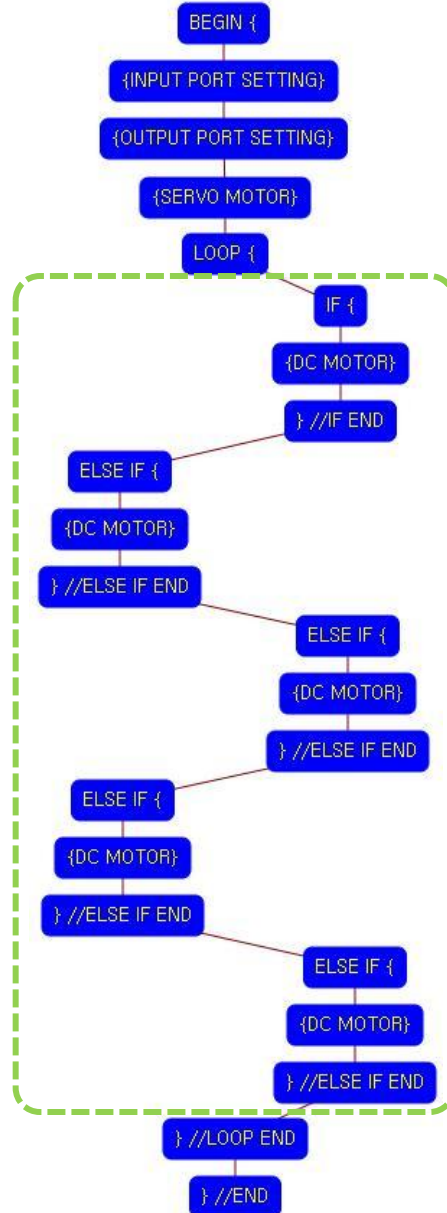The line tracer with 3 IR sensors runs following the black line. It means you have to check more conditions than 2 IR sensors model.

The key point of programming is that the black line is to be between the ⓐ and ⓑ IR sensor.

To more funny, the robot make head up when it starts.

Program name :
  eq2-3-p09_3IR_TurtleBot.ufc

BEGIN { — Program begin

{INPUT PORT SETTING} — Input port setting

{OUTPUT PORT SETTING} — Output port setting

{SERVO MOTOR} — Set the servo motor to the 150 degree

LOOP { — LOOP starting point (Repeat the command)

IF {
{DC MOTOR}
} //IF END

Condition 1
Left ⓒ IR sensor   : Detect white color
Center ⓑ IR sensor : Detect black color
Right ⓐ IR sensor   : Detect white color
Robot goes forward

ELSE IF {
{DC MOTOR}
} //ELSE IF END

Condition 2
Left ⓒ IR sensor   : Detect black color
Center ⓑ IR sensor : Detect black color
Right ⓐ IR sensor   : Detect white color
Robot turns left

ELSE IF {
{DC MOTOR}
} //ELSE IF END

Condition 3
Left ⓒ IR sensor   : Detect black color
Center ⓑ IR sensor : Detect white color
Right ⓐ IR sensor   : Detect white color
Robot turns left

ELSE IF {
{DC MOTOR}
} //ELSE IF END

Condition 4
Left ⓒ IR sensor   : Detect white color
Center ⓑ IR sensor : Detect black color
Right ⓐ IR sensor   : Detect black color
Robot turns right

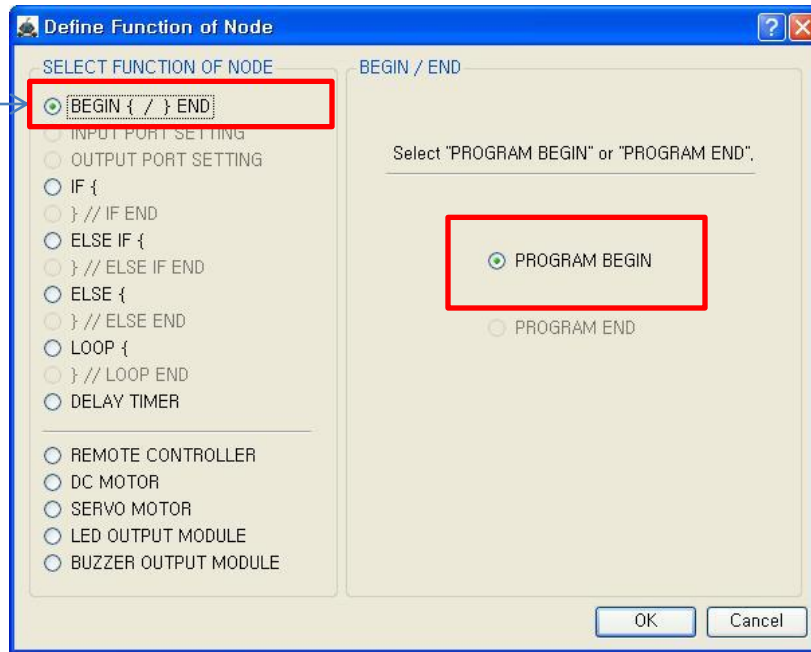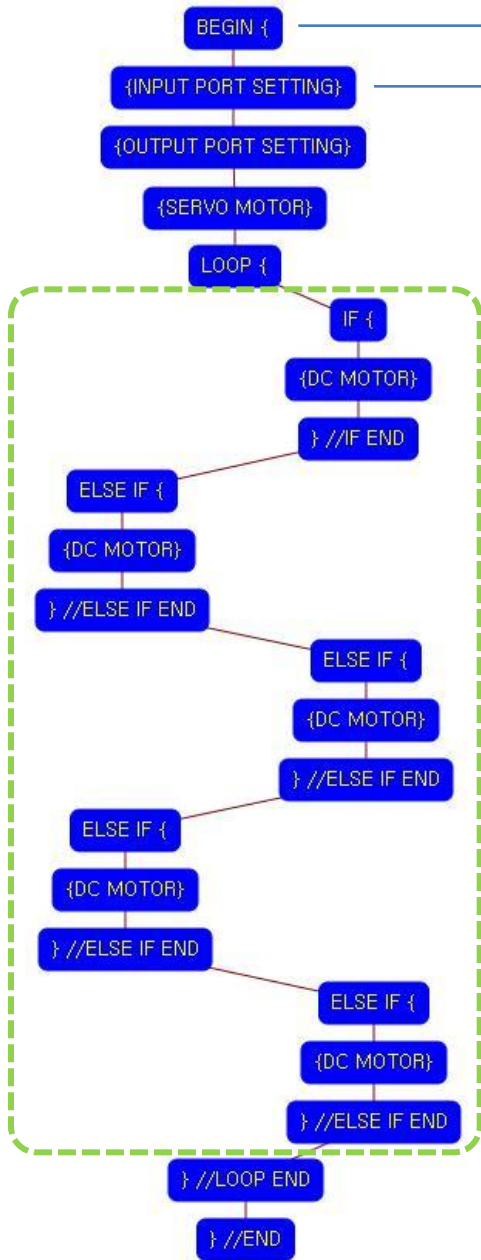**ELSE IF {**
{DC MOTOR}
} //ELSE IF END

Condition 4
Left ⓒ IR sensor   : Detect white color
Center ⓑ IR sensor : Detect white color
Right ⓐ IR sensor   : Detect black color
Robot turns right

} //LOOP END — LOOP ending point

} //END — Program end

Flowchart (left column)

- BEGIN {
- {INPUT PORT SETTING}
- {OUTPUT PORT SETTING}
- {SERVO MOTOR}
- LOOP {
  - IF {
    - {DC MOTOR}
    - } //IF END
  - ELSE IF {
    - {DC MOTOR}
    - } //ELSE IF END
  - ELSE IF {
    - {DC MOTOR}
    - } //ELSE IF END
  - ELSE IF {
    - {DC MOTOR}
    - } //ELSE IF END
  - ELSE IF {
    - {DC MOTOR}
    - } //ELSE IF END
- } //LOOP END
- } //END

