

# BYOI APP MANUAL

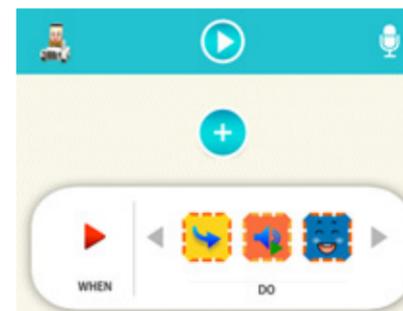
BUILD YOUR OWN INTELLIGENCE

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**TYCHE**  
**BYOI**

**1.WHAT IS BYOI?**



BYOI stands for Build Your Own Intelligence. With BYOI, anybody can easily program Tyche.

BYOI features include the following:

- Assembling simple actions (Music, Sound, Move, etc.)
- Speaking sentences.
- Recognizing markers and faces.
- Understanding and expressing emotions.

**2.BYOI INSTALLATION**

To install, open Google Play Store on your phone and search for BYOI. Note that the publisher of this App is Bonavision. Then, you will see the shortcut icon on the device screen as shown.



**3.WHAT ARE EVENTS AND ACTIONS?**

In this section, we describe what the events and actions are and what types of events and actions exist.

**A. EVENT**

Event is a trigger for actions. It means when an event happens, such as hearing a loud sound, Tyche does something. For example, let's say you programmed your Tyche so that when Tyche hears a loud sound, it moves forward and turns left. Now, when you start the program, Tyche will NOT move forward and turn left until you make a loud sound to trigger the move.

**HERE IS THE LIST OF EVENTS**

	This event is triggered when the program starts. Actions attached to this event will be executed as soon as you press execute button and the program is loaded successfully.
	This event is triggered when you touch a part of the avatar. You can specify which area will trigger the attached actions.
	This event is triggered when a loud sound is detected. You can control the sensitivity of detection. The lower the number, the lesser the sensitivity.
	This event is triggered when Tyche hears any phrase or sentence specified by you.

**B. ACTION**

Action is what Tyche does. Moving, making a sound, or playing music are all actions. When you want Tyche to do certain actions as soon as you execute, attach those actions to "Start" event.

**HERE IS THE LIST OF ACTIONS**

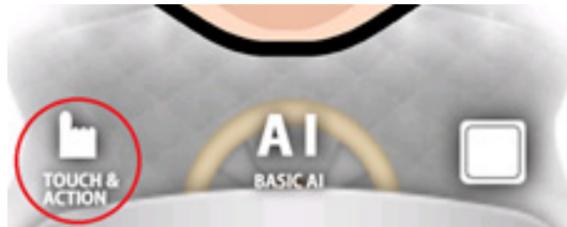
	When this action is executed, Tyche moves forward. You can control how long and how fast Tyche will move.
	When this action is executed, Tyche moves backward. You can control how long and how fast Tyche will move.
	When this action is executed, Tyche turns left. You can control how long and how fast Tyche will move.
	When this action is executed, Tyche turns right. You can control how long and how fast Tyche will move.
	When this action is executed, Tyche stops executing actions for the length of time you specified.
	When this action is executed, Tyche turns on its LED light for the length of time you specified.
	When this action is executed, Tyche blinks rapidly for the length of time you specified.
	When this action is executed, Tyche makes a face specified by you.
	When this action is executed, Tyche speaks the sentence you typed.
	When this action is executed, Tyche gazes around. (turns left and right rapidly)
	When this action is executed, Tyche plays the sound you have chosen.
	When this action is executed, Tyche plays the music you have chosen.
	When this action is executed, Tyche stops the sound currently playing.
	When this action is executed, Tyche stops the music currently playing.

