

R + IoT

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1. Download and install R + IoT

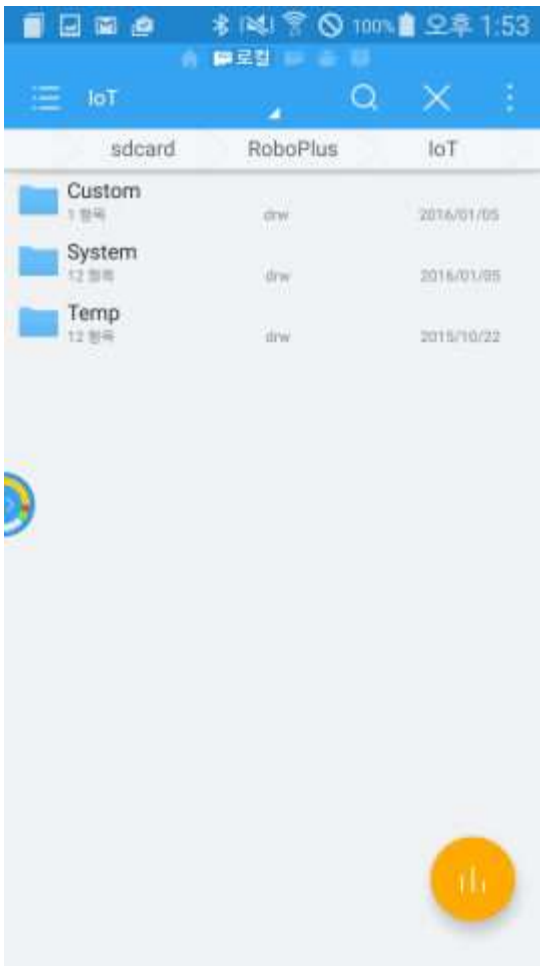
A. Search and install Robotize or R + IoT on Google Play.

B. Please install R + m.Task2 together.



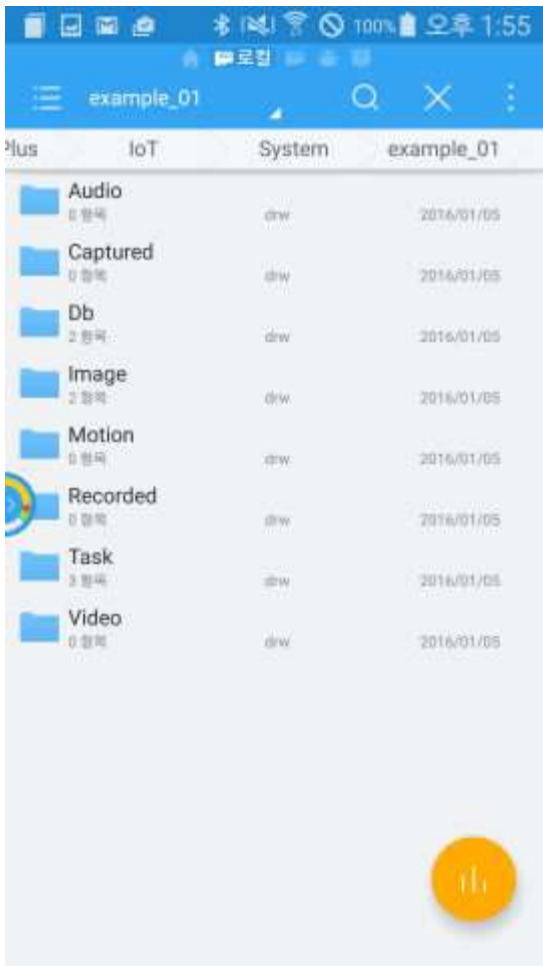
C. After installing R + IoT, a folder will be created in SD card \ RoboPlus \ IoT as below.

D. Custom records user projects, and system records example projects.



In E. System, each project has the following structure.

- ①Audio: Sound file used in project is saved.
- ②Capture: The photo file captured from the project is saved.
- ③Db: All file information and jezzy file used in project are saved.
- ④Image: Image file used in project is saved.
- ⑤Recorded: The video file recorded in the project is saved.
- ⑥Task: Project related task file is saved. If you created a task on a PC, connect the smart terminal to the PC
Copy the created task file to the task folder of the project and use it in conjunction with m.Task.
- ⑤Video: The movie file used in the project is saved.



2. How to use R + IoT application

A. Preferences

① Press the setup button on the upper right to return to the configuration screen.

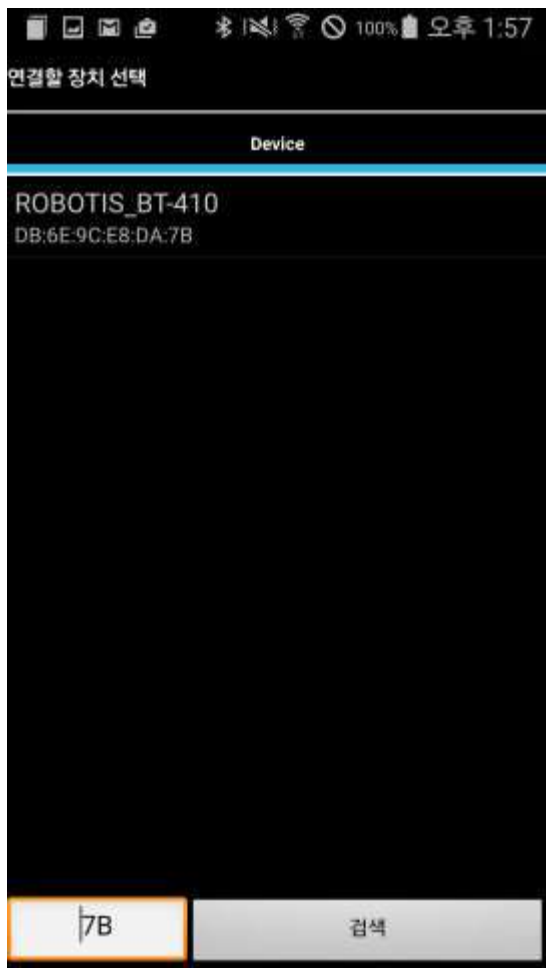


② On the setting screen, you can set device to connect, accessibility service, range of error of gesture.