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

BEGIN / END

Select "PROGRAM BEGIN" or "PROGRAM END".
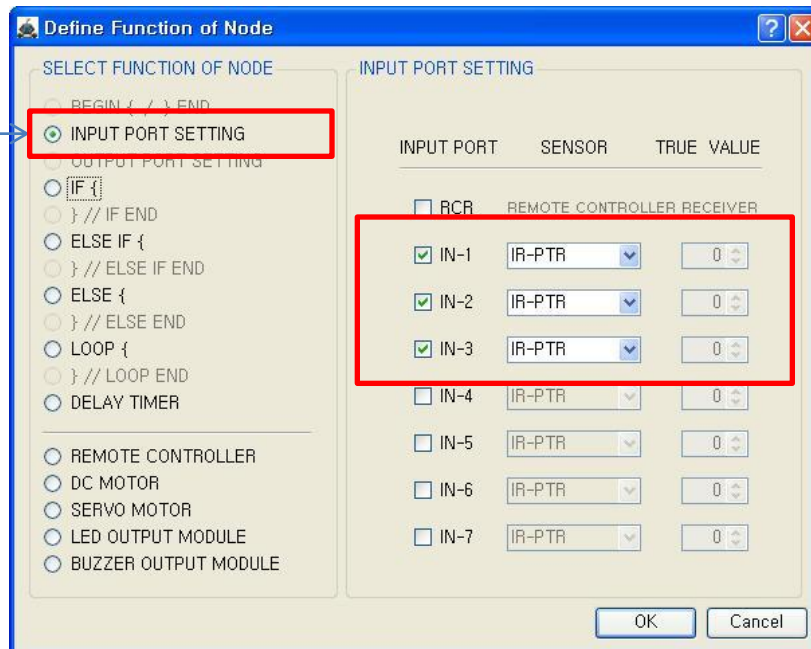
- ⊙ PROGRAM BEGIN
- ○ PROGRAM END

[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 (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

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 3 IR sensors as input device.

You have to connect the right ⓐ IR sensor to the IN-1 input port, the center ⓑ IR sensor to the IN-2 input port and the left ⓒ IR sensor to the IN-3 input port of main board.
And check the IN-1, IN-2, IN-3 with "IR-PTR" in software.

If the real connection of sensors are different to the setting on software, it will make robot to wrong operation.
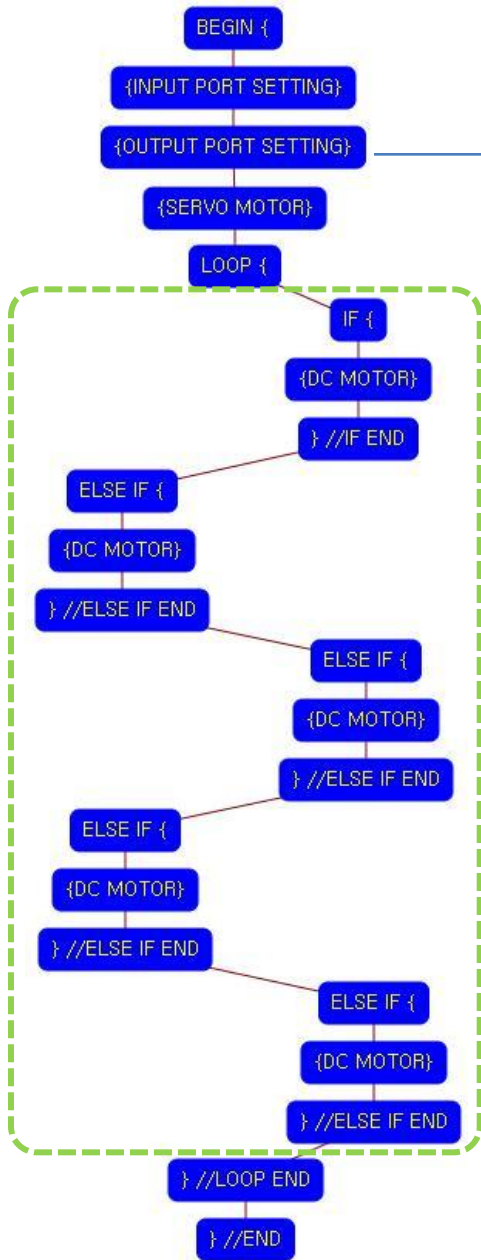
USER **C**REATIVE **R**OBOT

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	RED LED	0
☐ OUT-6	RED LED	0
☐ OUT-7	RED LED	0

OK   Cancel

This model use 1 Servo Motor as output device.

You have to connect the Servo motor to the OUT-4 output port of main board. The initial value of Servo motor is 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
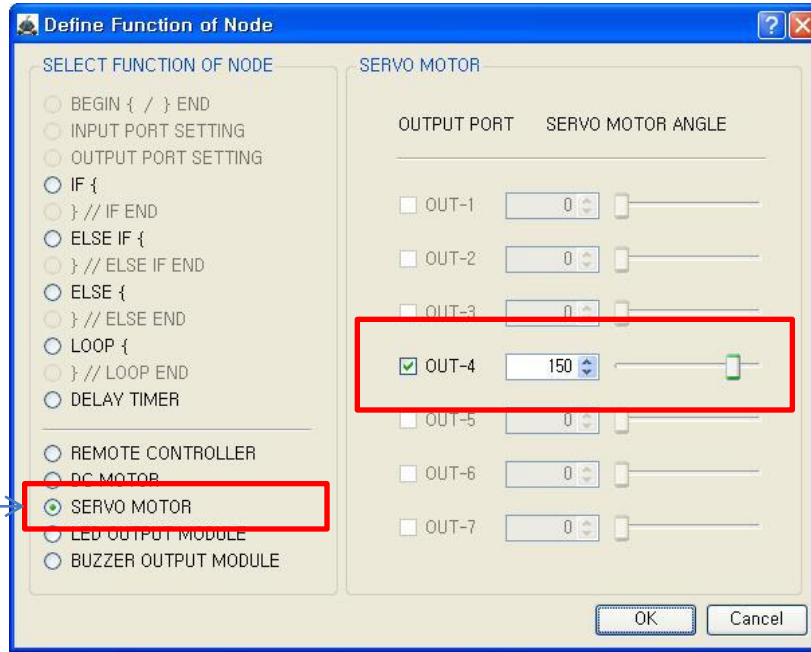- ● SERVO MOTOR
- LED OUTPUT MODULE
- BUZZER OUTPUT MODULE

SERVO MOTOR

OUTPUT PORT	SERVO MOTOR ANGLE
OUT-1	0
OUT-2	0
OUT-3	0
☑ OUT-4	150
OUT-5	0
OUT-6	0
OUT-7	0

OK   Cancel

Move the Servo motor of OUT-4 port to the 150 degree.

This makes the head of turtle robot heads up.

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
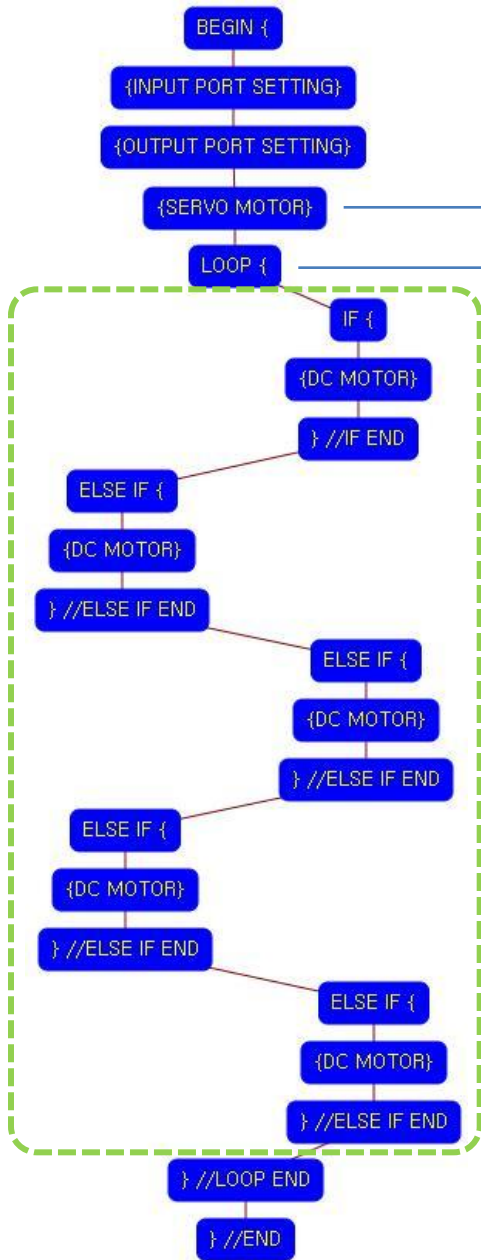- SERVO MOTOR
- LED OUTPUT MODULE
- BUZZER OUTPUT MODULE

