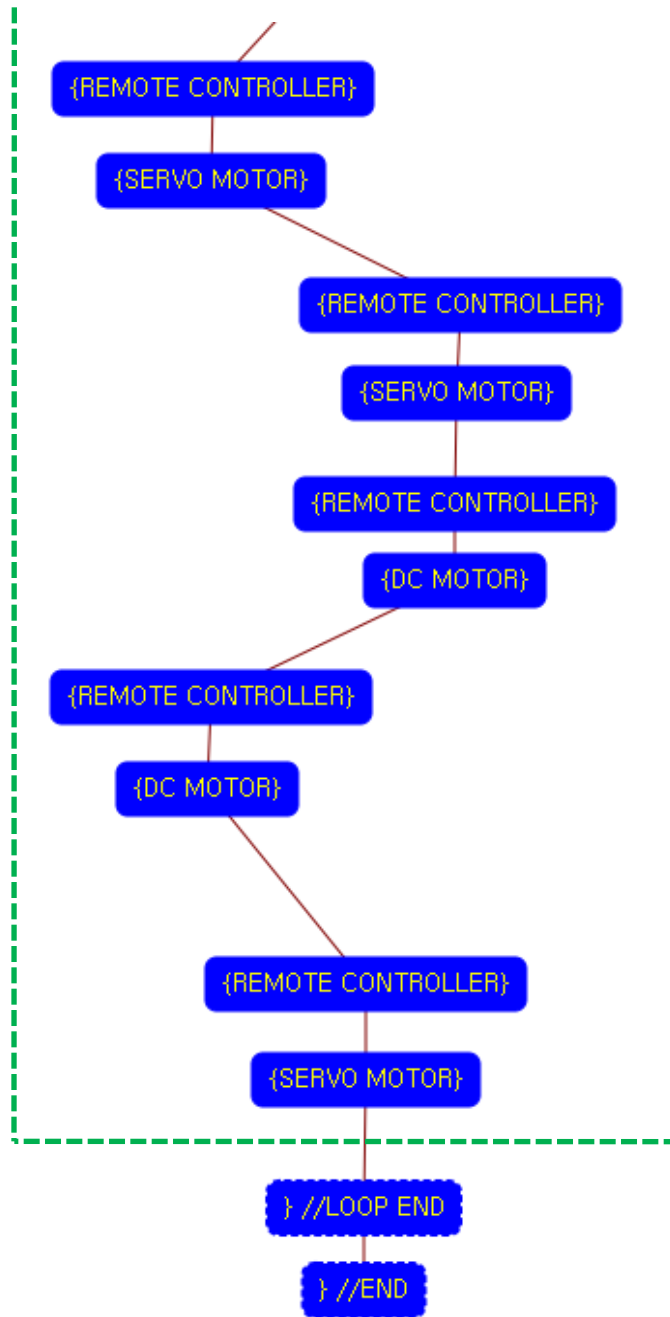
Case 6
Key of remote controller : F1
Robot swings his waist to the left side

Case 7
Key of remote controller : F3
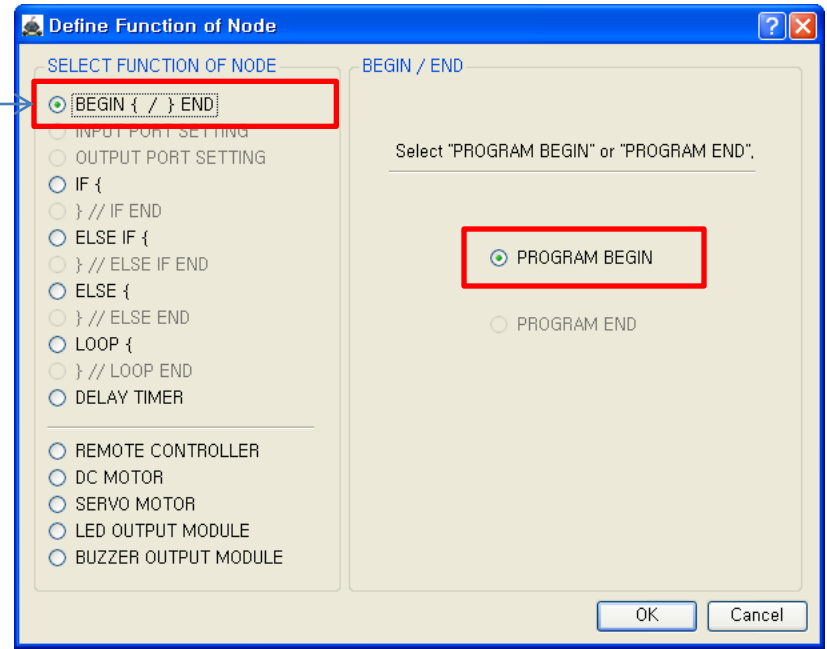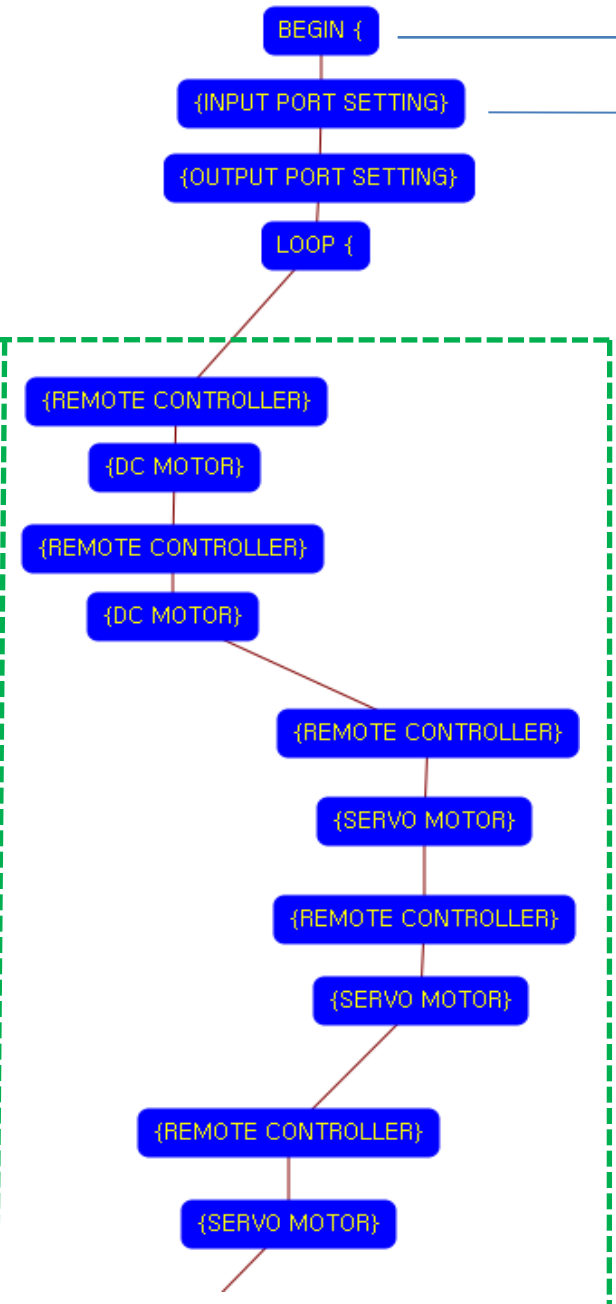Robot swings his waist to the right side

Case 8
Key of remote controller : F6
Turning right side

Case 9
Key of remote controller : F4
Turning left side

Case 7
Key of remote controller : F5
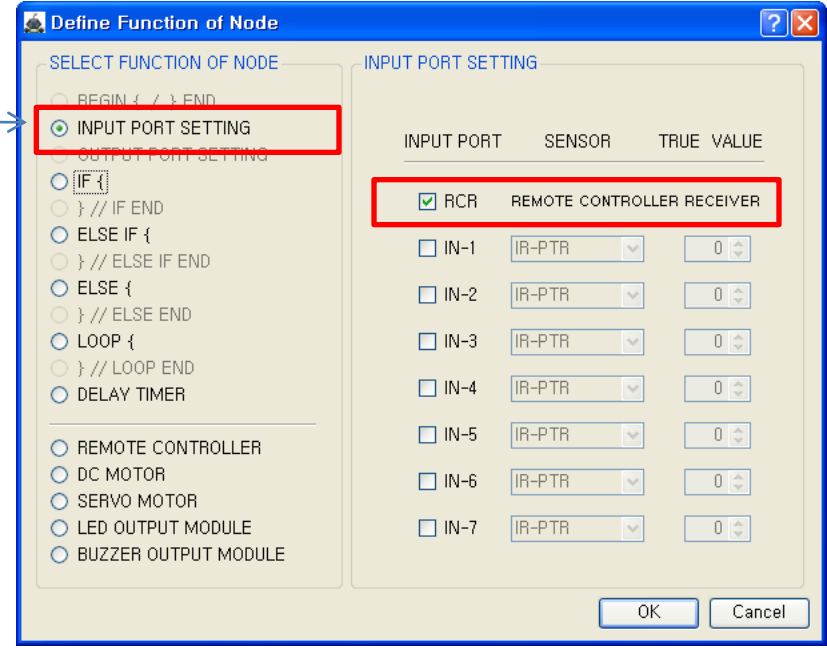Initialize the position

LOOP ending point

Program end

USER **C**REATIVE **R**OBOT

BEGIN {

{INPUT PORT SETTING}

{OUTPUT PORT SETTING}

LOOP {

{REMOTE CONTROLLER}

{DC MOTOR}

{REMOTE CONTROLLER}

{DC MOTOR}

{REMOTE CONTROLLER}

{SERVO MOTOR}

{REMOTE CONTROLLER}

{SERVO MOTOR}

{REMOTE CONTROLLER}

{SERVO MOTOR}

Define Function of Node

SELECT FUNCTION OF NODE

- BEGIN { / } END
- INPUT PORT SETTING
- OUTPUT PORT SETTING
- IF {
- } // IF END
- ELSE IF {
- } // ELSE IF END
- ELSE {
- } // ELSE END
- LOOP {
- } // LOOP END
- DELAY TIMER

- REMOTE CONTROLLER
- DC MOTOR
- SERVO MOTOR
- LED OUTPUT MODULE
- BUZZER OUTPUT MODULE

BEGIN / END

Select "PROGRAM BEGIN" or "PROGRAM END".