## TYCHE

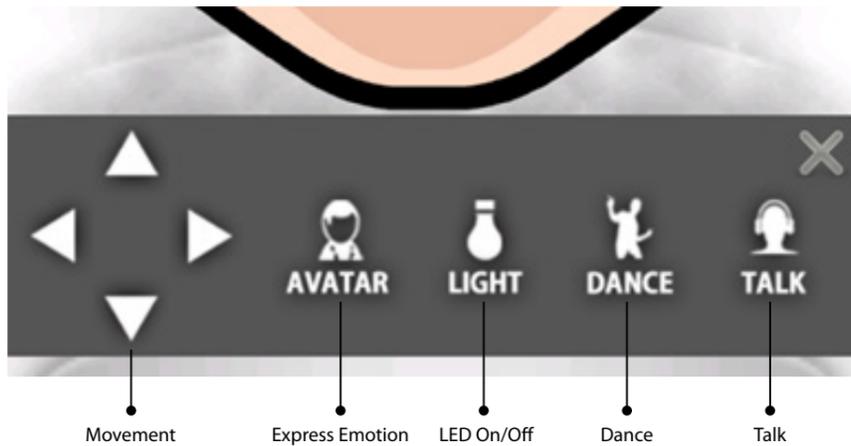
### Touch n Action

#### 4. HOW TO USE BYOI

##### A. TOUCH N ACTION



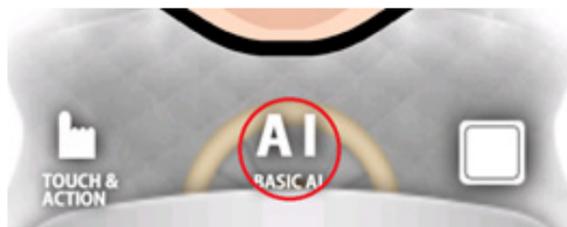
In order to use Tyche quickly and easily, use Touch N Action. To use Touch N Action, click the "Touch & Action" image, and then click Touch N Action. This will give you the basic functions that can be manipulated with the Basic AI app in section B.



This picture shows various functions of Tyche (Movement, Emotion expressions, Dance, LED On/Off, Randomly spoken sentences).

##### B. BYOI PROGRAMMING

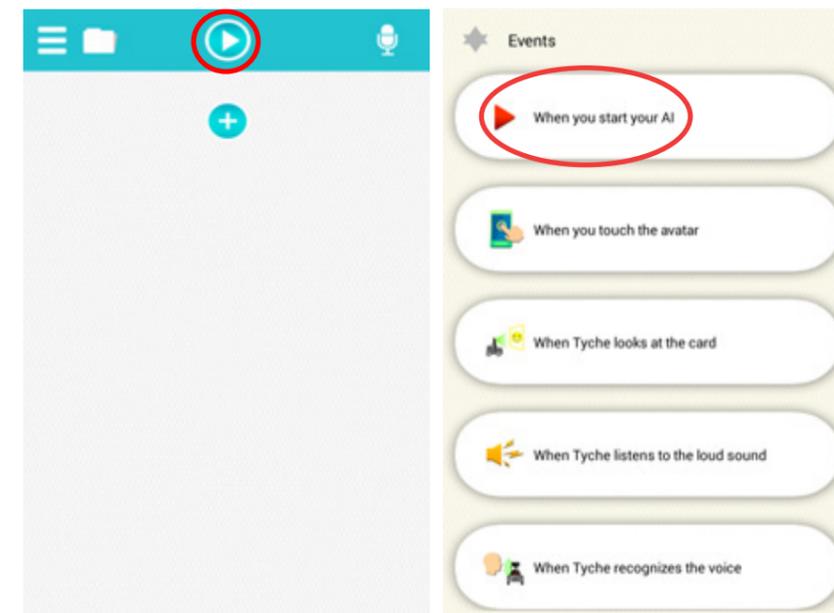
##### I. START PROGRAMMING



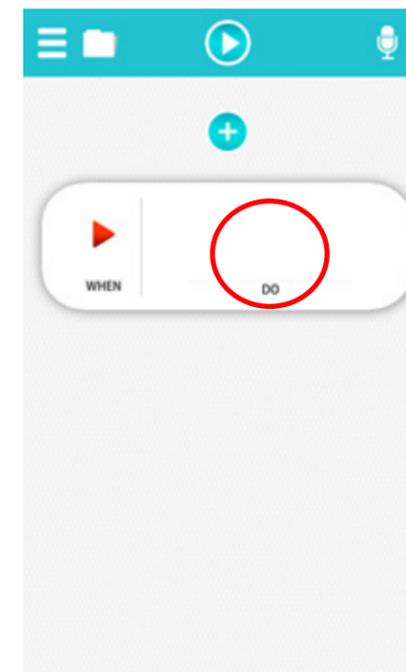
Click the 'Basic AI' icon and Plan Editor will be opened. Touching on the '+' icon will let you add events and actions to your plan.