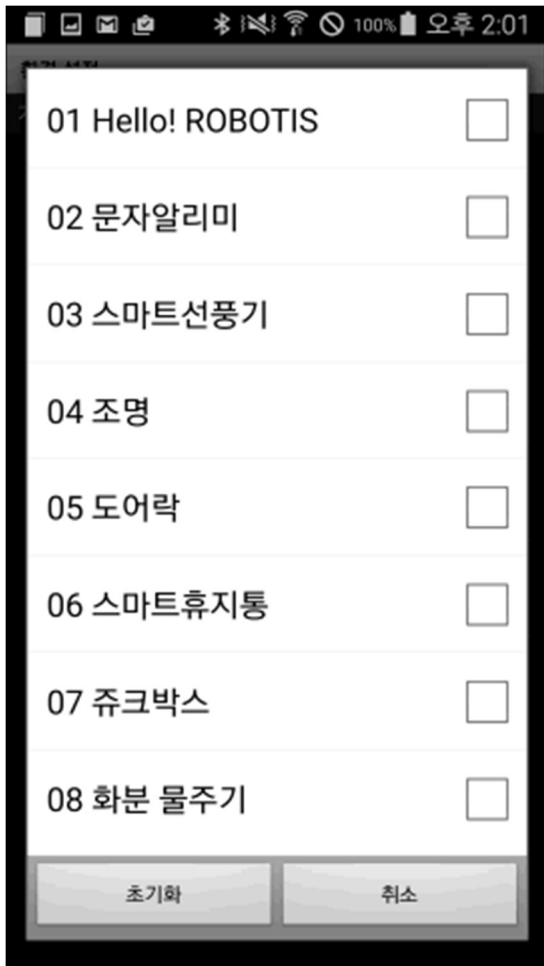


③ Device to connect: Search for the last 2 digits of the address written on the Bluetooth module.

If you select Bluetooth in the list that is searched, it tries to connect to the selected device when you connect the controller.



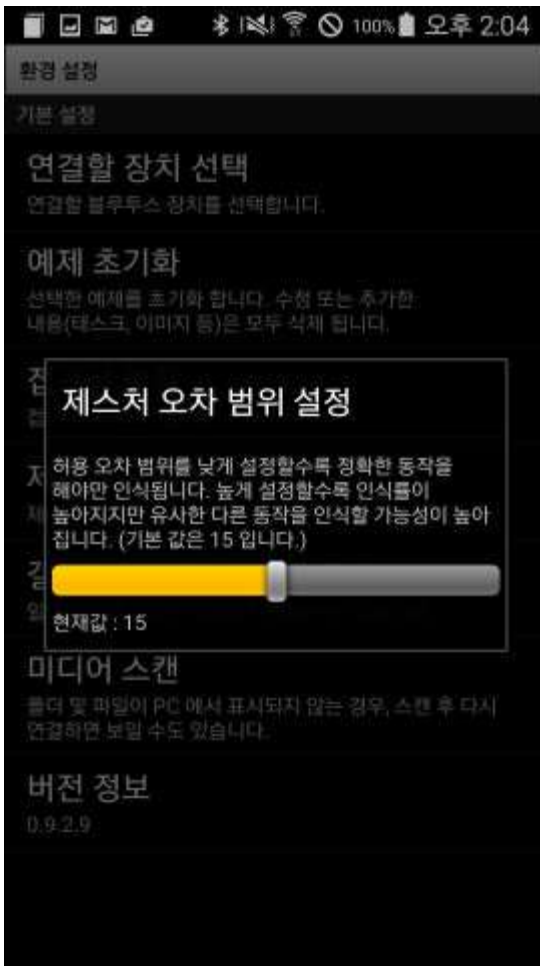
④ Example initialization: Initialize each example. When you accidentally delete an image or task used in the example, You can return to the original state. After you select an example, all tasks, images, and so on that were modified by the user during initialization are deleted.



⑤ Accessibility setting: The function must be activated for the event function.



⑥ Gesture error range setting: Set the accuracy of gesture function.



⑦ Show example images in gallery: You can choose whether images and videos registered in R + IoT app are displayed or not displayed in the gallery.



⑧ Media scan: In some smart devices, images and folders registered in R + IoT app may not be displayed normally when connected to PC and smart device.

In this case, scanning the media and reconnecting it may be normal.



B. R + m.Task interlock

① Press the edit button to display the function confirmation and editable screen.