- PROGRAM BEGIN
- PROGRAM END

OK   Cancel

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.

Define Function of Node

SELECT FUNCTION OF NODE

- BEGIN { / } END
- INPUT PORT SETTING
- OUTPUT PORT SETTING
- IF {
- } // IF END
- ELSE IF {
- } // ELSE IF END
- ELSE {
- } // ELSE END
- LOOP {
- } // LOOP END
- DELAY TIMER

- REMOTE CONTROLLER
- DC MOTOR
- SERVO MOTOR
- LED OUTPUT MODULE
- BUZZER OUTPUT MODULE

INPUT PORT SETTING

INPUT PORT	SENSOR	TRUE VALUE
☑ RCR	REMOTE CONTROLLER RECEIVER	
☐ IN-1	IR-PTR	0
☐ IN-2	IR-PTR	0
☐ IN-3	IR-PTR	0
☐ IN-4	IR-PTR	0
☐ IN-5	IR-PTR	0
☐ IN-6	IR-PTR	0
☐ IN-7	IR-PTR	0

OK   Cancel

This model use 1 remote control receiver module as input device.

You have to connect the remote control receiver to the RCR input port of main board. And check the RCR in software to use.

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

BEGIN {
{INPUT PORT SETTING}
{OUTPUT PORT SETTING}
LOOP {

{REMOTE CONTROLLER}
{DC MOTOR}
{REMOTE CONTROLLER}
{DC MOTOR}

{REMOTE CONTROLLER}
{SERVO MOTOR}
{REMOTE CONTROLLER}
{SERVO MOTOR}
{REMOTE CONTROLLER}
{SERVO MOTOR}

Define Function of Node

SELECT FUNCTION OF NODE

- BEGIN { / } END
- INPUT PORT SETTING
- **OUTPUT PORT SETTING**
- IF {
- } // IF END
- ELSE IF {
- } // ELSE IF END
- ELSE {
- } // ELSE END
- LOOP {
- } // LOOP END
- DELAY TIMER

- REMOTE CONTROLLER
- DC MOTOR
- SERVO MOTOR
- LED OUTPUT MODULE
- BUZZER OUTPUT MODULE

OUTPUT PORT SETTING

OUTPUT PORT	MODULE	INITIAL VALUE
☐ OUT-1	RED LED	0
☐ OUT-2	RED LED	0
☐ OUT-3	RED LED	0
☑ OUT-4	SERVO MOTOR	90
☑ OUT-5	SERVO MOTOR	90
☐ OUT-6	RED LED	0
☐ OUT-7	RED LED	0

OK   Cancel

This model use 2 Servo Motor as output device.

You have to connect the ① Servo motor to the OUT-4 output port, the ② Servo motor to the OUT-5 output port of main board. The initial values of Servo motors are to be 90.

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

Define Function of Node

SELECT FUNCTION OF NODE

- BEGIN { / } END
- INPUT PORT SETTING
- OUTPUT PORT SETTING
- IF {
- } // IF END
- ELSE IF {
- } // ELSE IF END
- ELSE {
- } // ELSE END
- **LOOP {**
- } // LOOP END
- DELAY TIMER

- REMOTE CONTROLLER
- DC MOTOR
- SERVO MOTOR
- LED OUTPUT MODULE
- BUZZER OUTPUT MODULE

LOOP BEGIN ~

LOOP BEGIN COMMAND

[ID] : Sequence Number (Automatically assigned),
[REPEAT TIME] : Select "REPEAT TIME".

[ID]   4

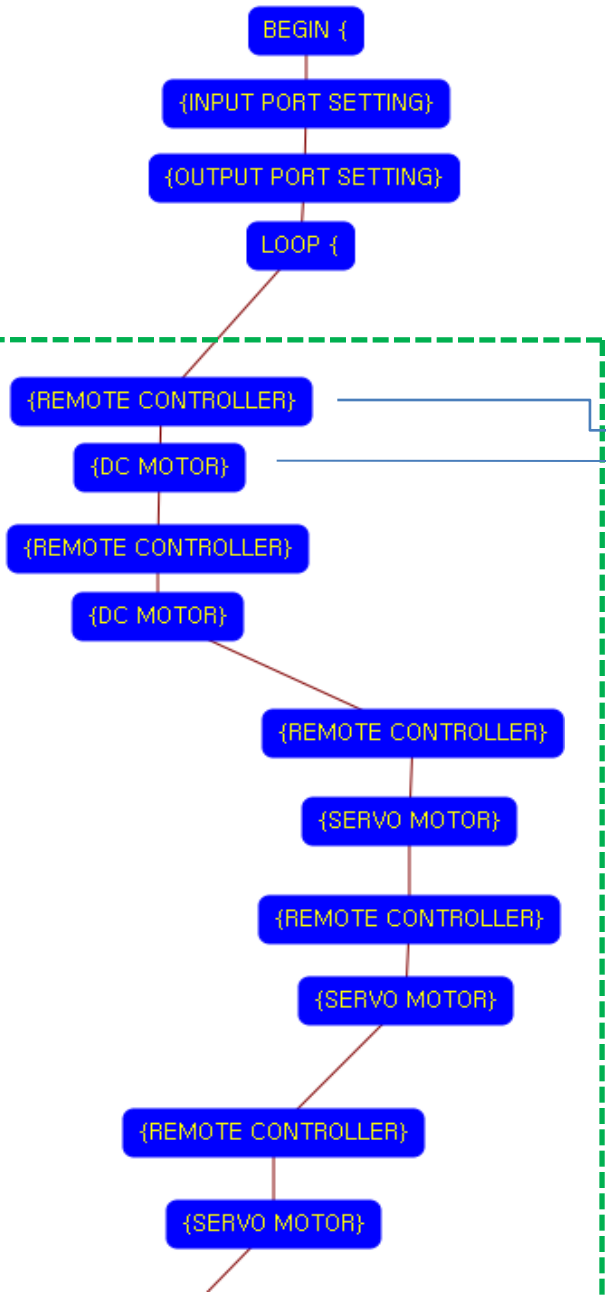[REPEAT TIME]   0

OK   Cancel

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.
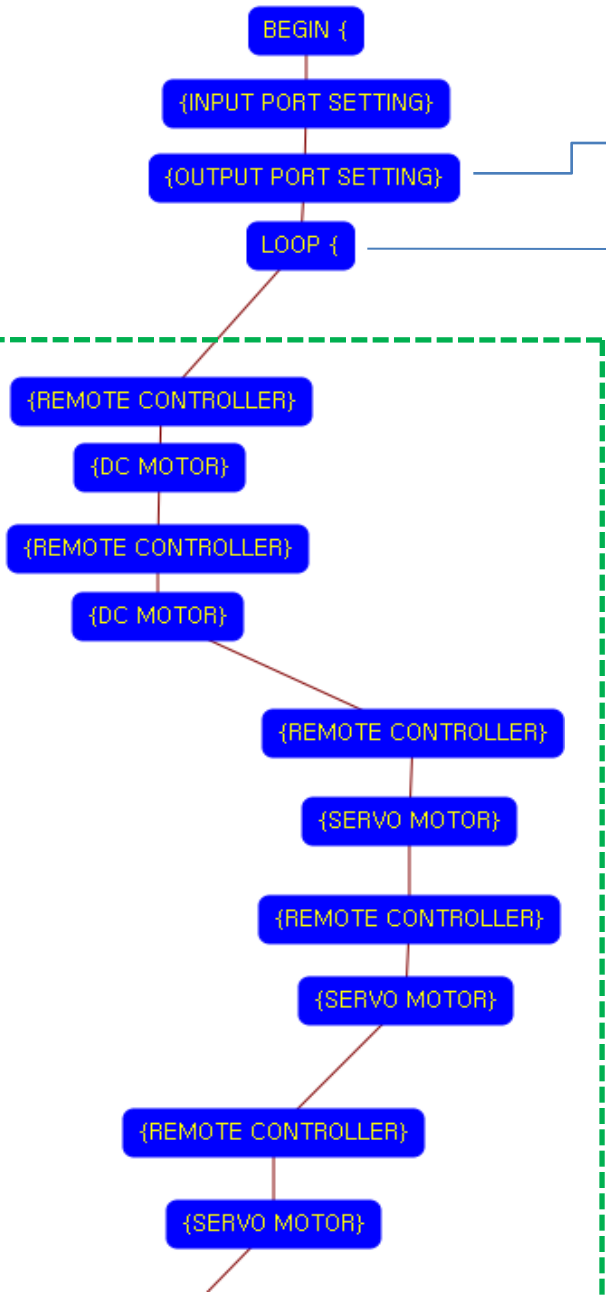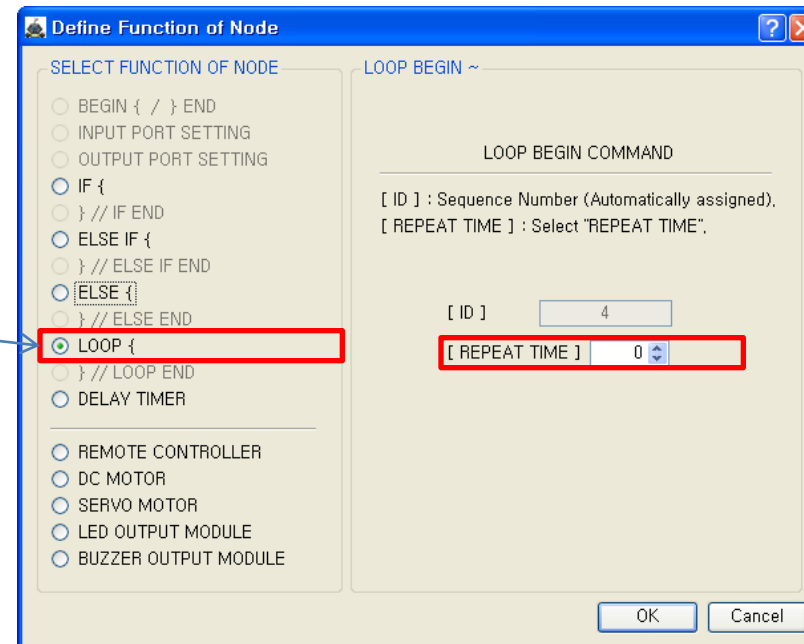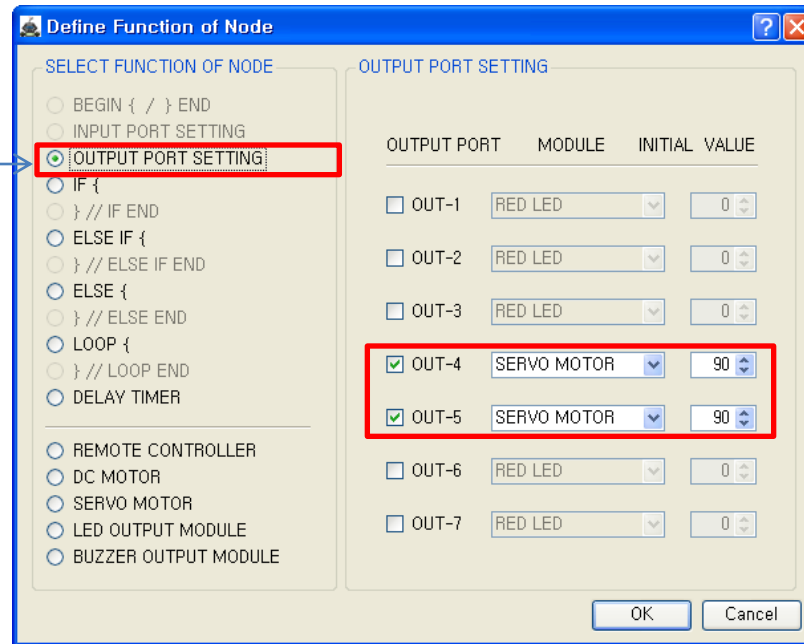
USER CREATIVE ROBOT