## TYCHE

### BYOI Programming



The plus button reveals the events list that can all be used beginning with the Start Event.

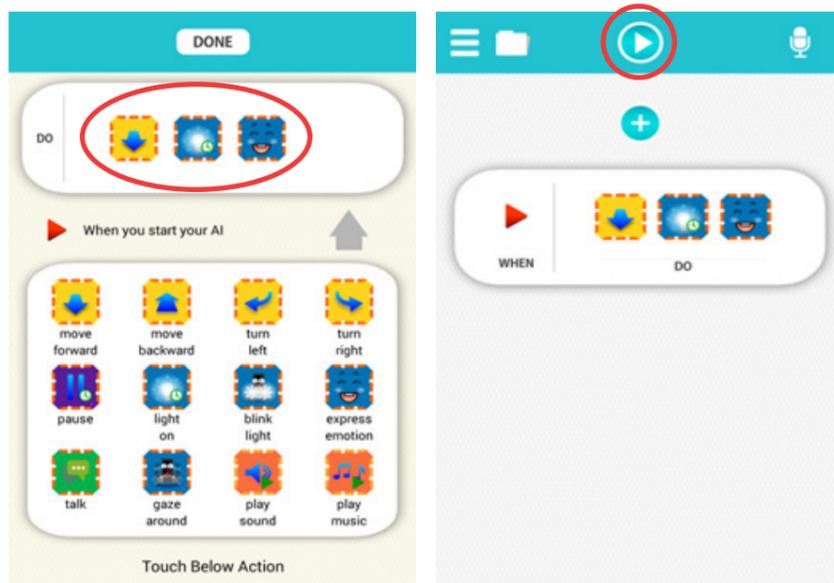


Click on the Start Event and then the "DO" area to see a list of actions to apply.

**TYCHE**  
BYOI Programming

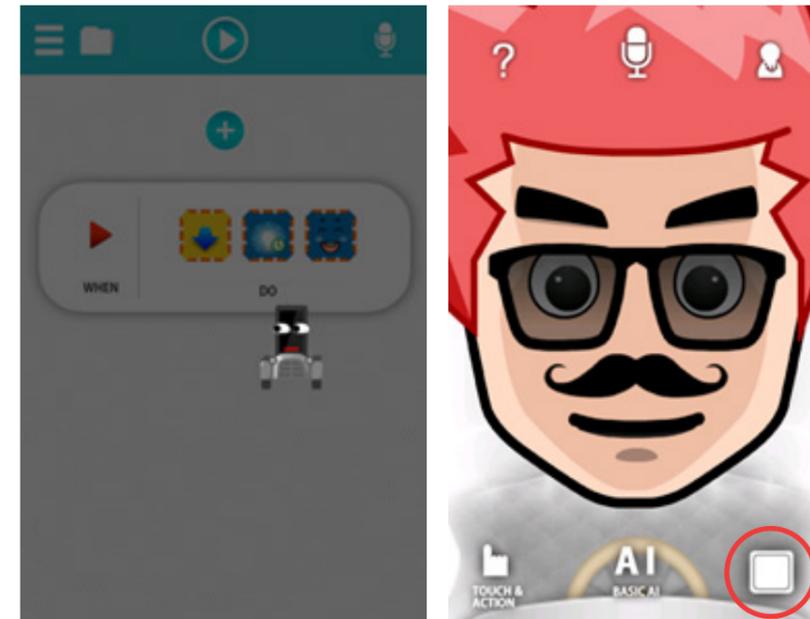


If you touch one of the action choices displayed, it will be added onto the DO list.



This picture shows various functions of Tyche (Movement, Emotion expressions, Dance, LED On/Off, Randomly spoken sentences).