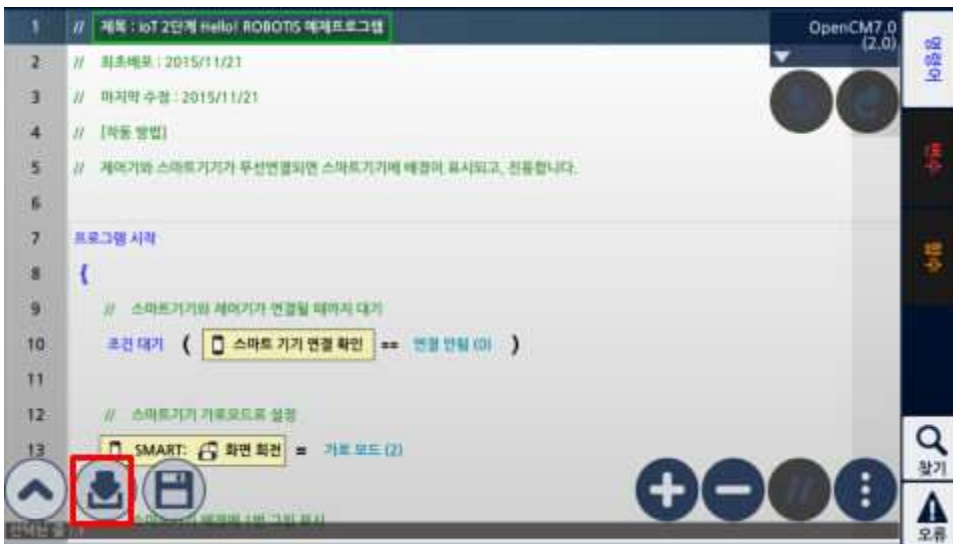
② Click R + m.Task on the displayed screen.



③ When you select a task or create a new task, R + m.Task is executed.



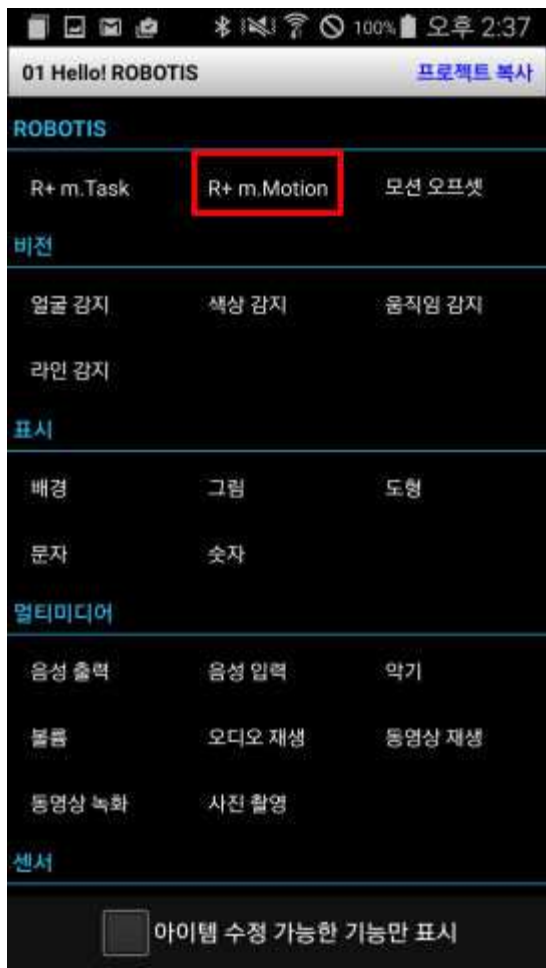
④ Click the download button to download the task to the controller.



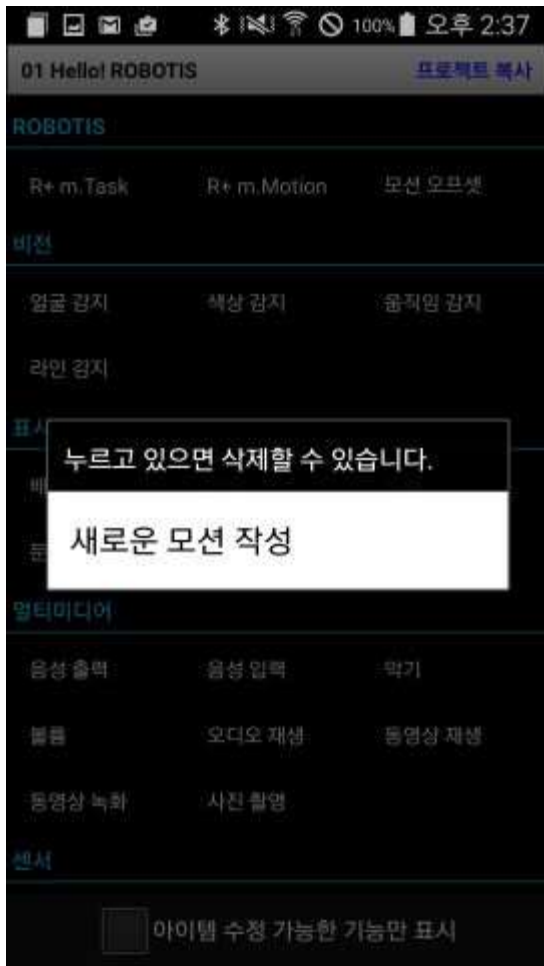
C. R + m.Motion interlock

※ Robotise IoT example does not use motion.

① Click the Edit button, and click R + m.Motion on the screen to check and modify the displayed function.



② When motion is selected, R + m.Motion is executed.