BEGIN {

{INPUT PORT SETTING}

{OUTPUT PORT SETTING}

LOOP {

{REMOTE CONTROLLER}

{DC MOTOR}

{REMOTE CONTROLLER}

{DC MOTOR}

{REMOTE CONTROLLER}

{SERVO MOTOR}

{REMOTE CONTROLLER}

{SERVO MOTOR}

{REMOTE CONTROLLER}

{SERVO MOTOR}

Define Function of Node

SELECT FUNCTION OF NODE
- BEGIN { / } END
- INPUT PORT SETTING
- OUTPUT PORT SETTING
- IF {
- } // IF END
- ELSE IF {
- } // ELSE IF END
- ELSE {
- } // ELSE END
- LOOP {
- } // LOOP END
- DELAY TIMER
- ● **REMOTE CONTROLLER**
- DC MOTOR
- SERVO MOTOR
- LED OUTPUT MODULE
- BUZZER OUTPUT MODULE

RTEMOTE CONTROLLER

[DIRECTION KEY]

| LEFT UP | RIGHT UP |
| LEFT DOWN | RIGHT DOWN |

[DIRECTION MIXED KEY]

LEFT UP + RIGHT UP

LEFT UP + RIGHT DOWN | LEFT DOWN + RIGHT UP

LEFT DOWN + RIGHT DOWN

[FUNCTION KEY]

| F1 | F2 | F3 |
| F4 | F5 | F6 |

OK   Cancel

Define Function of Node

SELECT FUNCTION OF NODE
- BEGIN { / } END
- INPUT PORT SETTING
- OUTPUT PORT SETTING
- IF {
- } // IF END
- ELSE IF {
- } // ELSE IF END
- ELSE {
- } // ELSE END
- LOOP {
- } // LOOP END
- DELAY TIMER
- REMOTE CONTROLLER
- ● **DC MOTOR**
- SERVO MOTOR
- LED OUTPUT MODULE
- BUZZER OUTPUT MODULE

DC MOTOR

DC MOTOR CONTROL COMMAND

[DIRECTION] : Select "FORWARD" or "BACKWARD",
[SPEED] : Select Rotational Speed (0 ~ 100),
[RUNNING TIME] : Select Time (0.1 ~ 80.0 sec.)

[LEFT DC MOTOR]   [RIGHT DC MOTOR]
[DIRECTION]   [DIRECTION]
BACKWARD   BACKWARD
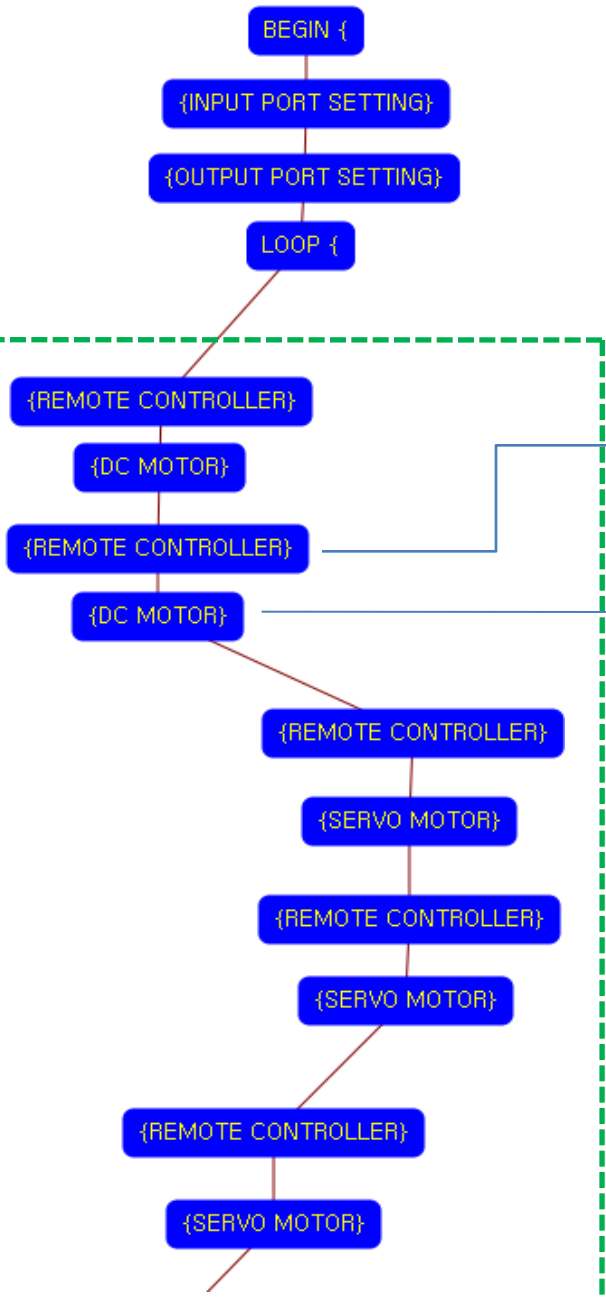[SPEED]   [SPEED]
100   100

[RUNNING TIME]
1

OK   Cancel

Set the "LEFT UP " key of remote controller.

Left DC Motor
- Direction : Backward
- Speed : 100
- Running Time : 1
Right DC Motor
- Direction : Backward
- Speed : 100
- Running Time : 1
➜Robot goes forward during 0.1 second

Although the setting value of running time is 0.1 seconds, the robot is going forward continuously during the "LEFT UP" key is pressed.

USER **C**REATIVE **R**OBOT

BEGIN {

{INPUT PORT SETTING}

{OUTPUT PORT SETTING}

LOOP {

{REMOTE CONTROLLER}

{DC MOTOR}

{REMOTE CONTROLLER}

{DC MOTOR}

{REMOTE CONTROLLER}

{SERVO MOTOR}

{REMOTE CONTROLLER}

{SERVO MOTOR}

{REMOTE CONTROLLER}

{SERVO MOTOR}

Define Function of Node

SELECT FUNCTION OF NODE

○ BEGIN { / } END
○ INPUT PORT SETTING
○ OUTPUT PORT SETTING
○ IF {
○ } // IF END
○ ELSE IF {
○ } // ELSE IF END
○ ELSE {
○ } // ELSE END
○ LOOP {
○ } // LOOP END
○ DELAY TIMER

⦿ REMOTE CONTROLLER
○ DC MOTOR
○ SERVO MOTOR
○ LED OUTPUT MODULE
○ BUZZER OUTPUT MODULE

RTEMOTE CONTROLLER

[DIRECTION KEY]

| LEFT UP | RIGHT UP |
| LEFT DOWN | RIGHT DOWN |

[DIRECTION MIXED KEY]

LEFT UP + RIGHT UP

LEFT UP + RIGHT DOWN | LEFT DOWN + RIGHT UP

LEFT DOWN + RIGHT DOWN

[FUNCTION KEY]

| F1 | F2 | F3 |
| F4 | F5 | F6 |

OK   Cancel

Define Function of Node

SELECT FUNCTION OF NODE

○ BEGIN { / } END
○ INPUT PORT SETTING
○ OUTPUT PORT SETTING
○ IF {
○ } // IF END
○ ELSE IF {
○ } // ELSE IF END
○ ELSE {
○ } // ELSE END
○ LOOP {
○ } // LOOP END
○ DELAY TIMER

○ REMOTE CONTROLLER
⦿ DC MOTOR
○ SERVO MOTOR
○ LED OUTPUT MODULE
○ BUZZER OUTPUT MODULE

DC MOTOR

DC MOTOR CONTROL COMMAND

[DIRECTION] : Select "FORWARD" or "BACKWARD",
[SPEED] : Select Rotational Speed (0 ~ 100),
[RUNNING TIME] : Select Time (0.1 ~ 80.0 sec.)

[LEFT DC MOTOR] | [RIGHT DC MOTOR]
[DIRECTION] | [DIRECTION]
FORWARD | FORWARD
[SPEED] | [SPEED]
100 | 100

[RUNNING TIME]

1

OK   Cancel

Set the "LEFT DOWN " key of remote controller.