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

Flowchart (left side)

BEGIN {

{INPUT PORT SETTING}

{OUTPUT PORT SETTING}

{SERVO MOTOR}

LOOP {

IF {

{DC MOTOR}

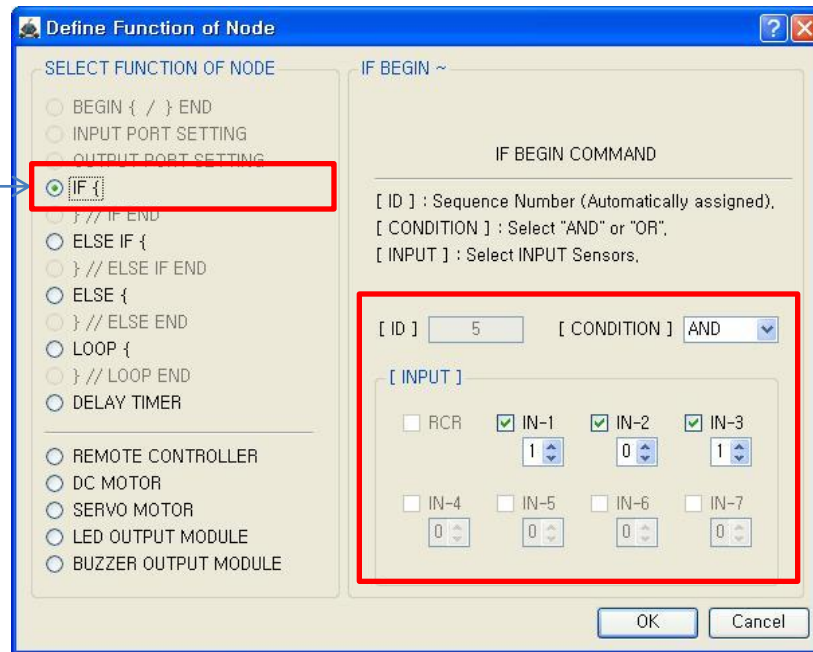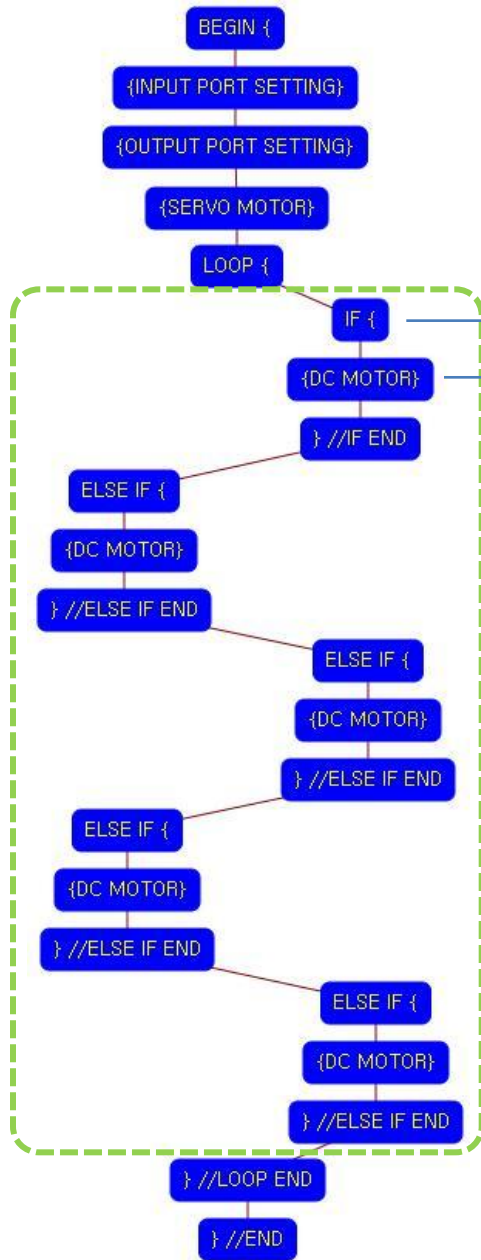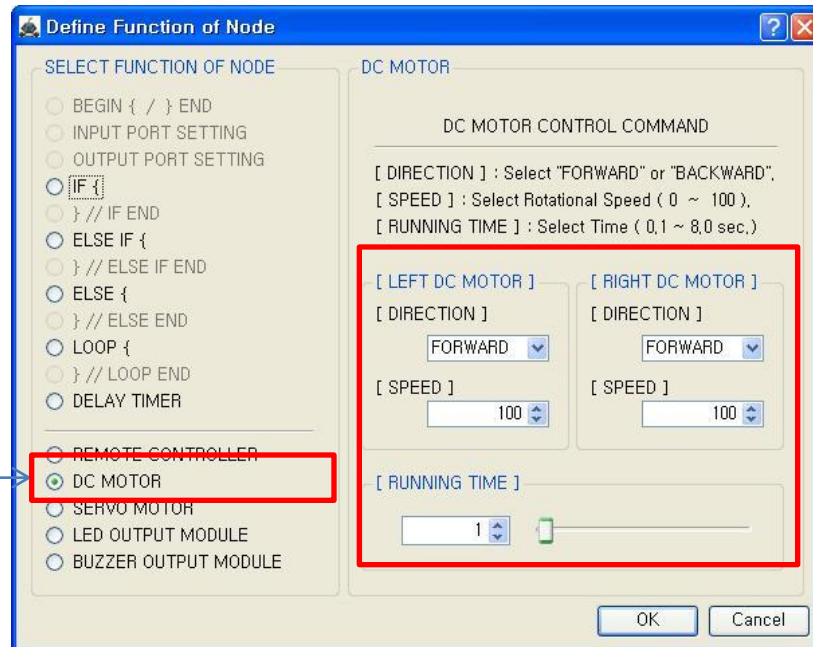} //IF END

ELSE IF {

{DC MOTOR}

} //ELSE IF END

ELSE IF {

{DC MOTOR}

} //ELSE IF END

ELSE IF {

{DC MOTOR}

} //ELSE IF END

ELSE IF {

{DC MOTOR}

} //ELSE IF END

} //LOOP END

} //END

Define Function of Node (top)

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

IF BEGIN ~

IF BEGIN COMMAND

[ID] : Sequence Number (Automatically assigned),
[CONDITION] : Select "AND" or "OR",
[INPUT] : Select INPUT Sensors,

[ID]   5   [CONDITION] AND

[INPUT]

☐ RCR   ☑ IN-1   ☑ IN-2   ☑ IN-3
              1   0   1

☐ IN-4   ☐ IN-5   ☐ IN-6   ☐ IN-7
    0   0   0   0

[OK] [Cancel]

Define Function of Node (bottom)

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 ~ 8.0 sec.)

[LEFT DC MOTOR]   [RIGHT DC MOTOR]
[DIRECTION]   [DIRECTION]

FORWARD   FORWARD

[SPEED]   [SPEED]
        100   100

[RUNNING TIME]

    1

[OK] [Cancel]