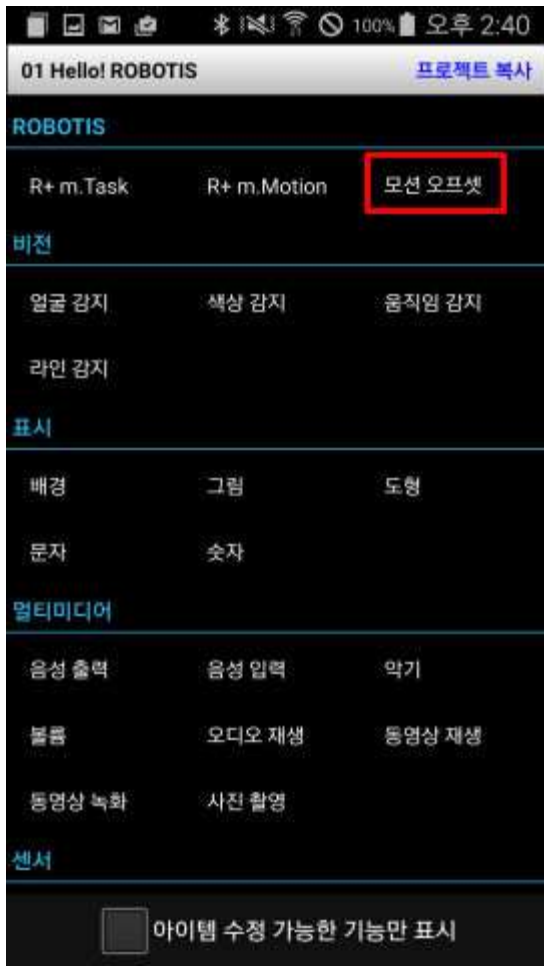


③ For more information on R + m Motion, please refer to RoboPlus Motion 2.0.

D. Motion Offset Settings

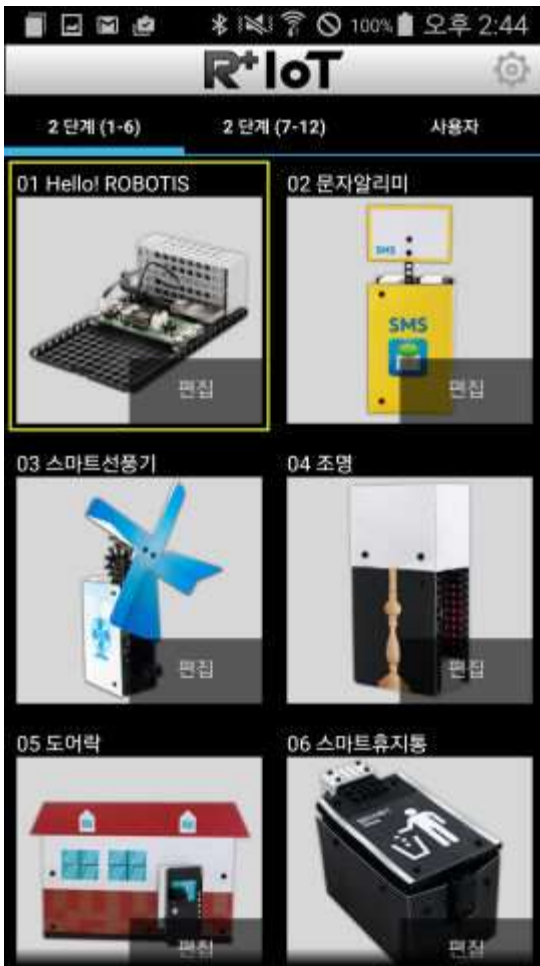
※ Robotise IoT example does not use motion offset setting.

① Click the edit button, then click the motion offset on the screen to check and modify the displayed function.



E. Run the project

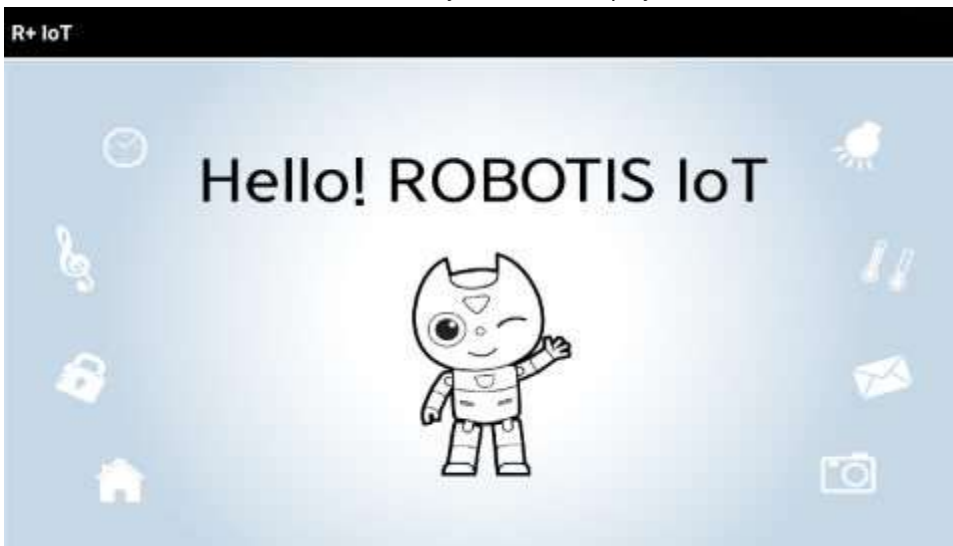
- ① Press the start button of the robot, connect the Bluetooth, and touch the project briefly.



② If you can not connect, click "Retry" or click "Select Device" to select the correct Bluetooth.



③ When connected, the screen created by the task is displayed.



F. Copy Project

① Click the Edit button and check the displayed function and click Copy project on the editable screen.