Left DC Motor
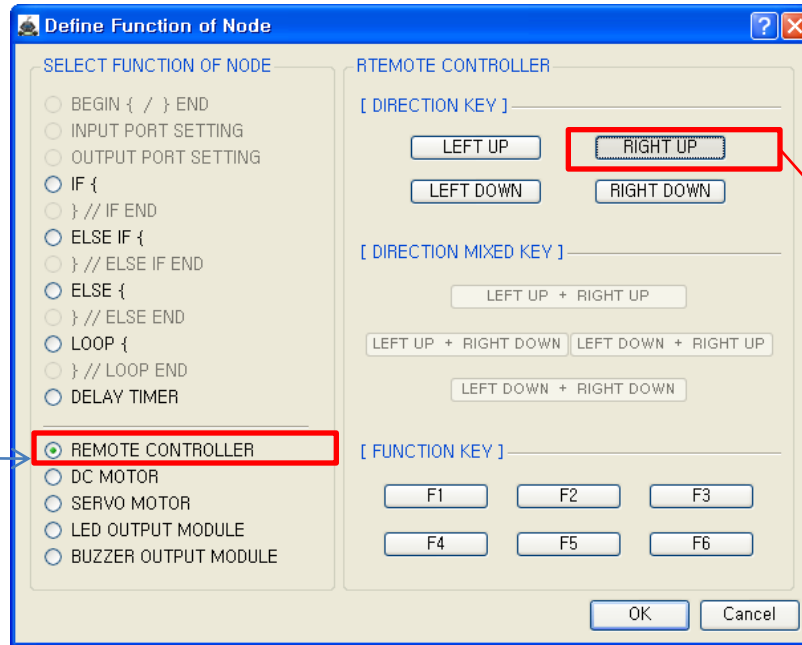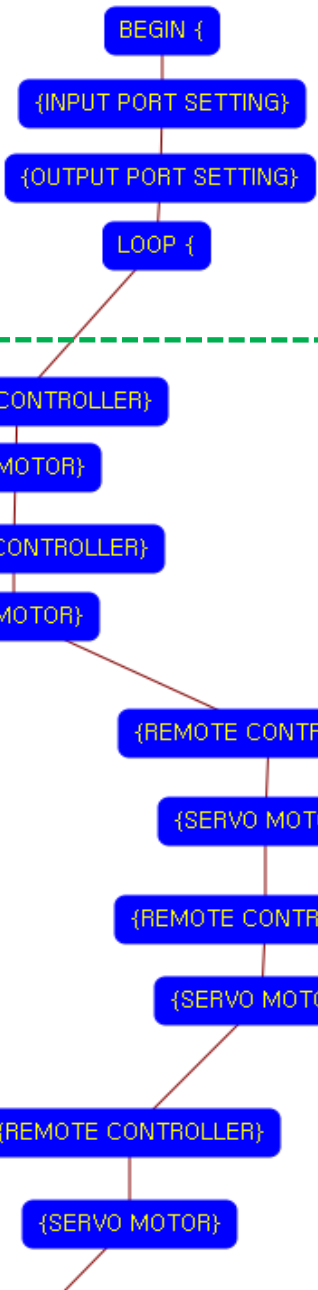- Direction : Forward
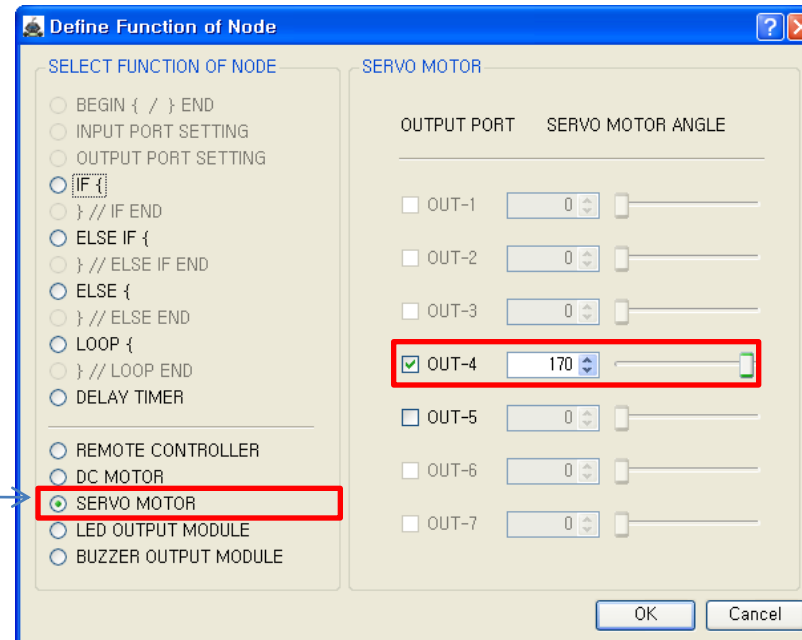- Speed : 100
- Running Time : 1
Right DC Motor
- Direction : Forward
- Speed : 100
- Running Time : 1
➜Robot goes backward during 0.1 second

Although the setting value of running time is 0.1 seconds, the robot is going forward continuously during the "LEFT DOWN" key is pressed.
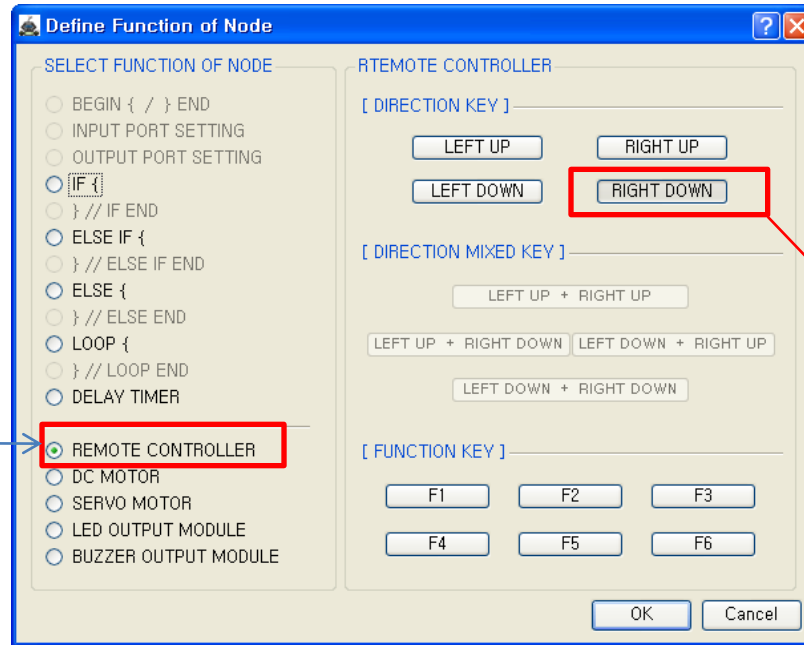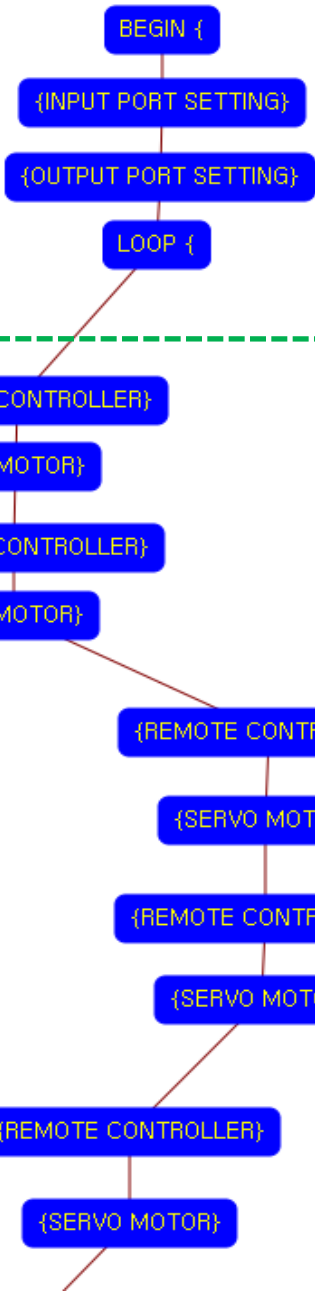
Flowchart (left column)

- BEGIN {
- {INPUT PORT SETTING}
- {OUTPUT PORT SETTING}
- LOOP {
- {REMOTE CONTROLLER}
- {DC MOTOR}
- {REMOTE CONTROLLER}
- {DC MOTOR}
- {REMOTE CONTROLLER}
- {SERVO MOTOR}
- {REMOTE CONTROLLER}
- {SERVO MOTOR}
- {REMOTE CONTROLLER}
- {SERVO MOTOR}

Define Function of Node (top dialog)

SELECT FUNCTION OF NODE

- BEGIN { / } END
- INPUT PORT SETTING
- OUTPUT PORT SETTING
- IF {
- } // IF END
- ELSE IF {
- } // ELSE IF END
- ELSE {
- } // ELSE END
- LOOP {
- } // LOOP END
- DELAY TIMER
- ● REMOTE CONTROLLER
- DC MOTOR
- SERVO MOTOR
- LED OUTPUT MODULE
- BUZZER OUTPUT MODULE

RTEMOTE CONTROLLER

[DIRECTION KEY]

| LEFT UP | RIGHT UP |
| LEFT DOWN | RIGHT DOWN |

[DIRECTION MIXED KEY]

LEFT UP + RIGHT UP

LEFT UP + RIGHT DOWN   LEFT DOWN + RIGHT UP

LEFT DOWN + RIGHT DOWN

[FUNCTION KEY]

| F1 | F2 | F3 |
| F4 | F5 | F6 |

OK   Cancel

Define Function of Node (bottom dialog)

SELECT FUNCTION OF NODE

- BEGIN { / } END
- INPUT PORT SETTING
- OUTPUT PORT SETTING
- ● IF {
- } // IF END
- ELSE IF {
- } // ELSE IF END
- ELSE {
- } // ELSE END
- LOOP {
- } // LOOP END
- DELAY TIMER
- REMOTE CONTROLLER
- DC MOTOR
- ● SERVO MOTOR
- LED OUTPUT MODULE
- BUZZER OUTPUT MODULE