**TYCHE**  
BYOI Programming

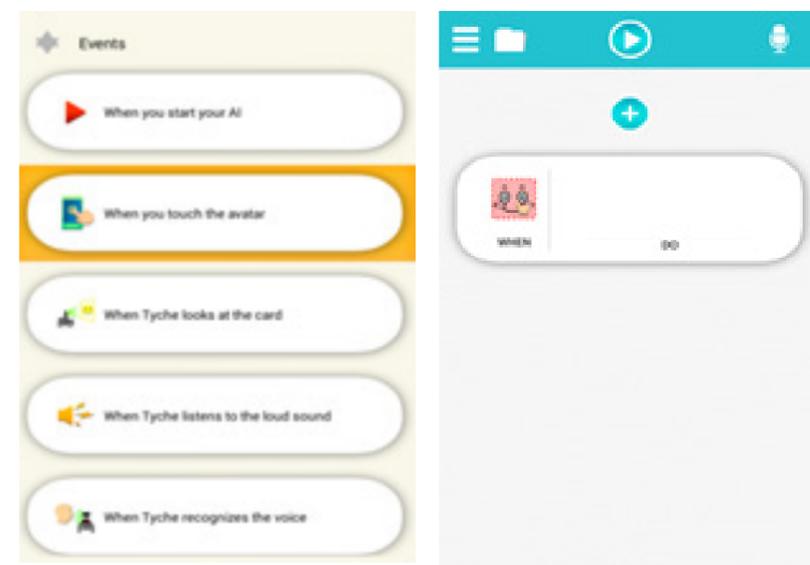


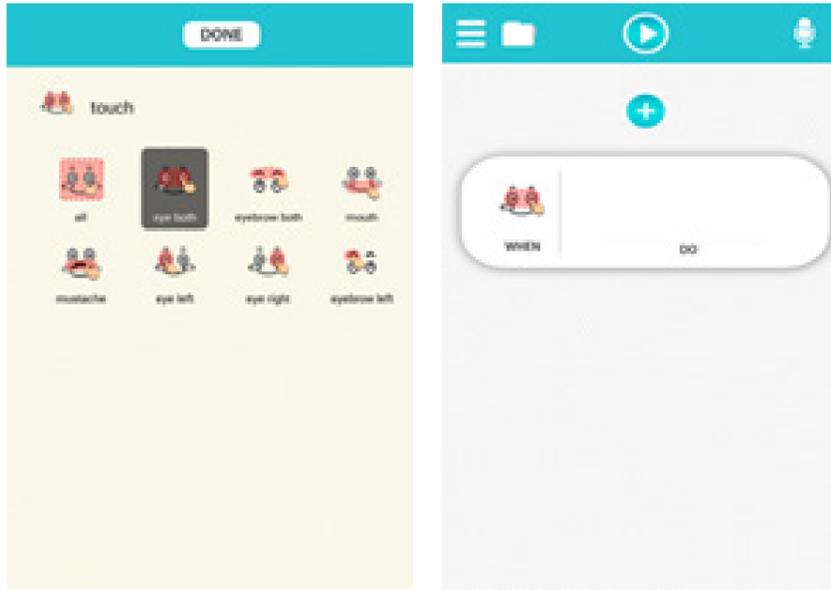
Your plan will be executed in a few seconds. If you want to restart your plan, click the stop button on the bottom-right corner and click the same again to play.

**II.CHANGE DETAILS OF EVENTS AND ACTIONS**

**1. CHANGE DETAILS OF EVENTS**

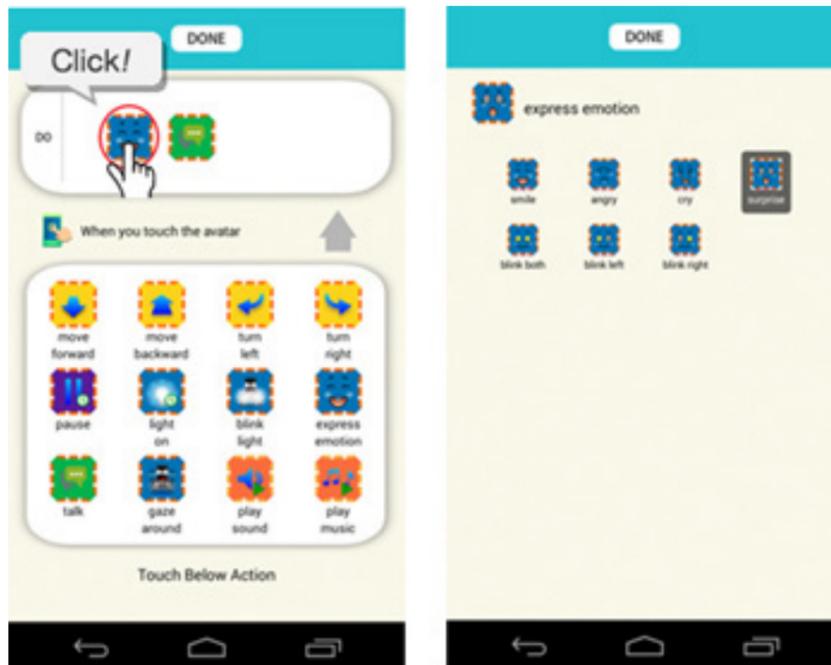
- 1) Add Touch Event
- 2) Click the picture of an event
- 3) Change the part that will trigger the actions
- 4) Click "DONE"