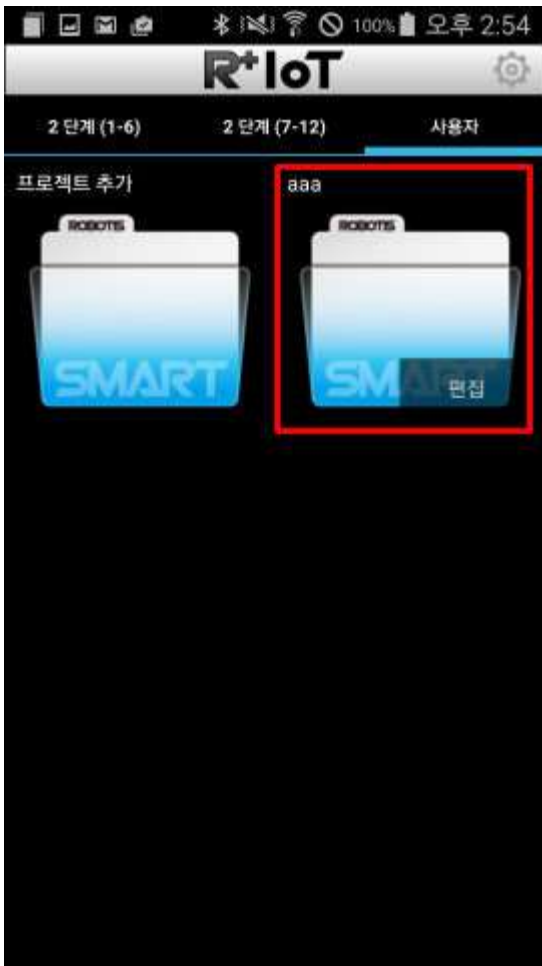
② Enter the name of the project to be copied and click the OK button.



③ When copying is completed, the project name is changed.



④ The copied project is added as a user project.



G. Rename the project

① Click the edit button, and click the project name on the screen to check and modify the displayed function. (Only user projects can be renamed.)



② Enter the new project name and click the OK button.



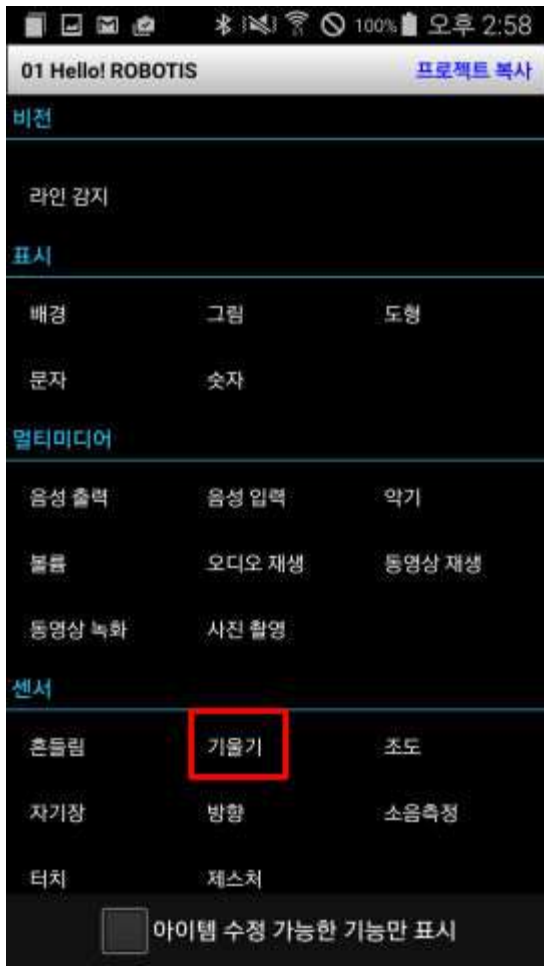
③ The project will be changed to the name you entered.



3. Check and modify R + IoT application function

A. Functional verification (eg tilt)

- ① Click the slope.



② Check the displayed slope value.



③ The checked value can be referenced when creating a task as shown in the example below.



B. Modification of function (eg picture)

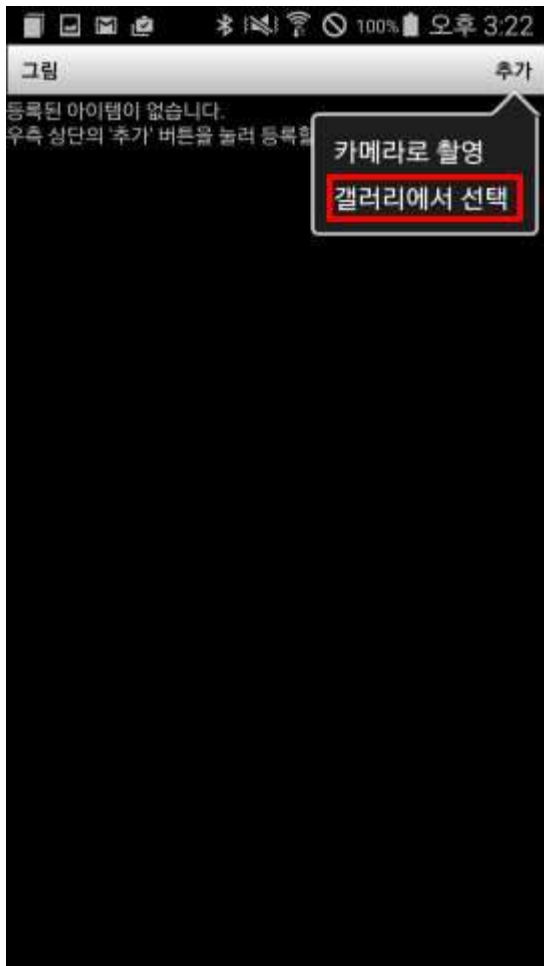
① Click the check box at the bottom of the screen to display only the functions that can be modified.