SERVO MOTOR

OUTPUT PORT	SERVO MOTOR ANGLE
OUT-1	0
OUT-2	0
OUT-3	0
☑ OUT-4	170
OUT-5	0
OUT-6	0
OUT-7	0

OK   Cancel

Right column text

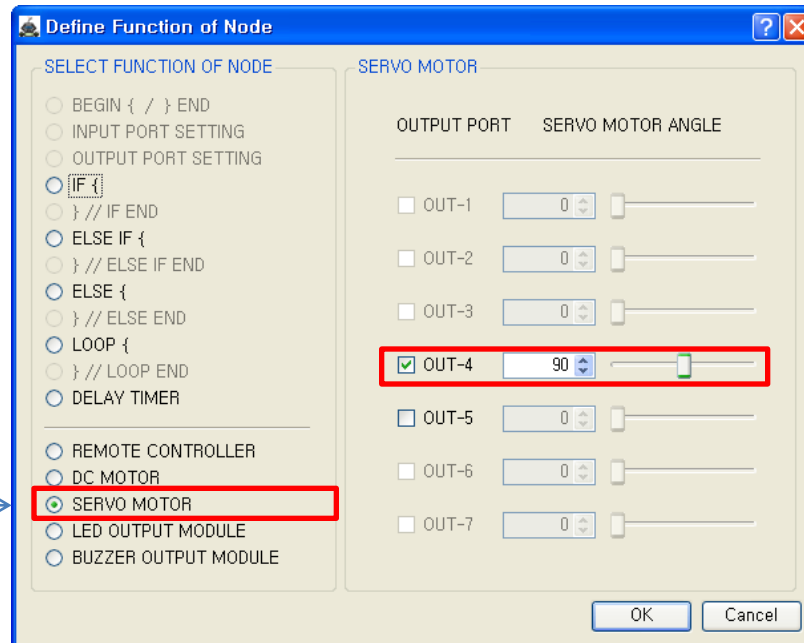Set the "RIGHT UP " key of remote controller.

If the "RIGHT UP" key is pressed, the ① servo motor on OUT-4 port sets to the 170 degree.

This make the sword is hacking to the downside.
(If the servo motor assembly is different with the assembly manual, the servo motor operation is different also)
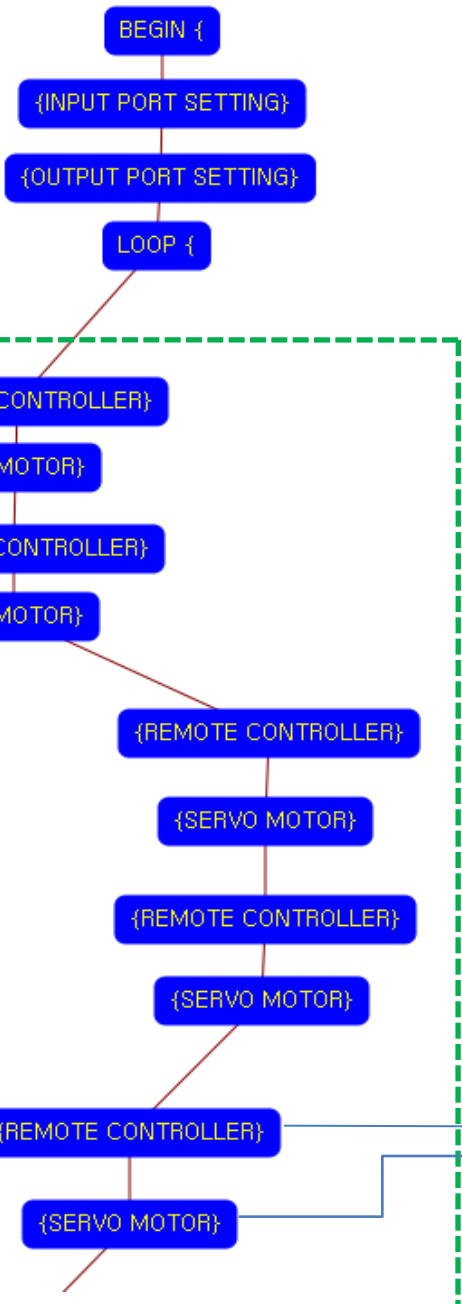
USER **C**REATIVE **R**OBOT

BEGIN {
{INPUT PORT SETTING}
{OUTPUT PORT SETTING}
LOOP {
{REMOTE CONTROLLER}
{DC MOTOR}
{REMOTE CONTROLLER}
{DC MOTOR}
{REMOTE CONTROLLER}
{SERVO MOTOR}
{REMOTE CONTROLLER}
{SERVO MOTOR}
{REMOTE CONTROLLER}
{SERVO MOTOR}

Define Function of Node

SELECT FUNCTION OF NODE
- BEGIN { / } END
- INPUT PORT SETTING
- OUTPUT PORT SETTING
- IF {
- } // IF END
- ELSE IF {
- } // ELSE IF END
- ELSE {
- } // ELSE END
- LOOP {
- } // LOOP END
- DELAY TIMER
- REMOTE CONTROLLER
- DC MOTOR
- SERVO MOTOR
- LED OUTPUT MODULE
- BUZZER OUTPUT MODULE

RTEMOTE CONTROLLER

[DIRECTION KEY]
LEFT UP   RIGHT UP
LEFT DOWN   RIGHT DOWN

[DIRECTION MIXED KEY]
LEFT UP + RIGHT UP
LEFT UP + RIGHT DOWN   LEFT DOWN + RIGHT UP
LEFT DOWN + RIGHT DOWN

[FUNCTION KEY]
F1   F2   F3
F4   F5   F6

OK   Cancel

Set the "RIGHT DOWN " key of remote controller

Define Function of Node

SELECT FUNCTION OF NODE
- BEGIN { / } END
- INPUT PORT SETTING
- OUTPUT PORT SETTING
- IF {
- } // IF END
- ELSE IF {
- } // ELSE IF END
- ELSE {
- } // ELSE END
- LOOP {
- } // LOOP END
- DELAY TIMER
- REMOTE CONTROLLER
- DC MOTOR
- SERVO MOTOR
- LED OUTPUT MODULE
- BUZZER OUTPUT MODULE

SERVO MOTOR

OUTPUT PORT   SERVO MOTOR ANGLE

- OUT-1   0
- OUT-2   0
- OUT-3   0
- OUT-4   90
- OUT-5   0
- OUT-6   0
- OUT-7   0

OK   Cancel

If the "RIGHT DOWN" key is pressed, the ① servo motor on OUT-4 port sets to the 90 degree.

This make the sword is hanging up.
(If the servo motor assembly is different with the assembly manual, the servo motor operation is different also)

USER CREATIVE ROBOT

BEGIN {
{INPUT PORT SETTING}
{OUTPUT PORT SETTING}
LOOP {

{REMOTE CONTROLLER}
{DC MOTOR}
{REMOTE CONTROLLER}
{DC MOTOR}

{REMOTE CONTROLLER}
{SERVO MOTOR}
{REMOTE CONTROLLER}
{SERVO MOTOR}
{REMOTE CONTROLLER}
{SERVO MOTOR}

Define Function of Node

SELECT FUNCTION OF NODE

- BEGIN { / } END
- INPUT PORT SETTING
- OUTPUT PORT SETTING
- IF {
- } // IF END
- ELSE IF {
- } // ELSE IF END
- ELSE {
- } // ELSE END
- LOOP {
- } // LOOP END
- DELAY TIMER

- REMOTE CONTROLLER
- DC MOTOR
- SERVO MOTOR
- LED OUTPUT MODULE
- BUZZER OUTPUT MODULE

RTEMOTE CONTROLLER

[DIRECTION KEY]

| LEFT UP | RIGHT UP |
| LEFT DOWN | RIGHT DOWN |

[DIRECTION MIXED KEY]

LEFT UP + RIGHT UP

LEFT UP + RIGHT DOWN | LEFT DOWN + RIGHT UP

LEFT DOWN + RIGHT DOWN

[FUNCTION KEY]

| F1 | F2 | F3 |
| F4 | F5 | F6 |

OK   Cancel

Set the "F2" key of remote controller.

If the "F2" key is pressed, the ② servo motor on OUT-5 port sets to the 90 degree.

This make the robot face tot the front side.
(If the servo motor assembly is different with the assembly manual, the servo motor operation is different also)

Define Function of Node

SELECT FUNCTION OF NODE

- BEGIN { / } END
- INPUT PORT SETTING
- OUTPUT PORT SETTING
- IF {
- } // IF END
- ELSE IF {
- } // ELSE IF END
- ELSE {
- } // ELSE END
- LOOP {
- } // LOOP END
- DELAY TIMER

- REMOTE CONTROLLER
- DC MOTOR
- SERVO MOTOR
- LED OUTPUT MODULE
- BUZZER OUTPUT MODULE

SERVO MOTOR

| OUTPUT PORT | SERVO MOTOR ANGLE |

- OUT-1   0
- OUT-2   0
- OUT-3   0
- OUT-4   0
- ☑ OUT-5   90
- OUT-6   0
- OUT-7   0

OK   Cancel

Flowchart nodes (left side, within green dashed box):

{REMOTE CONTROLLER}
{SERVO MOTOR}
{REMOTE CONTROLLER}
{SERVO MOTOR}
{REMOTE CONTROLLER}
{DC MOTOR}
{REMOTE CONTROLLER}
{DC MOTOR}
{REMOTE CONTROLLER}
{SERVO MOTOR}
} //LOOP END
} //END

Define Function of Node (first dialog)