Right side notes

1st condition

True condition is
ⓐ IR sensor of IN-1 :
   detects white color
AND
ⓑ IR sensor of IN-2 :
   detects black color
AND
ⓒ IR sensor of IN-3 :
   detects white color
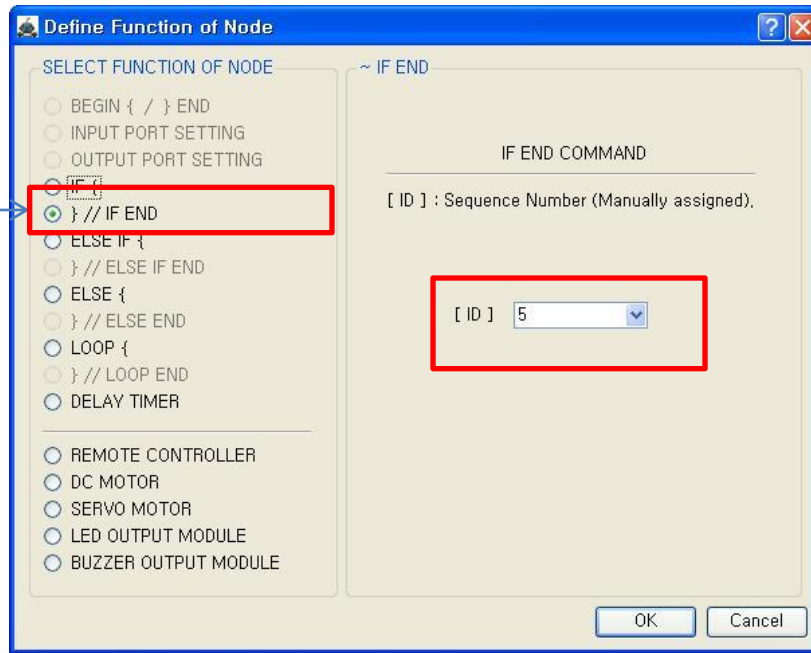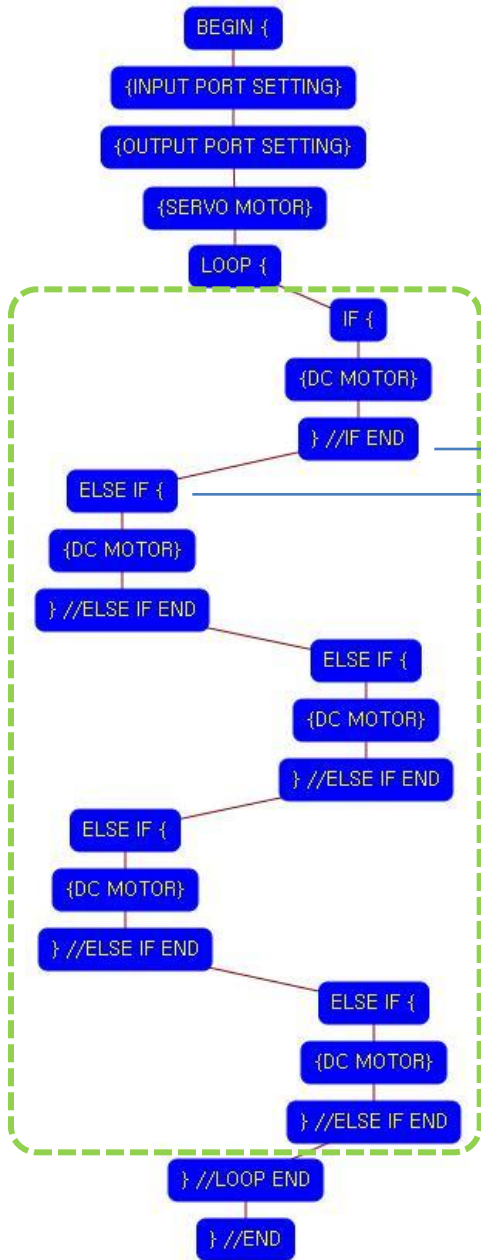
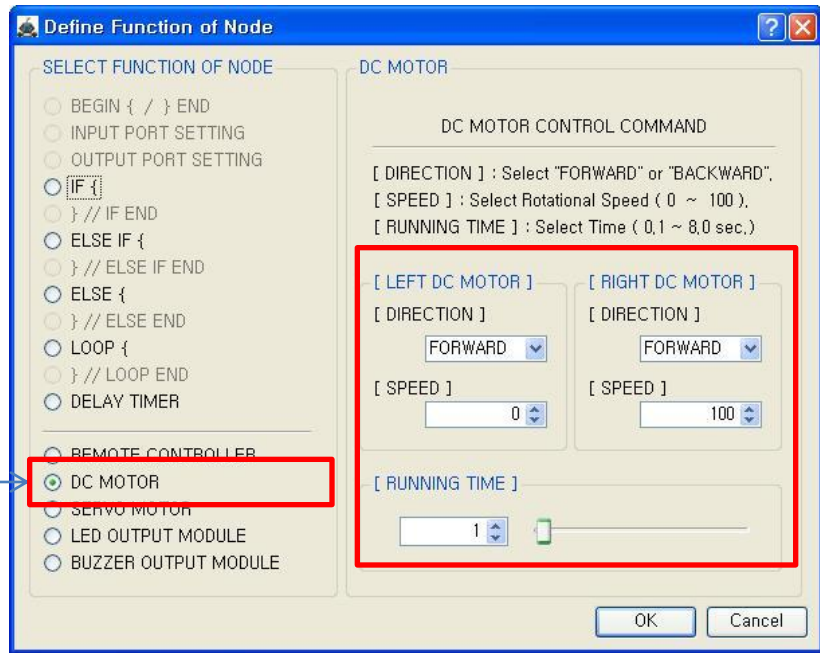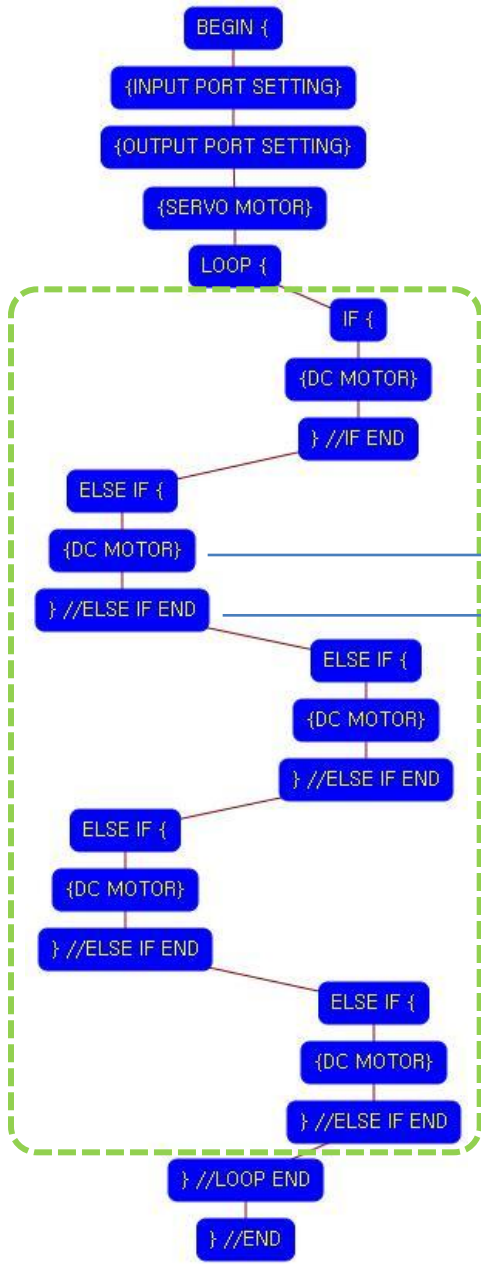If the condition is true, the next "{DC MOTOR}" command is executed, else the next "ELSE IF {" command is executed.

If the 1st "IF {" condition is true, both of DC motor run like as followings.

Both DC Motor
- Direction : Forward
- Speed : 100
- Running Time : 1
➜ Robot goes forward during 0.1 second

Motor speed is from 0 to 100 and running time is based on 0.1 second.
(1 is 0.1 second)

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

~ IF END

IF END COMMAND

[ID] : Sequence Number (Manually assigned).

[ID] 5

OK   Cancel

The end point of 1st "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.

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

ELSE IF BEGIN ~

ELSE IF BEGIN COMMAND

[ID] : Sequence Number (Automatically assigned).
[CONDITION] : Select "AND" or "OR".
[INPUT] : Select INPUT Sensors.

[ID] 8   [CONDITION] AND

[INPUT]

□ RCR	☑ IN-1	☑ IN-2	☑ IN-3
	1	0	0
□ IN-4	□ IN-5	□ IN-6	□ IN-7
0	0	0	0

OK   Cancel

2nd condition

True condition is
ⓐ IR sensor of IN-1 :
    detects white color
AND
ⓑ IR sensor of IN-2 :
    detects black color
AND
ⓒ IR sensor of IN-3 :
    detects black color

If the condition is true, the next "{DC MOTOR}" command is executed, else the next "ELSE IF {" command is executed.

Flowchart (left):

BEGIN {
{INPUT PORT SETTING}
{OUTPUT PORT SETTING}
{SERVO MOTOR}
LOOP {
IF {
{DC MOTOR}
} //IF END
ELSE IF {
{DC MOTOR}
} //ELSE IF END
ELSE IF {
{DC MOTOR}
} //ELSE IF END
ELSE IF {
{DC MOTOR}
} //ELSE IF END
ELSE IF {
{DC MOTOR}
} //ELSE IF END
} //LOOP END
} //END

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

DC MOTOR

DC MOTOR CONTROL COMMAND

[DIRECTION] : Select "FORWARD" or "BACKWARD",
[SPEED] : Select Rotational Speed (0 ~ 100),
[RUNNING TIME] : Select Time (0,1 ~ 8,0 sec,)

[LEFT DC MOTOR]   [RIGHT DC MOTOR]
[DIRECTION]   [DIRECTION]
FORWARD ▼   FORWARD ▼
[SPEED]   [SPEED]
0 ▲▼   100 ▲▼

[RUNNING TIME]
1 ▲▼

OK   Cancel

If the 2nd "ELSE IF {" condition is true, both of DC motor run like as followings.