**2.CHANGE DETAILS OF ACTIONS**

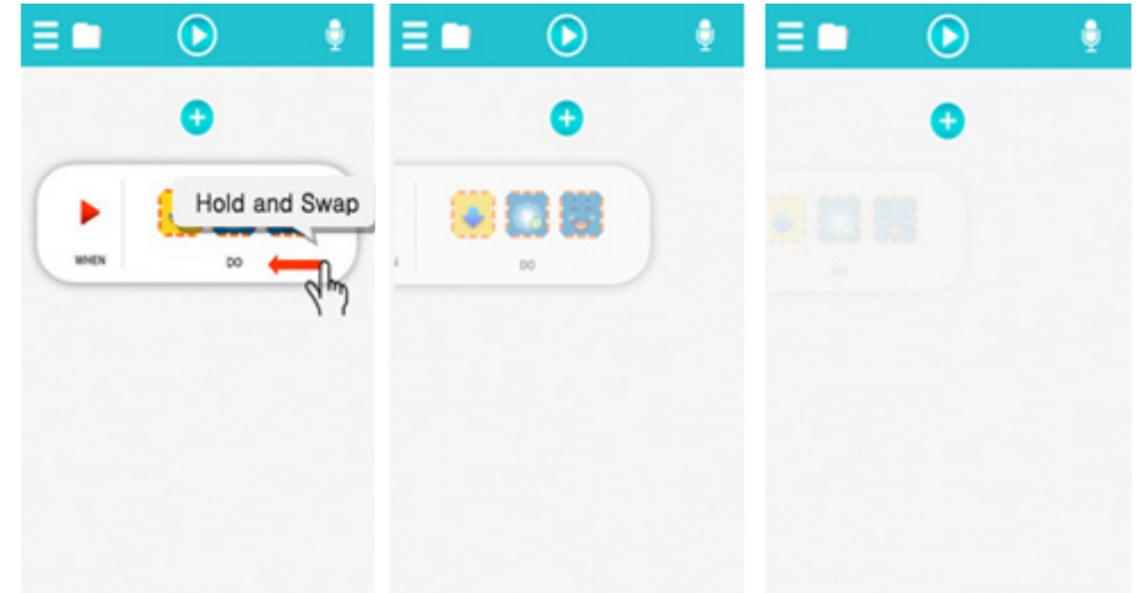
- 1) Choose "express emotion" action
- 2) Click the "express emotion" action in "DO" section
- 3) Click the "surprise" face
- 4) Click "DONE"