SELECT FUNCTION OF NODE
- BEGIN { / } END
- INPUT PORT SETTING
- OUTPUT PORT SETTING
- IF {
- } // IF END
- ELSE IF {
- } // ELSE IF END
- ELSE {
- } // ELSE END
- LOOP {
- } // LOOP END
- DELAY TIMER
- ● REMOTE CONTROLLER
- DC MOTOR
- SERVO MOTOR
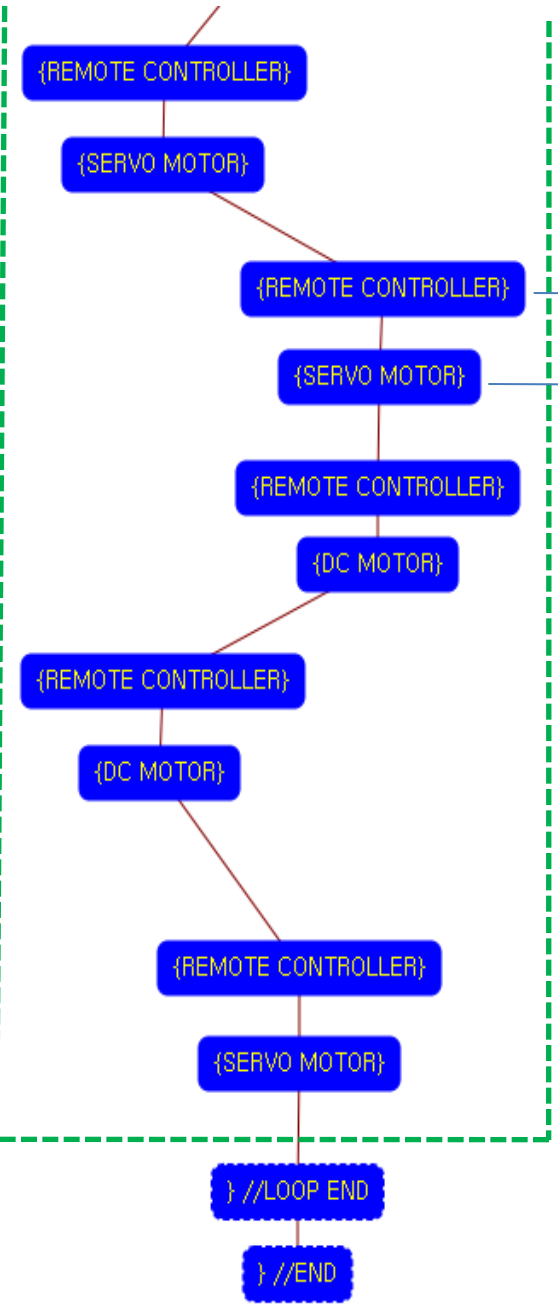- LED OUTPUT MODULE
- BUZZER OUTPUT MODULE

RTEMOTE CONTROLLER

[DIRECTION KEY]
LEFT UP   RIGHT UP
LEFT DOWN   RIGHT DOWN

[DIRECTION MIXED KEY]
LEFT UP + RIGHT UP
LEFT UP + RIGHT DOWN   LEFT DOWN + RIGHT UP
LEFT DOWN + RIGHT DOWN

[FUNCTION KEY]
F1   F2   F3
F4   F5   F6

OK   Cancel

Set the "F1" key of remote controller.

Define Function of Node (second dialog)

SELECT FUNCTION OF NODE
- BEGIN { / } END
- INPUT PORT SETTING
- OUTPUT PORT SETTING
- IF {
- } // IF END
- ELSE IF {
- } // ELSE IF END
- ELSE {
- } // ELSE END
- LOOP {
- } // LOOP END
- DELAY TIMER
- REMOTE CONTROLLER
- DC MOTOR
- ● SERVO MOTOR
- LED OUTPUT MODULE
- BUZZER OUTPUT MODULE

SERVO MOTOR

OUTPUT PORT   SERVO MOTOR ANGLE
- OUT-1   0
- OUT-2   0
- OUT-3   0
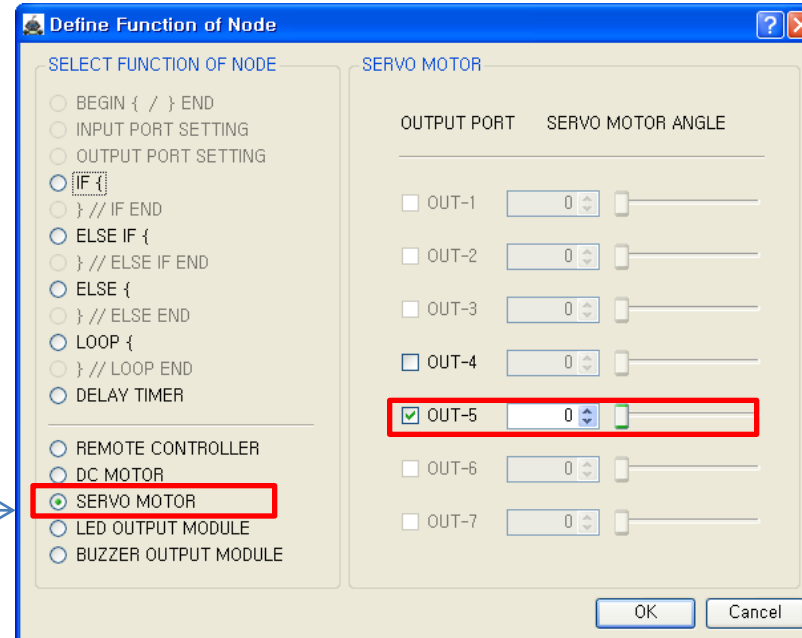- OUT-4   0
- ☑ OUT-5   180
- OUT-6   0
- OUT-7   0

OK   Cancel

If the "F1" key is pressed, the ② servo motor on OUT-5 port sets to the 180 degree.

This make the robot swing his waist to the left side.
(If the servo motor assembly is different with the assembly manual, the servo motor operation is different also)
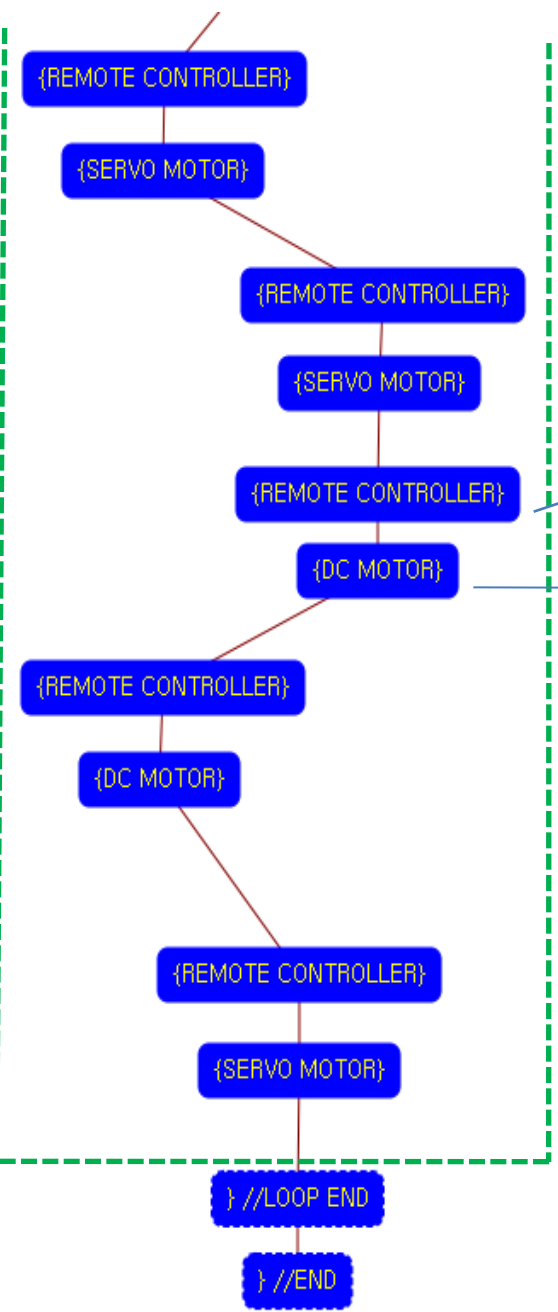
USER CREATIVE ROBOT
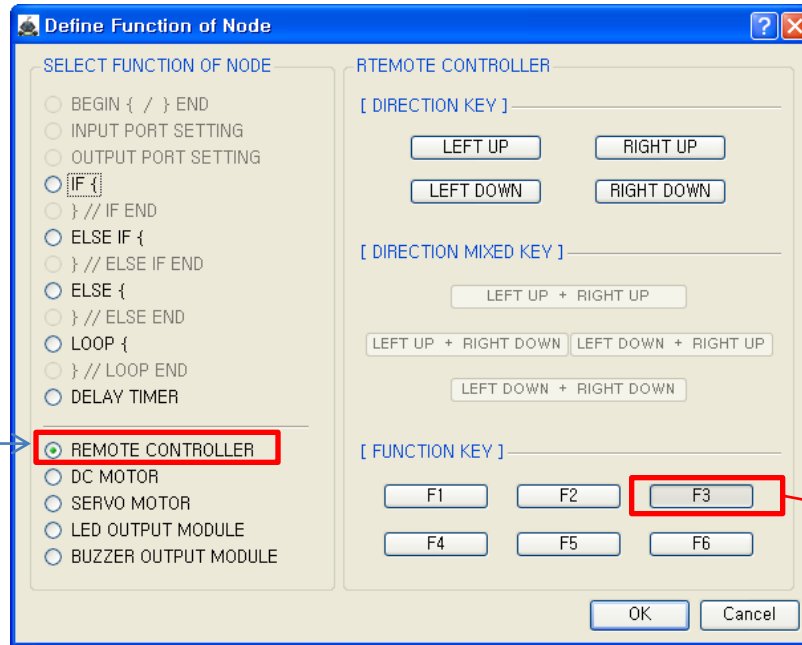
Set the "F3" key of remote controller.

If the "F3" key is pressed, the ② servo motor on OUT-5 port sets to the 0 degree.