Left DC Motor
- Direction : Forward
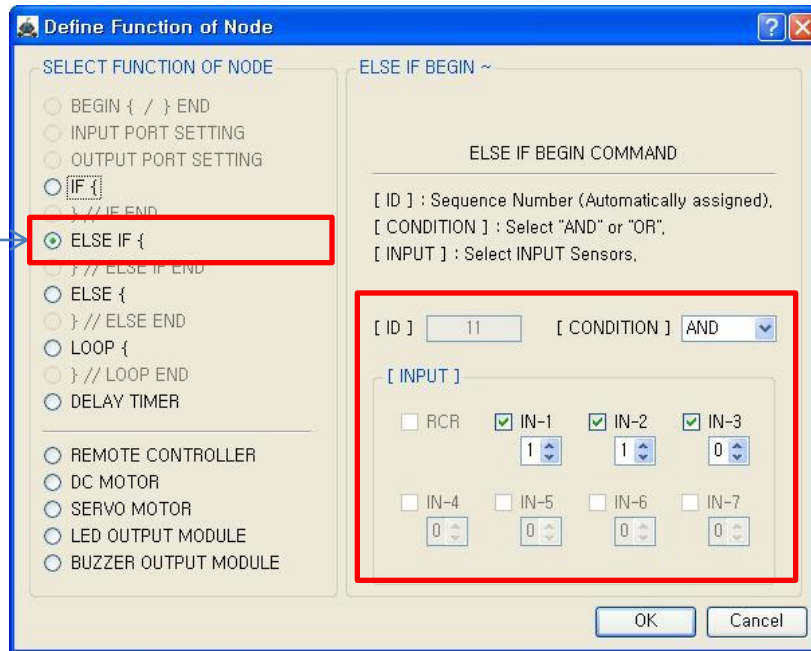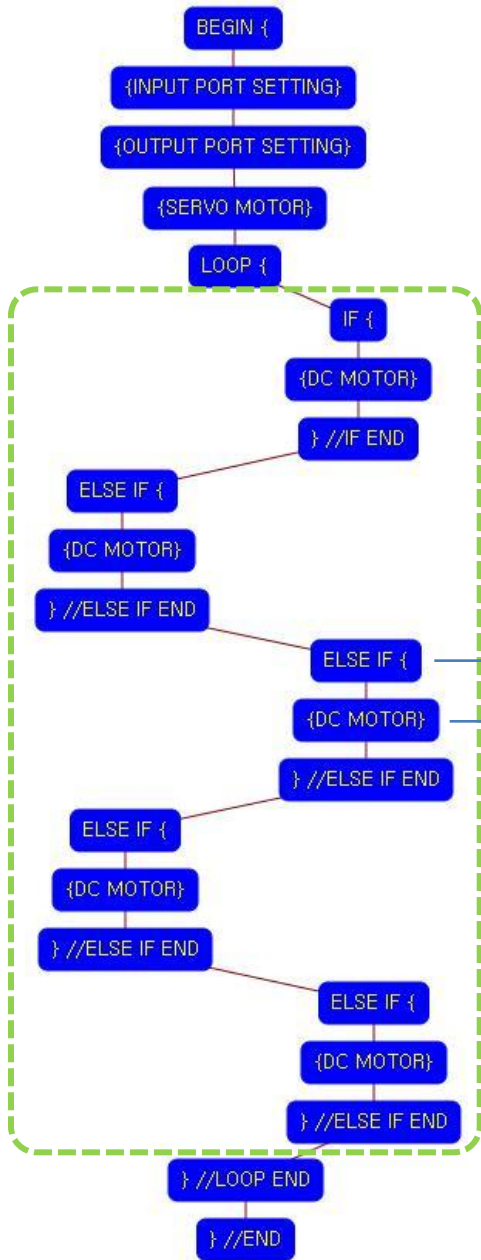- Speed : 0
- Running Time : 1
Right DC Motor
- Direction : Forward
- Speed : 100
- Running Time : 1
➜Robot turns left during 0.1 second

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

~ ELSE IF END

ELSE IF END COMMAND

[ID] : Sequence Number (Manually assigned),

[ID] 8 ▼

OK   Cancel

The end point of 2nd condition.

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

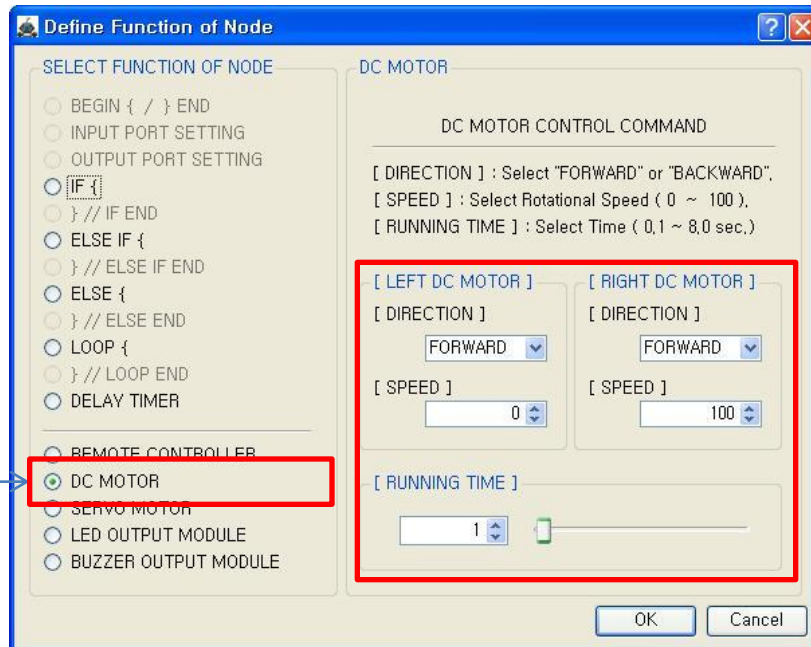(It is necessary to know that which "ELSE IF {" among the many "ELSE IF {" conditions in program.

Flowchart (left):
- BEGIN {
- {INPUT PORT SETTING}
- {OUTPUT PORT SETTING}
- {SERVO MOTOR}
- LOOP {
- IF {
- {DC MOTOR}
- } //IF END
- ELSE IF {
- {DC MOTOR}
- } //ELSE IF END
- ELSE IF {
- {DC MOTOR}
- } //ELSE IF END
- ELSE IF {
- {DC MOTOR}
- } //ELSE IF END
- ELSE IF {
- {DC MOTOR}
- } //ELSE IF END
- } //LOOP END
- } //END

Define Function of Node (top)

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

ELSE IF BEGIN ~

ELSE IF BEGIN COMMAND

[ID] : Sequence Number (Automatically assigned),
[CONDITION] : Select "AND" or "OR",
[INPUT] : Select INPUT Sensors.

[ID] 11   [CONDITION] AND

[INPUT]
- RCR   ☑ IN-1   ☑ IN-2   ☑ IN-3
           1   1   0
- IN-4   IN-5   IN-6   IN-7
   0   0   0   0

OK   Cancel

Define Function of Node (bottom)

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 ~ 8.0 sec.)