**III. DELETE EVENTS AND ACTIONS**

**1.DELETE EVENTS**

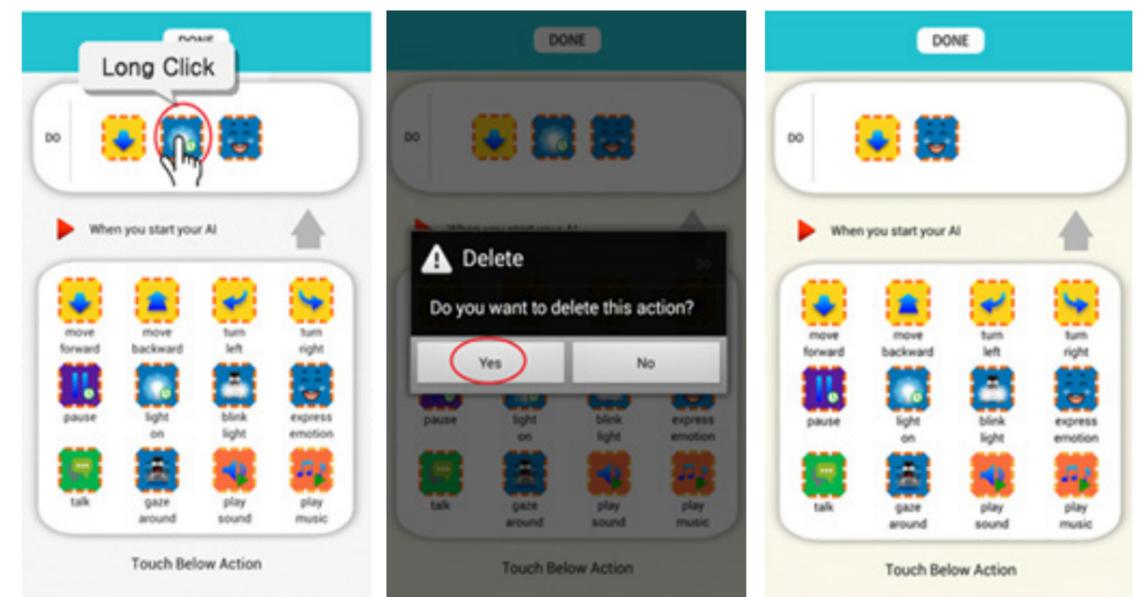
- 1) Hold at the most right-corner of the event.
- 2) Swipe from right to left to delete



**2.DELETE ACTIONS**

This section describes how to delete an action in an event.

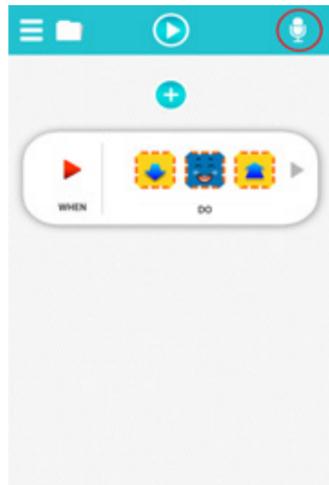
- 1) Touch the action and hold it for a few seconds
- 2) A pop up will prompt you about which action to take. Click "Yes" to delete.



**C.VERBAL PROGRAMMING**

**1.WHAT IS VERBAL PROGRAMMING?**

Verbal Programming is a tool which allows you to program by speaking commands. In order to start Verbal Programming, click the microphone button on the top right corner and speak one event and any number of actions listed in the action column below. For example, let's say we want Tyche to move forward and turn left when we touch its face. You should speak:  
"When I touch your face, move forward and turn left"  
or "If I touch your face, move forward and turn left."



- 1) Click on the microphone.
- 2) Say any combination of phrases below as you would wish.

**2.LISTS**

**EVENTS YOU CAN SAY:**

In this list, "When" can be replaced with "if". For example, "When I start, ~" could be => "If I start, ~"

1. Start Event	When I start, ~(some actions, but not required)
2. Touch Event	<ol style="list-style-type: none"> <li>1) When I touch your face, ~ (some actions, but not required).</li> <li>2) When I touch your eyes, ~ (some actions, but not required).</li> <li>3) When I touch your eyebrows, ~ (some actions, but not required).</li> <li>4) When I touch your mouth, ~ (some actions, but not required).</li> <li>5) When I touch your mustache, ~ (some actions, but not required).</li> <li>6) When I touch your left eye, ~ (some actions, but not required).</li> <li>7) When I touch your right eye, ~ (some actions, but not required).</li> <li>8) When I touch your left eyebrow, ~ (some actions, but not required).</li> <li>9) When I touch your right eyebrow, ~ (some actions, but not required).</li> <li>10) When I touch your background, ~ (some actions, but not required).</li> </ol>
3. Loud Sound Event	1) When you hear a loud sound, ~ (some actions, but not required).
4. Open Dialogue	1) When you hear a voice, ~ (some actions, but not required).