This make the robot swing his waist to the right side.
(If the servo motor assembly is different with the assembly manual, the servo motor operation is different also)

USER CREATIVE ROBOT

{REMOTE CONTROLLER}

{SERVO MOTOR}

{REMOTE CONTROLLER}

{SERVO MOTOR}

{REMOTE CONTROLLER}

{DC MOTOR}

{REMOTE CONTROLLER}

{DC MOTOR}

{REMOTE CONTROLLER}

{SERVO MOTOR}

} //LOOP END

} //END

Define Function of Node

SELECT FUNCTION OF NODE

- ○ BEGIN { / } END
- ○ INPUT PORT SETTING
- ○ OUTPUT PORT SETTING
- ○ IF {
- ○ } // IF END
- ○ ELSE IF {
- ○ } // ELSE IF END
- ○ ELSE {
- ○ } // ELSE END
- ○ LOOP {
- ○ } // LOOP END
- ○ DELAY TIMER
- ● REMOTE CONTROLLER
- ○ DC MOTOR
- ○ SERVO MOTOR
- ○ LED OUTPUT MODULE
- ○ BUZZER OUTPUT MODULE

RTEMOTE CONTROLLER

[DIRECTION KEY]

LEFT UP   RIGHT UP
LEFT DOWN   RIGHT DOWN

[DIRECTION MIXED KEY]

LEFT UP + RIGHT UP

LEFT UP + RIGHT DOWN | LEFT DOWN + RIGHT UP

LEFT DOWN + RIGHT DOWN

[FUNCTION KEY]

F1   F2   F3
F4   F5   F6

OK   Cancel

Set the "F6" key of remote controller.

Define Function of Node

SELECT FUNCTION OF NODE

- ○ BEGIN { / } END
- ○ INPUT PORT SETTING
- ○ OUTPUT PORT SETTING
- ○ IF {
- ○ } // IF END
- ○ ELSE IF {
- ○ } // ELSE IF END
- ○ ELSE {
- ○ } // ELSE END
- ○ LOOP {
- ○ } // LOOP END
- ○ DELAY TIMER
- ○ REMOTE CONTROLLER
- ● DC MOTOR
- ○ SERVO MOTOR
- ○ LED OUTPUT MODULE
- ○ BUZZER OUTPUT MODULE

DC MOTOR

DC MOTOR CONTROL COMMAND

[DIRECTION] : Select "FORWARD" or "BACKWARD",
[SPEED] : Select Rotational Speed (0 ~ 100),
[RUNNING TIME] : Select Time (0,1 ~ 80,0 sec,)

[LEFT DC MOTOR]   [RIGHT DC MOTOR]

[DIRECTION]   [DIRECTION]
FORWARD   BACKWARD

[SPEED]   [SPEED]
100   100
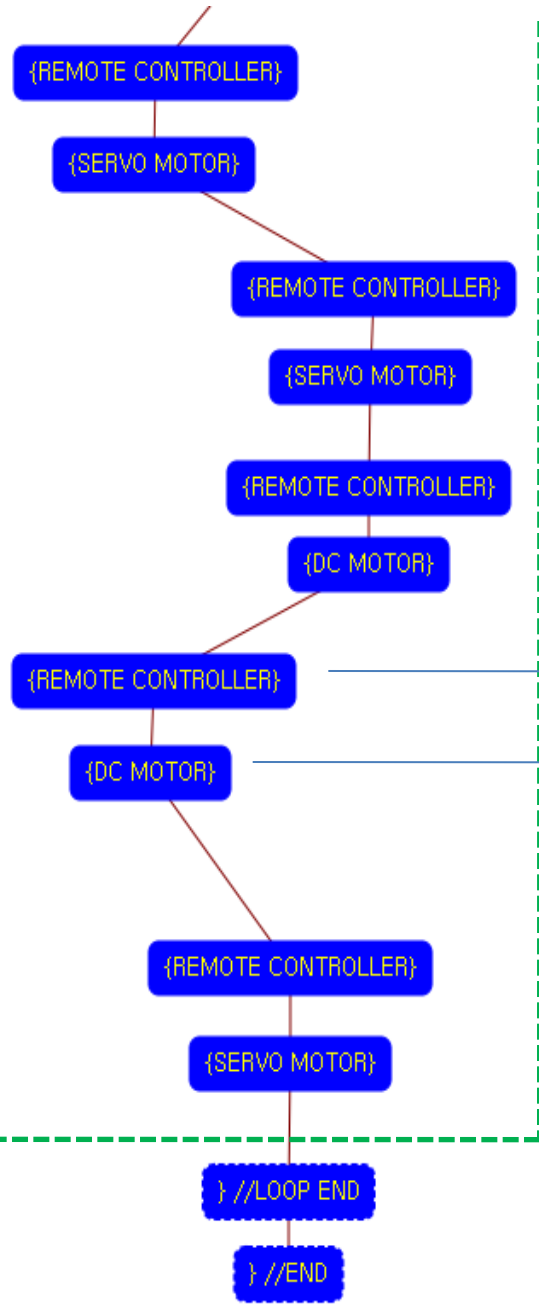
[RUNNING TIME]

1

OK   Cancel

Left DC Motor
- Direction : Forward
- Speed : 100
- Running Time : 1
Right DC Motor
- Direction : Backward
- Speed : 100
- Running Time : 1
➔Robot spins right during 0.1 second

Although the setting value of running time is 0.1 seconds, the robot is turning continuously during the "F6" key is pressed.

USER CREATIVE ROBOT

{REMOTE CONTROLLER}

{SERVO MOTOR}

{REMOTE CONTROLLER}

{SERVO MOTOR}

{REMOTE CONTROLLER}

{DC MOTOR}

{REMOTE CONTROLLER}

{DC MOTOR}

{REMOTE CONTROLLER}

{SERVO MOTOR}

} //LOOP END

} //END

Define Function of Node

SELECT FUNCTION OF NODE
- BEGIN { / } END
- INPUT PORT SETTING
- OUTPUT PORT SETTING
- IF {
- } // IF END
- ELSE IF {
- } // ELSE IF END
- ELSE {
- } // ELSE END
- LOOP {
- } // LOOP END
- DELAY TIMER
- ● REMOTE CONTROLLER
- DC MOTOR
- SERVO MOTOR
- LED OUTPUT MODULE
- BUZZER OUTPUT MODULE

RTEMOTE CONTROLLER

[DIRECTION KEY]

| LEFT UP | RIGHT UP |
| LEFT DOWN | RIGHT DOWN |

[DIRECTION MIXED KEY]

LEFT UP + RIGHT UP

LEFT UP + RIGHT DOWN | LEFT DOWN + RIGHT UP

LEFT DOWN + RIGHT DOWN

[FUNCTION KEY]

| F1 | F2 | F3 |
| F4 | F5 | F6 |

OK   Cancel

Set the "F4" key of remote controller.

Define Function of Node

SELECT FUNCTION OF NODE
- BEGIN { / } END
- INPUT PORT SETTING
- OUTPUT PORT SETTING
- IF {
- } // IF END
- ELSE IF {
- } // ELSE IF END
- ELSE {
- } // ELSE END
- LOOP {
- } // LOOP END
- DELAY TIMER
- REMOTE CONTROLLER
- ● DC MOTOR
- SERVO MOTOR
- LED OUTPUT MODULE
- BUZZER OUTPUT MODULE

DC MOTOR

DC MOTOR CONTROL COMMAND

[DIRECTION] : Select "FORWARD" or "BACKWARD",
[SPEED] : Select Rotational Speed (0 ~ 100),
[RUNNING TIME] : Select Time (0.1 ~ 80.0 sec.)

[LEFT DC MOTOR]   [RIGHT DC MOTOR]
[DIRECTION]   [DIRECTION]
BACKWARD   FORWARD
[SPEED]   [SPEED]
100   100
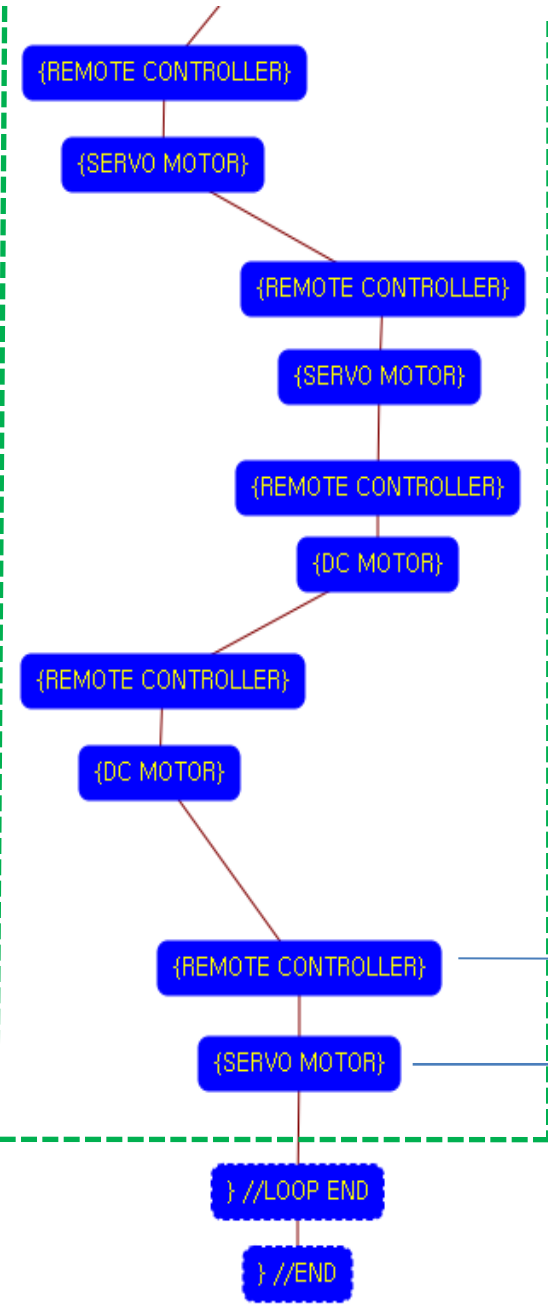
[RUNNING TIME]
1

OK   Cancel

Left DC Motor
- Direction : Backward
- Speed : 100
- Running Time : 1
Right DC Motor
- Direction : Forward
- Speed : 100
- Running Time : 1
➡Robot spins left during 0.1 second

Although the setting value of running time is 0.1 seconds, the robot is turning continuously during the "F4" key is pressed.