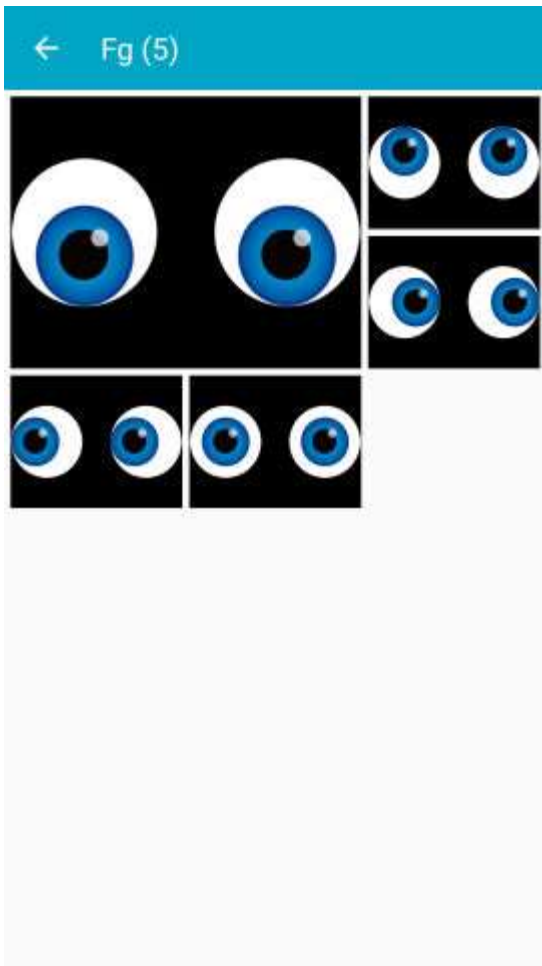
② Click "Picture".



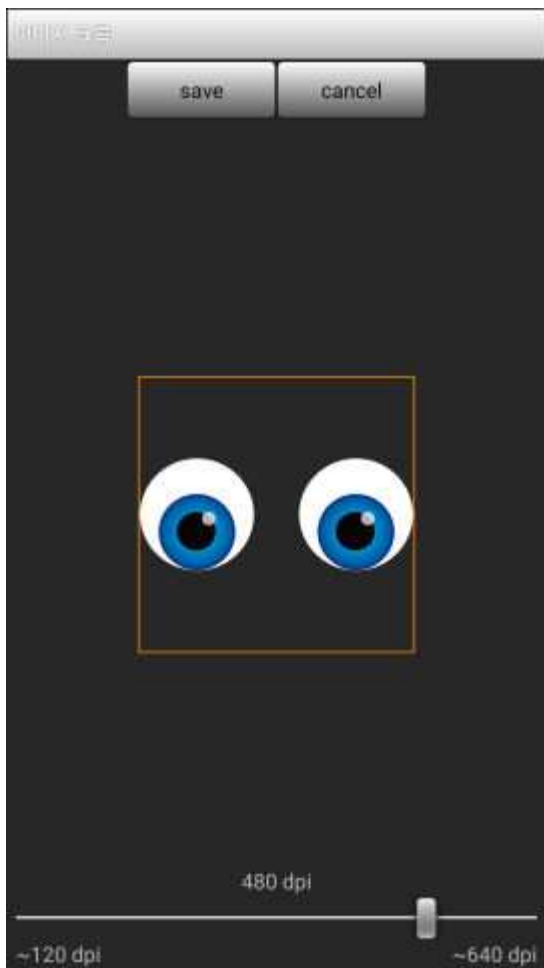
③ Click the "Top" button in the upper right corner, and click "Select from gallery".



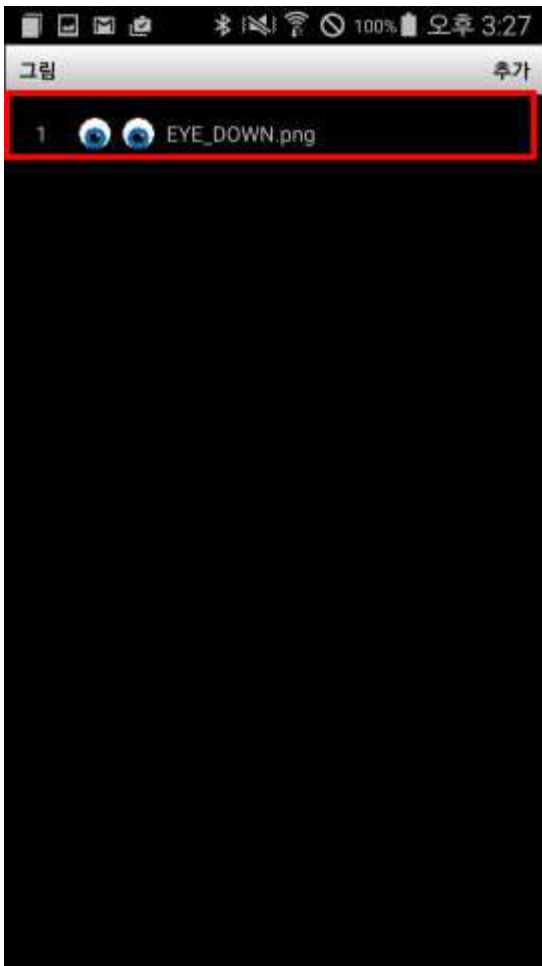
④ Select the image.



⑤ Touch the orange square to select the area to crop, then click the save button.



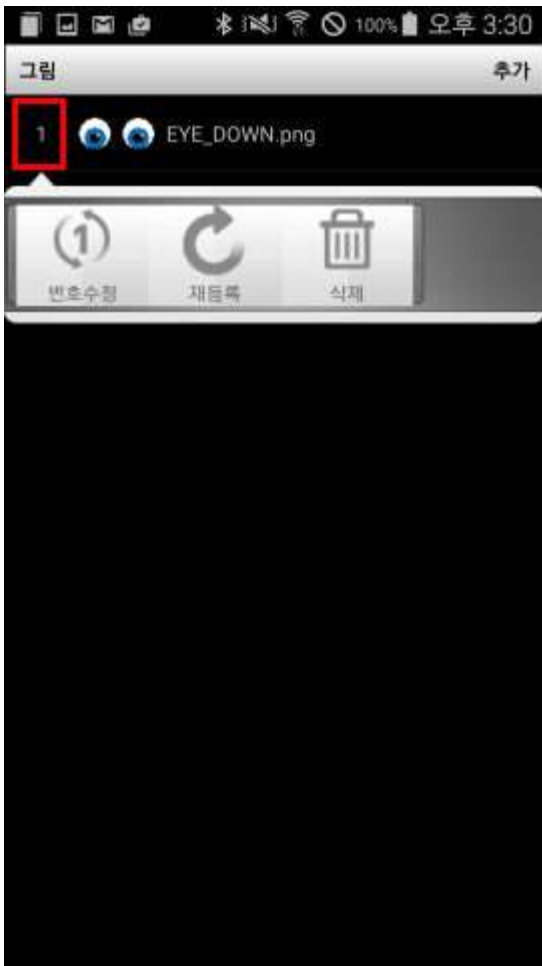
© The image is added.