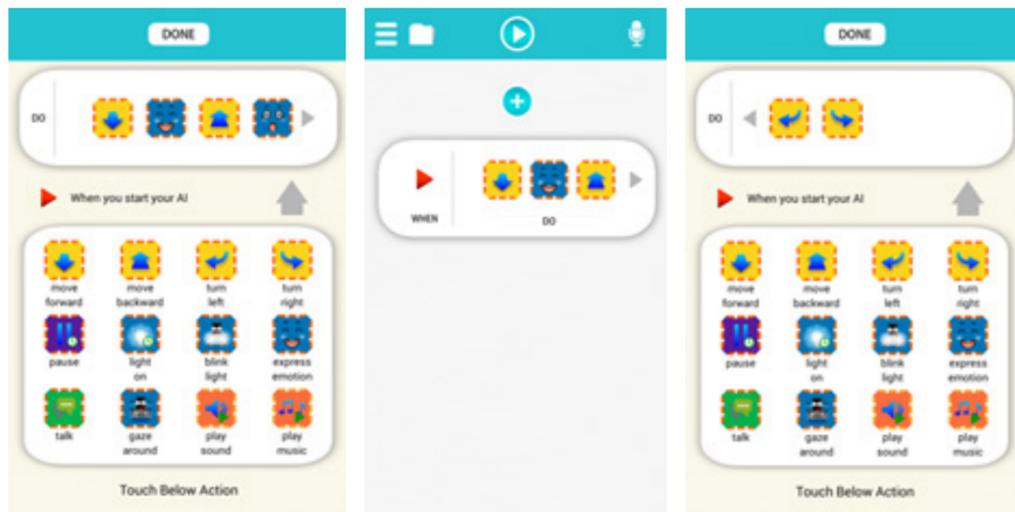
**ACTIONS YOU CAN COMMAND:**

1. move ~	<ol style="list-style-type: none"> <li>1) move forward</li> <li>2) move backward</li> </ol>
2. turn	<ol style="list-style-type: none"> <li>1) turn left</li> <li>2) turn right</li> </ol>
3. pause	1) pause
4. light on	1) light on
5. blink light	1) blink light
6. express emotion	<ol style="list-style-type: none"> <li>1) make a smiling face</li> <li>2) make an angry face</li> <li>3) make a crying face</li> <li>4) make a surprising face</li> </ol>
7. blink	<ol style="list-style-type: none"> <li>1) blink your left eye</li> <li>2) blink your right eye</li> </ol>
8. gaze around	1) gaze around
9. play ~	<ol style="list-style-type: none"> <li>1) play chase</li> <li>2) play clapping</li> <li>3) play dance</li> <li>4) play funk</li> <li>5) play kick break</li> <li>6) play synth</li> <li>7) play walk away</li> <li>8) play duck</li> <li>9) play horse</li> <li>10) play space animal</li> <li>11) play tiger</li> <li>12) play bomb</li> <li>13) play computer</li> <li>14) play electric guitar</li> <li>15) play indios</li> <li>16) play scream</li> <li>17) play screaming kid</li> <li>18) play shut up</li> <li>19) play what</li> <li>20) play victory scream</li> <li>21) play siren</li> </ol>

**5.PRACTICAL USE OF BYOI**  
**A.MOVEMENT**

Add the actions to the start event in the order you want and execute the AI.  
Make sure Tyche is plugged into a car. If you programmed correctly, Tyche will, in the example given execute.

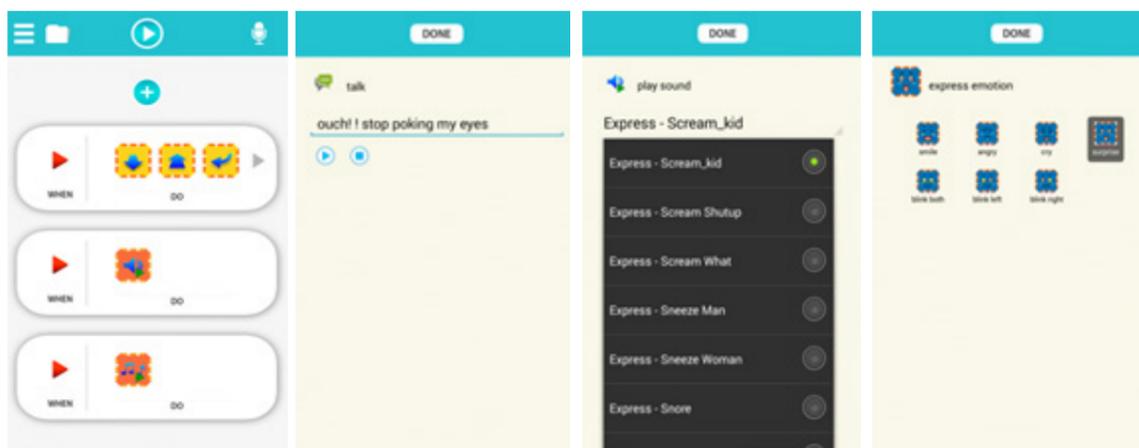
1.Move forward, make a happy face, move backward, and make a surprising face, turn left, and then turn right.