[LEFT DC MOTOR]   [RIGHT DC MOTOR]
[DIRECTION]   [DIRECTION]
FORWARD   FORWARD
[SPEED]   [SPEED]
   0   100

[RUNNING TIME]
   1

OK   Cancel

Right column text:

3rd condition

True condition is
ⓐ IR sensor of IN-1 :
   detects white color
AND
ⓑ IR sensor of IN-2 :
   detects white color
AND
ⓒ IR sensor of IN-3 :
   detects black color
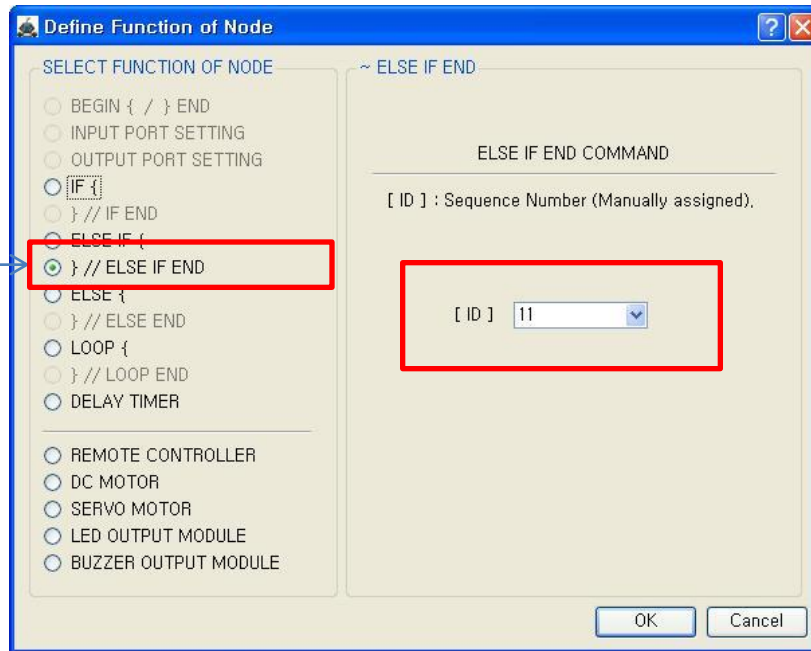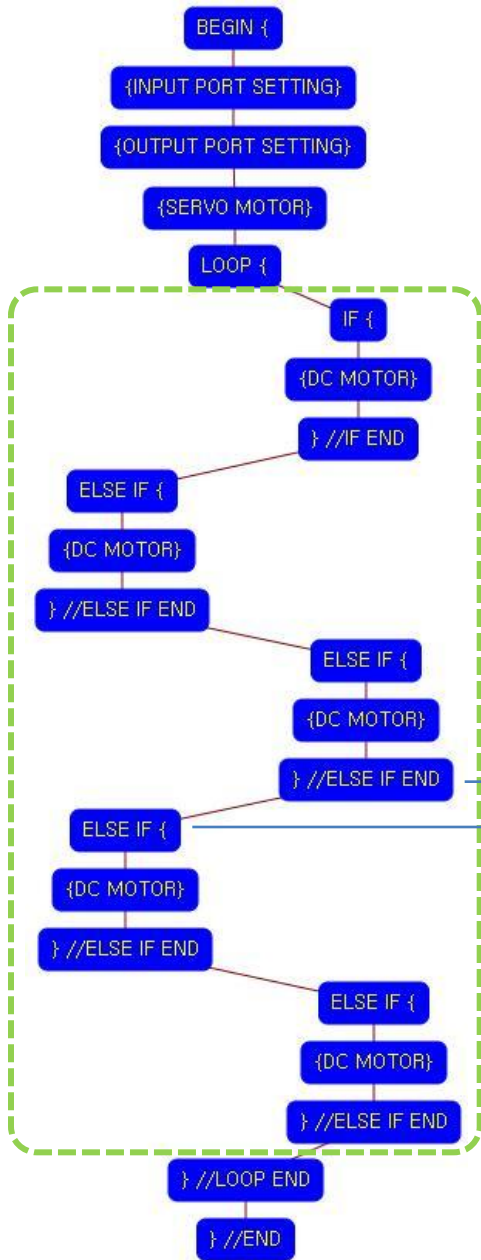
If the condition is true, the next "{DC MOTOR}" command is executed, else the next "ELSE IF {" command is executed.
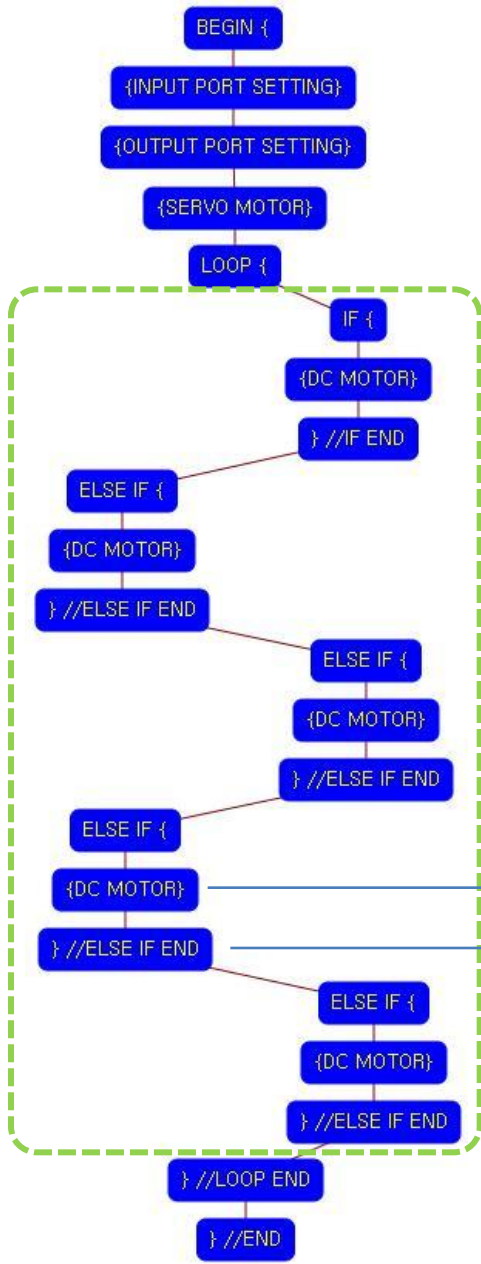
If the 3rd "ELSE IF {" condition is true, both of DC motor run like as followings.

Left DC Motor
- Direction : Forward
- Speed : 0
- Running Time : 1
Right DC Motor
- Direction : Forward
- Speed : 100
- Running Time : 1
➔Robot turns left during 0.1 second

USER CREATIVE ROBOT

Flowchart nodes:

BEGIN {
{INPUT PORT SETTING}
{OUTPUT PORT SETTING}
{SERVO MOTOR}
LOOP {
IF {
{DC MOTOR}
} //IF END
ELSE IF {
{DC MOTOR}
} //ELSE IF END
ELSE IF {
{DC MOTOR}
} //ELSE IF END
ELSE IF {
{DC MOTOR}
} //ELSE IF END
ELSE IF {
{DC MOTOR}
} //ELSE IF END
} //LOOP END
} //END

Define Function of Node (? X)

SELECT FUNCTION OF NODE

~ ELSE IF 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

ELSE IF END COMMAND

[ID] : Sequence Number (Manually assigned),

[ID] 11

OK   Cancel

The end point of 3rd 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.

Define Function of Node (? X)

SELECT FUNCTION OF NODE

ELSE IF BEGIN ~

- 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

ELSE IF BEGIN COMMAND

[ID] : Sequence Number (Automatically assigned),
[CONDITION] : Select "AND" or "OR",
[INPUT] : Select INPUT Sensors,

[ID]   14   [CONDITION] AND

[INPUT]

☐ RCR   ☑ IN-1   ☑ IN-2   ☑ IN-3
              0   0   1

☐ IN-4   ☐ IN-5   ☐ IN-6   ☐ IN-7
   0   0   0   0

OK   Cancel

4th condition

True condition is
ⓐ IR sensor of IN-1 : detects black color
AND
ⓑ IR sensor of IN-2 : detects black color
AND
ⓒ IR sensor of IN-3 : detects white color

If the condition is true, the next "{DC MOTOR}" command is executed, else the next "ELSE IF {" command is executed.

If the 4th "ELSE IF {" condition is true, both of DC motor run like as followings.