⑦ You can display the figure in the task using the number on the left (item number).



⑧ Click the number on the left to edit, re-register, delete.



4. R + IoT ControlTable

| address | name | property | Default | Minimum value | Maximum value | Length | Explanation |
|---------|---------------------------|--------------|---------|---------------|---------------|--------|--|
| 10000 | Display debug information | Read / Write | 0 | 0 | - | 4 | Display information such as sensor, touch, detection area on the screen 0: Off 1: Vision related position, color display 2: Sensor shake value display 4: Tilt display 8: Display of illuminance value 16: Display of magnetic field value |

| | | | | | | | |
|-------|------------------------------------|---------------|---|---|-----|---|--|
| | | | | | | | 32: Direction value display 64: Noise value display 128: Touch area 1, 2 value display 256: Voice input result display 512: SMS related phone number, contents display 1024: Show status bar values |
| 10010 | Rotate the screen | Read / Write | 0 | 0 | 2 | 1 | (Read) 0: Auto, 1: Portrait, 2: Landscape (Write) 0: Auto, 1: Portrait, 2: Landscape |
| 10020 | Select camera | Read / Write | 0 | 0 | 2 | 1 | 0: Shutdown, 1: Rear camera, 2: Front camera |
| 10030 | Camera Zoom | Read / Write | 0 | 0 | 255 | 1 | 0 to 255: magnification |
| 10040 | Select camera function | Read / Write | 0 | 0 | 5 | 1 | 0: blank screen 1: Face detection 2: Color sensation 3: Motion detection 4: line detection |
| 10050 | Sensing color (for line sensing) | Read / Write | 0 | 0 | 5 | 1 | 2: black, 3: red, 4: rust, 5: blue |
| 10060 | Record video | Read / Write | 0 | 1 | 1 | 1 | 0: Stop recording, 1: Start recording Screen rotation setting, camera selection, no noise during recording. |
| 10070 | Photo shoot | Read / Write | 0 | 1 | 1 | 1 | 0: Stop recording, 1: Start recording |
| 10080 | Face detection | Read Location | 0 | 0 | 25 | 1 | Screen area between 1 and 25 [i] |
| 10090 | Detect color (for color detection) | read | 0 | 0 | 5 | 1 | 0: Not detected. Or unknown color 2: black, 3: red, 4: rust, 5: blue |

| | | | | | | | |
|-------|--|------------------|---|---|-----|---|--|
| 10100 | Motion detection | Read Location | 0 | 0 | 25 | 1 | Screen area between 1 and 25 |
| 10110 | Line detection | Read Location | 0 | 0 | 5 | 1 | Screen area between 1 and 5 |
| 10130 | Show background | Read / Write | 0 | 0 | 199 | 1 | (Read) Last set image number (Write) Image number to use as background image 0: Clear background (transparent when using camera, other black.) Value: (magnification * 65536) + (image number * 256) + (image position) Image location: Screen area between 1 and 25 Image number: Image number registered in the app |
| 10140 | Show picture | Read / Write | 0 | 0 | - | 3 | (Read) Last set image number, position and scale (Write) Image number, position and scale used as foreground image Image number = 0: Delete image at that position Image position = 0, Image number = 0: Delete all images * Magnification (1 to 10: x times magnification, 11 to 20: x times magnification) |
| 10145 | Automatically display pictures (when detecting faces) | Read / Write | 0 | 0 | 199 | 1 | (Read) Current foreground image Item number (Write) Auto display using item number of foreground image |

| | | | | | | | |
|-------|-------------------|--------------|---|---|---|---|--|
| 10150 | Show shape | Read / Write | 0 | 0 | - | 4 | <p>Value: (Shape Color * 16777216) + (Shape Size * 65536) + (Figure position * 256) + (figure number)</p> <p>Shape color: 0: unknown 1: White, 2: Black, 3: Red, 4: Green, 5: Blue 6: yellow, 7: pale gray, 8: gray, 9: dark gray</p> <p>Shape size: a value between 0 and 255</p> <p>Shape Location: Screen area between 1 and 25</p> <p>Shape number: 0: Delete shape 1: circle, 2: square, 3: triangle</p> <p>(Read) Information of the last figure set (Write) Information of a graphic to be displayed on the screen</p> <p>Shape position = 0, Shape number = 0: Delete all shapes</p> |
| 10160 | Character display | Read / Write | 0 | 0 | - | 4 | <p>Value: only the figure number is changed to the character number and is the same as the figure</p> <p>Character number: The number of the character registered in the app</p> <p>Character number 200: Save contents when receiving SMS or message</p> |
| 10170 | Number display | Read / Write | 0 | 0 | - | 4 | <p>Value: Only the figure number changes to a number and is the same as the figure</p> |