{REMOTE CONTROLLER}

{SERVO MOTOR}

{REMOTE CONTROLLER}

{SERVO MOTOR}

{REMOTE CONTROLLER}

{DC MOTOR}

{REMOTE CONTROLLER}

{DC MOTOR}

{REMOTE CONTROLLER}

{SERVO MOTOR}

} //LOOP END

} //END

Define Function of Node

SELECT FUNCTION OF NODE

○ BEGIN { / } END
○ INPUT PORT SETTING
○ OUTPUT PORT SETTING
○ IF {
○ } // IF END
○ ELSE IF {
○ } // ELSE IF END
○ ELSE {
○ } // ELSE END
○ LOOP {
○ } // LOOP END
○ DELAY TIMER

● REMOTE CONTROLLER
○ DC MOTOR
○ SERVO MOTOR
○ LED OUTPUT MODULE
○ BUZZER OUTPUT MODULE

RTEMOTE CONTROLLER

[DIRECTION KEY]

LEFT UP   RIGHT UP
LEFT DOWN   RIGHT DOWN

[DIRECTION MIXED KEY]

LEFT UP + RIGHT UP

LEFT UP + RIGHT DOWN   LEFT DOWN + RIGHT UP

LEFT DOWN + RIGHT DOWN

[FUNCTION KEY]

F1   F2   F3

F4   F5   F6

OK   Cancel

Set the "F5" key of remote controller.

If the "F5" key is pressed, the robot is initialized the position.

(If the servo motor assembly is different with the assembly manual, the servo motor operation is different also)

Define Function of Node

SELECT FUNCTION OF NODE

○ BEGIN { / } END
○ INPUT PORT SETTING
○ OUTPUT PORT SETTING
○ IF {
○ } // IF END
○ ELSE IF {
○ } // ELSE IF END
○ ELSE {
○ } // ELSE END
○ LOOP {
○ } // LOOP END
○ DELAY TIMER

○ REMOTE CONTROLLER
○ DC MOTOR
● SERVO MOTOR
○ LED OUTPUT MODULE
○ BUZZER OUTPUT MODULE

SERVO MOTOR

OUTPUT PORT   SERVO MOTOR ANGLE

☐ OUT-1   0
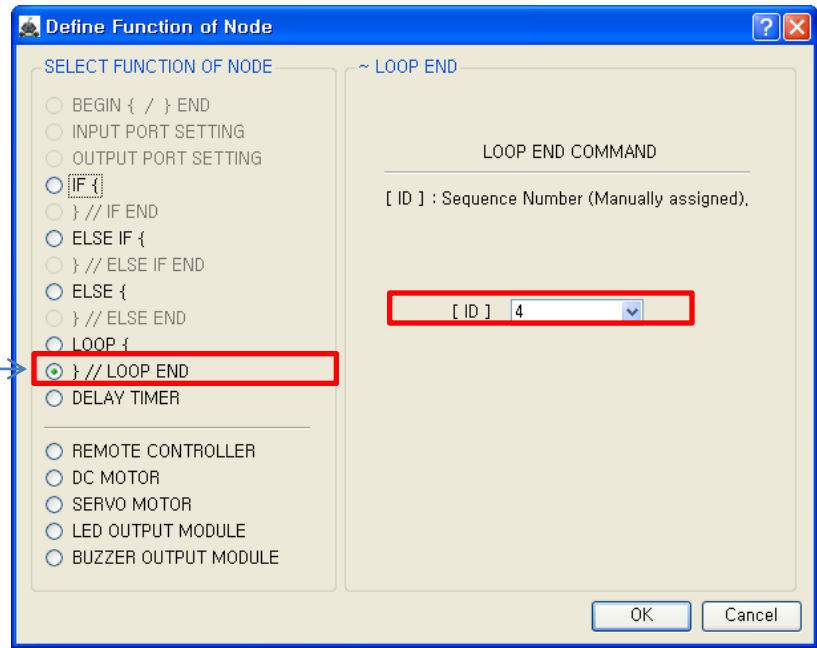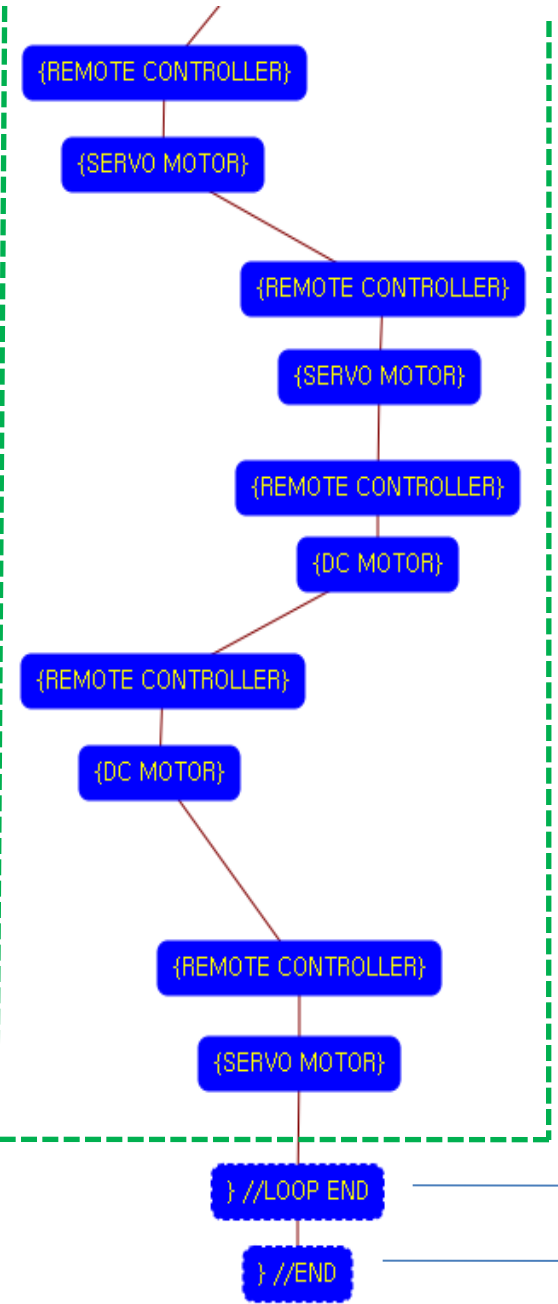☐ OUT-2   0
☐ OUT-3   0
☑ OUT-4   90
☑ OUT-5   90
☐ OUT-6   0
☐ OUT-7   0

OK   Cancel

USER **C**REATIVE **R**OBOT

{REMOTE CONTROLLER}

{SERVO MOTOR}

{REMOTE CONTROLLER}

{SERVO MOTOR}

{REMOTE CONTROLLER}

{DC MOTOR}

{REMOTE CONTROLLER}

{DC MOTOR}

{REMOTE CONTROLLER}

{SERVO MOTOR}

} //LOOP END

} //END

Define Function of Node

SELECT FUNCTION OF NODE

~ LOOP END

- ○ BEGIN { / } END
- ○ INPUT PORT SETTING
- ○ OUTPUT PORT SETTING
- ○ IF {
- ○ } // IF END
- ○ ELSE IF {
- ○ } // ELSE IF END
- ○ ELSE {
- ○ } // ELSE END
- ○ LOOP {
- ◉ } // LOOP END
- ○ DELAY TIMER

- ○ REMOTE CONTROLLER
- ○ DC MOTOR
- ○ SERVO MOTOR
- ○ LED OUTPUT MODULE
- ○ BUZZER OUTPUT MODULE

LOOP END COMMAND

[ID] : Sequence Number (Manually assigned).

[ID]   4

OK   Cancel

The end point of "LOOP {" repetition command.

You have to assigned the ID of paired "LOOP {" repetition command.

(It is necessary to know that which "LOOP {" among the many "LOOP {" repetition commands in program.

Define Function of Node

SELECT FUNCTION OF NODE

BEGIN / END

- ◉ BEGIN { / } END
- ○ INPUT PORT SETTING
- ○ OUTPUT PORT SETTING
- ○ IF {
- ○ } // IF END
- ○ ELSE IF {
- ○ } // ELSE IF END
- ○ ELSE {
- ○ } // ELSE END
- ○ LOOP {
- ○ } // LOOP END
- ○ DELAY TIMER

- ○ REMOTE CONTROLLER
- ○ DC MOTOR
- ○ SERVO MOTOR
- ○ LED OUTPUT MODULE
- ○ BUZZER OUTPUT MODULE

Select "PROGRAM BEGIN" or "PROGRAM END".

○ PROGRAM BEGIN

◉ PROGRAM END

OK   Cancel
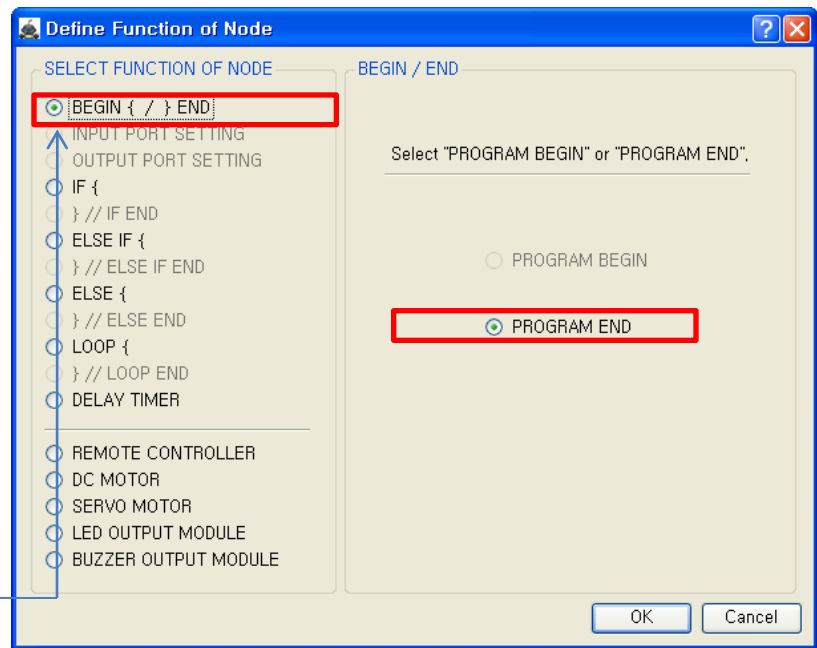
This means that program ends hear.

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

"PROGRAM BEGIN" is not active because you already define at the program.

To run the robot, it is necessary to download the program into the robot.
(Refer to download manual)

USER CREATIVE ROBOT