Left DC Motor
- Direction : Forward
- Speed : 100
- Running Time : 1
Right DC Motor
- Direction : Forward
- Speed : 0
- Running Time : 1
➔Robot turns right during 0.1 second

The end point of 4th 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.
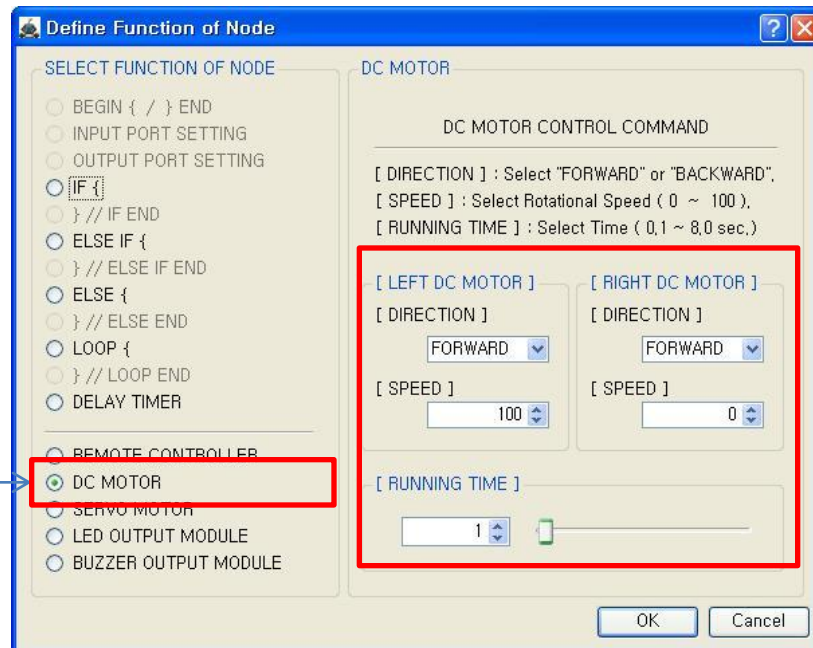
USER CREATIVE ROBOT
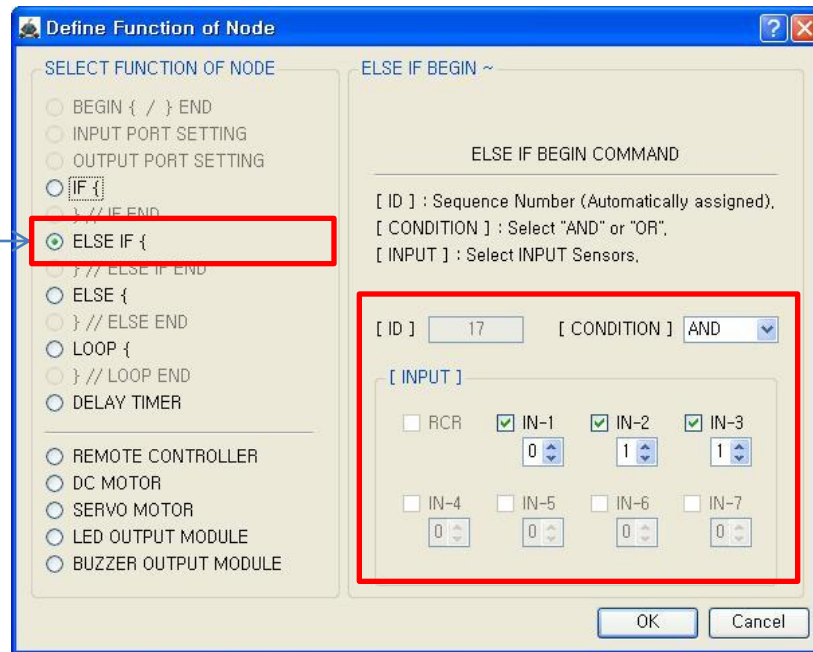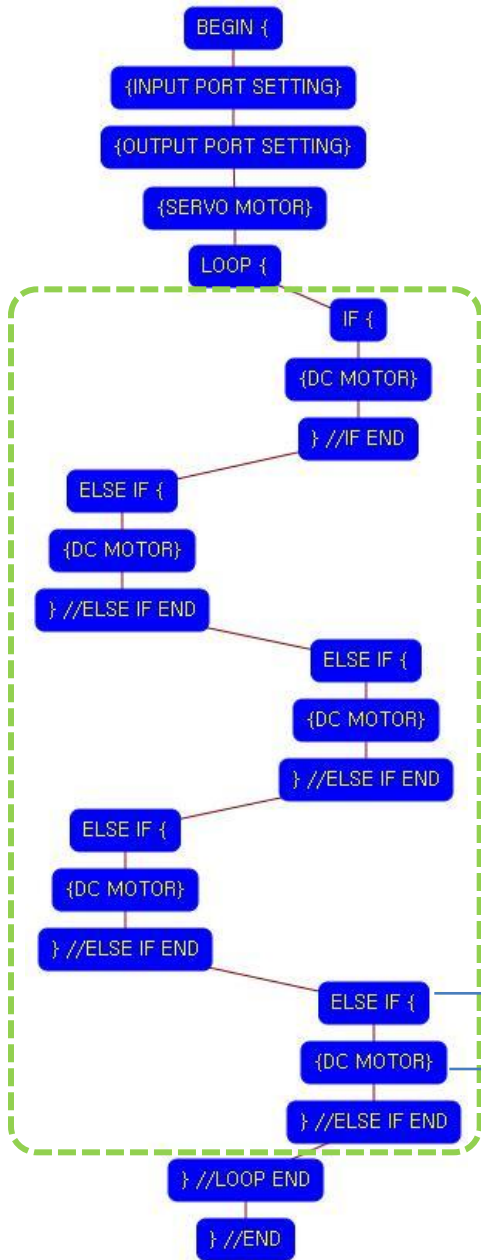
5th condition

True condition is
ⓐ IR sensor of IN-1 :
  detects black color
AND
ⓑ IR sensor of IN-2 :
  detects white color
AND
ⓒ IR sensor of IN-3 :
  detects white color

If the condition is true, the next "{DC MOTOR}" command is executed, else the next "} //LOOP END" command is executed.

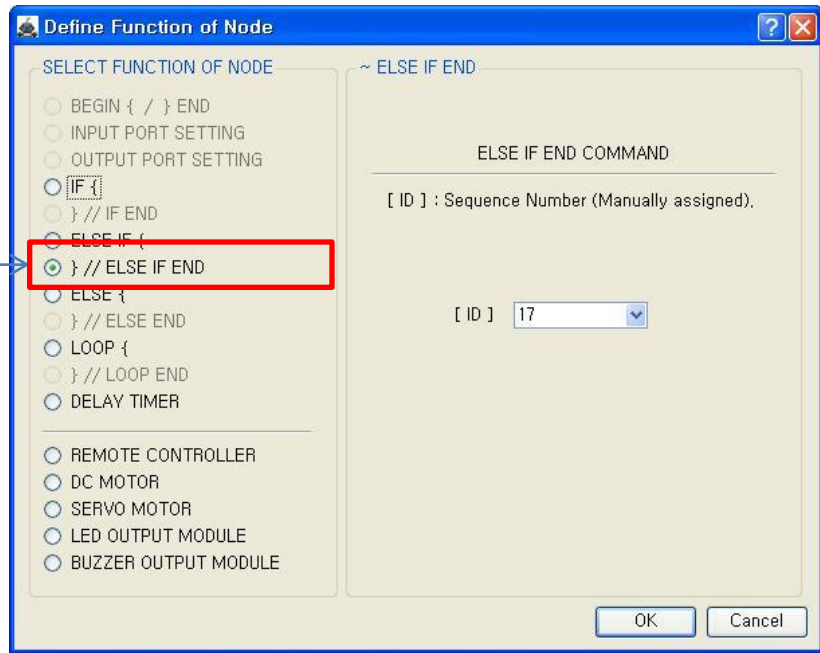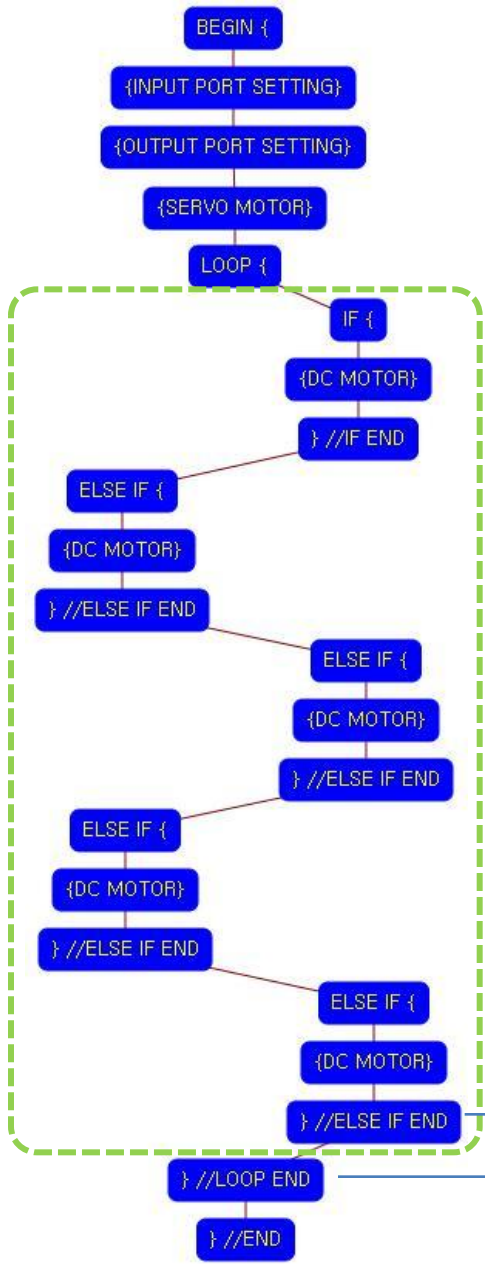If the 5th "ELSE IF {" condition is true, both of DC motor run like as followings.