| | | | | | | | |
|-------|------------------------------|--------------|---|---|-----|---|---|
| | | | | | | | <p>Numbers: 0 to 255: the corresponding numbers (Read) information of the last set number (Write) Information to be displayed on the screen Numeric size = 0: Delete the number at that location Numeric position = 0, Numeric size = 0: Delete all numbers</p> |
| 10180 | Audio output (TTS) | Read / Write | 0 | 0 | 200 | 1 | <p>(Read) 0: No operation, 1 ~ 200: TTS Character number being converted (Write) 0: Stop conversion. 1 to 200: TTS Character number to convert</p> |
| 10190 | Playing a musical instrument | Read / Write | 0 | 0 | - | 4 | <p>Value: (instrument type * 65536) + (octave * 256) + (scale) Instrument Type: See the instrument type of your app (1 to 128) Octave: Octave value between 0 and 10 Scale: Scale value between 1 and 12 (increased by one semitone from 'D')</p> |
| 10200 | Audio playback 1 | Read / Write | 0 | 0 | 199 | 1 | <p>(Read) Audio number being played (Write) 0: Stop playback. 1 to 199: Audio number to play</p> |
| 10380 | Audio playback 2 | Read / Write | 0 | 0 | 199 | 1 | <p>(Read) Audio number being played (Write) 0: Stop playback. 1 to 199: Audio number to play</p> |

| | | | | | | | |
|-------|---------------------------|--------------|---|---|-------|---|---|
| 10210 | Play video | Read / Write | 0 | 0 | 199 | 1 | (Read) Video number being played (Write) 0: Stop playback. 1 to 199: Video number to play |
| 10410 | Video suspension | Read / Write | 0 | 0 | 1 | 1 | (Read) 0: Playing, 1: Stopping (Write) 0: Play, 1: Stop |
| 10220 | Speech recognition | Read / Write | 0 | 0 | 1 | 1 | (Read) 0: No operation. 1: Active (Write) 0: Stop operation. 1: Start operation |
| 10230 | Speech recognition result | Read / Write | 0 | 0 | 199 | 1 | (Read) Voice recognition result Number of recognized characters (Write) value initialization |
| 10240 | volume | Read / Write | 0 | 0 | 255 | 1 | Volume Size |
| 10250 | wave | read | 0 | 0 | 255 | 1 | The strength of smartphone shaking |
| 10260 | Tilt (left) | read | 0 | 0 | 90 | 1 | 0 to 90 |
| 10261 | Tilt (right) | read | 0 | 0 | 90 | 1 | 0 to 90 |
| 10262 | Tilt (top) | read | 0 | 0 | 90 | 1 | 0 to 90 |
| 10263 | Tilt (bottom) | read | 0 | 0 | 90 | 1 | 0 to 90 |
| 10270 | Illuminance | read | 0 | 0 | 65535 | 2 | Illuminance sensor value |
| 10280 | magnetic field | read | 0 | 0 | 65535 | 2 | Magnetic field sensor value |
| 10290 | Direction (angle value) | read | 0 | 0 | 359 | 2 | 0: North, 90: East, 180: South, 270: West Angles from 0 to 359 degrees |
| 10300 | Noise (dB) | read | 0 | 0 | 255 | 1 | I read the degree of noise in db. |
| 10310 | Touch location 1 | read | 0 | 0 | 25 | 1 | Screen area between 1 and 25 |
| 10400 | Touch location 2 | read | 0 | 0 | 25 | 1 | Screen area between 1 and 25 |

| | | | | | | | |
|-------|------------------------|--------------|---|---|-------|---|---|
| 10320 | SMS phone number | Read / Write | 0 | 0 | 200 | 1 | (Read) 0: SMS not received 1 ~ 199: Registration number of the phone number from which the SMS was sent 200: SMS number sent is unregistered number (Write) value initialization |
| 10321 | SMS contents | Read / Write | 0 | 0 | 200 | 1 | (Read) 0: SMS not received 1 to 199: SMS The registration number of the received text 200: SMS received but unlisted text (Write) value initialization |
| 10330 | Notification bar event | Read / Write | 0 | 0 | 200 | 1 | (Read) 0: No notification bar such as CATTOK 1 to 199: Notification bar Registration number of received text 200: Notification received but unregistered text (Write) value initialization |
| 10340 | timer | Read / Write | 0 | 0 | 65535 | 2 | (Read) Returns the remaining time (Write) Timer value in seconds (up to 18 hours) |
| 10350 | Vibration time | Read / Write | 0 | 0 | 255 | 1 | (Read) 0: No vibration operation, 1: Vibration operation (Writing) Time to vibrate (in 1/100 second) |
| 10360 | flash | Read / Write | 0 | 0 | 1 | 1 | 0: Flash off, 1: Flash on |
| 10370 | Launch your app | Read / Write | 0 | 0 | 199 | 1 | (Read) Last app number you ran |

| | | | | | | | |
|-------|--------------------------------|-----------------|---|---|-----|---|--|
| | | | | | | | (Write) the number of the application to be executed) |
| 10390 | current time | read | 0 | 0 | - | 2 | Value: in minutes |
| 10420 | Send mail | Diary / Writing | 0 | 0 | 2 | 1 | (Read) 0: Untransmitted, 1: Dispatching, 2: Normal Dispatch, 3: Error (Write) 0: Not active 1: Captured recent image, 2: Recent recorded video attached * Can not occur in the same sequence of files * When shipped while shooting, if you do not check the status after shipment, the status will be incorrect because it is executed as a thread |
| 10430 | Screen output | Diary / Writing | 0 | 0 | - | 4 | Features such as Roboplus program output view |
| 10440 | Line break after screen output | Diary / Writing | 0 | 0 | - | 4 | Features such as Roboplus program output view |
| 10450 | Gesture | Diary / Writing | 0 | 0 | 200 | 1 | (Read) Recognized gesture number (Write) value initialization |