Left DC Motor
- Direction : Forward
- Speed : 100
- Running Time : 1
Right DC Motor
- Direction : Forward
- Speed : 0
- Running Time : 1
➜Robot turns right during 0.1 second

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

ELSE IF BEGIN ~

ELSE IF BEGIN COMMAND

[ID] : Sequence Number (Automatically assigned),
[CONDITION] : Select "AND" or "OR",
[INPUT] : Select INPUT Sensors,

[ID] 17   [CONDITION] AND

[INPUT]

☐ RCR ☑ IN-1 ☑ IN-2 ☑ IN-3
         0   1   1

☐ IN-4 ☐ IN-5 ☐ IN-6 ☐ IN-7
   0   0   0   0

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 ~ 8,0 sec,)

[LEFT DC MOTOR]   [RIGHT DC MOTOR]
[DIRECTION]   [DIRECTION]

FORWARD   FORWARD

[SPEED]   [SPEED]

        100   0

[RUNNING TIME]

        1

OK   Cancel

The end point of 5th condition.

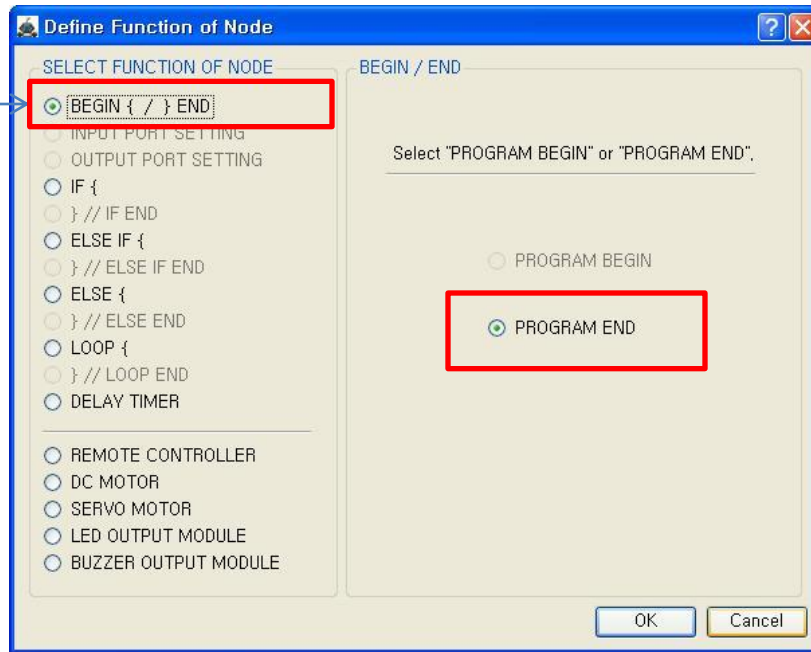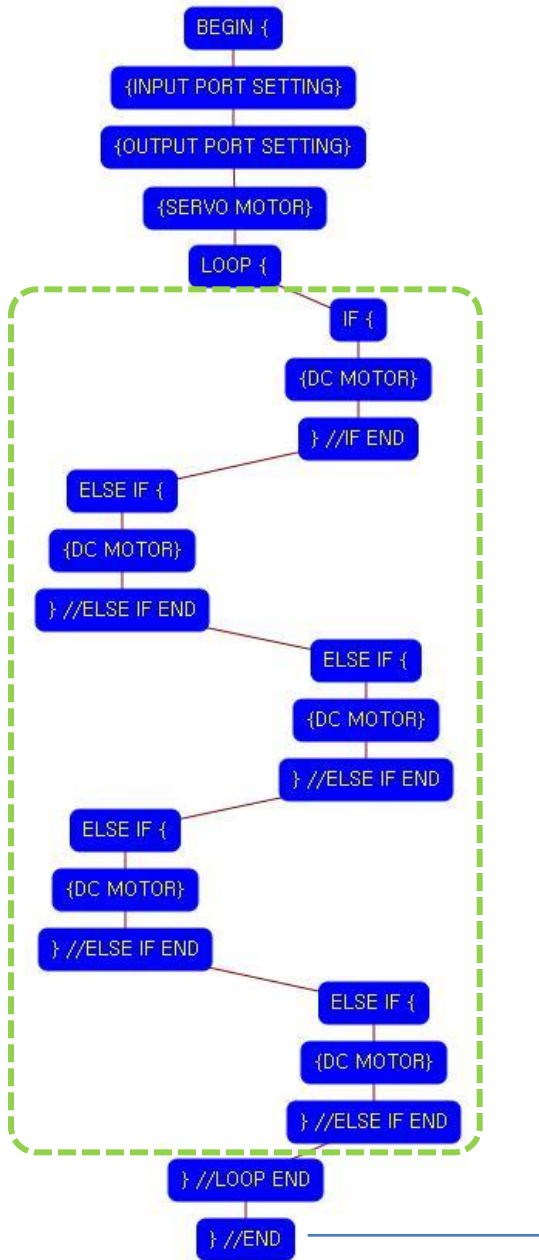You have to assigned the ID of paired "ELSE IF {" condition.

(It is necessary to know that which "ELSE IF {" among the many "ELSE IF {" conditions in program.
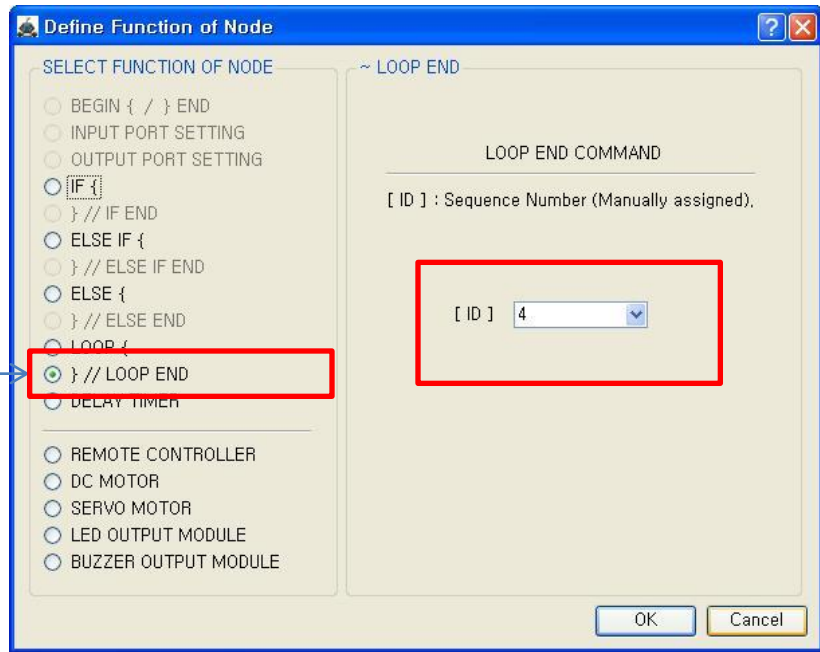
The end point of "LOOP {" repetition command.

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.

USER CREATIVE ROBOT

BEGIN {
{INPUT PORT SETTING}
{OUTPUT PORT SETTING}
{SERVO MOTOR}
LOOP {
IF {
{DC MOTOR}
} //IF END
ELSE IF {
{DC MOTOR}
} //ELSE IF END
ELSE IF {
{DC MOTOR}
} //ELSE IF END
ELSE IF {
{DC MOTOR}
} //ELSE IF END
ELSE IF {
{DC MOTOR}
} //ELSE IF END
} //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

BEGIN / END

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