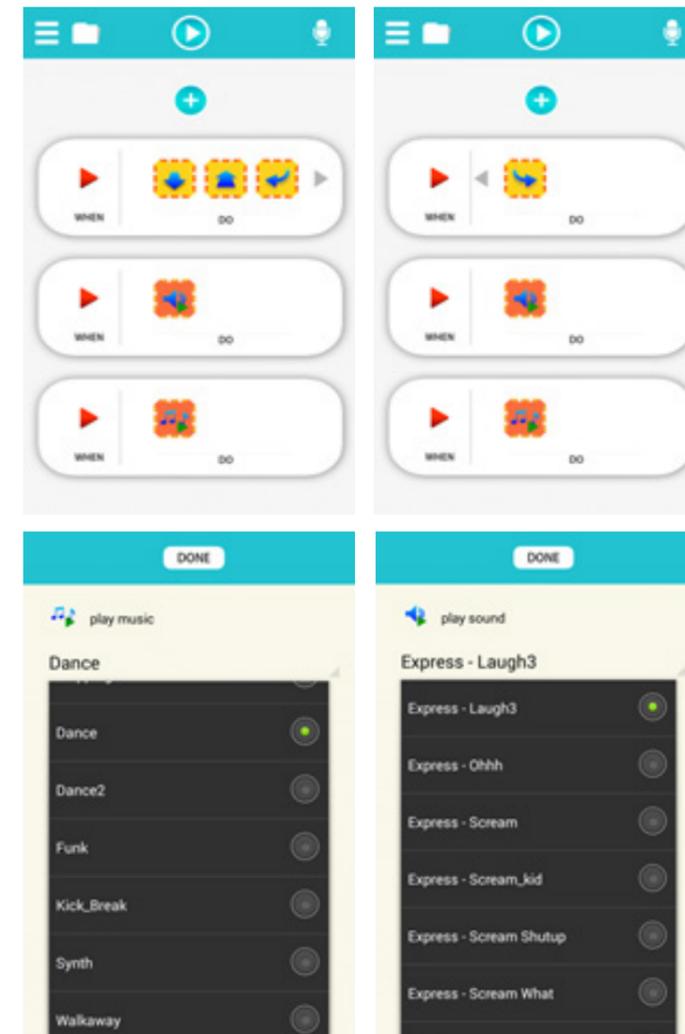
**B.TOUCH AND AVATAR**

If you programmed correctly as the example above, Tyche will

- 1.Make a smiley face and say 'Ouch! Stop poking my eyes' when you touch one of its eyes.
- 2.Play 'screaming kid' sound and be surprised at the same time when you touch its mouth.



**C.SOUND AND MUSIC**

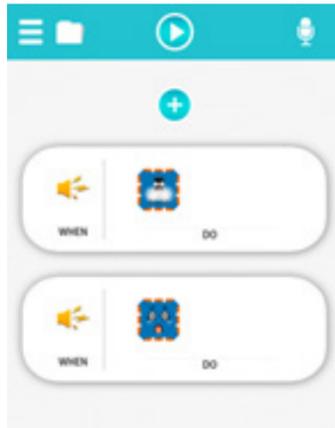


If you follow the above sequence correctly, Tyche will simultaneously do 1, 2, and 3.

- 1.Move forward, move backward, turn left, and turn right.
- 2.Laugh.
- 3.Play a dance music.

## TYCHE Loud Sound

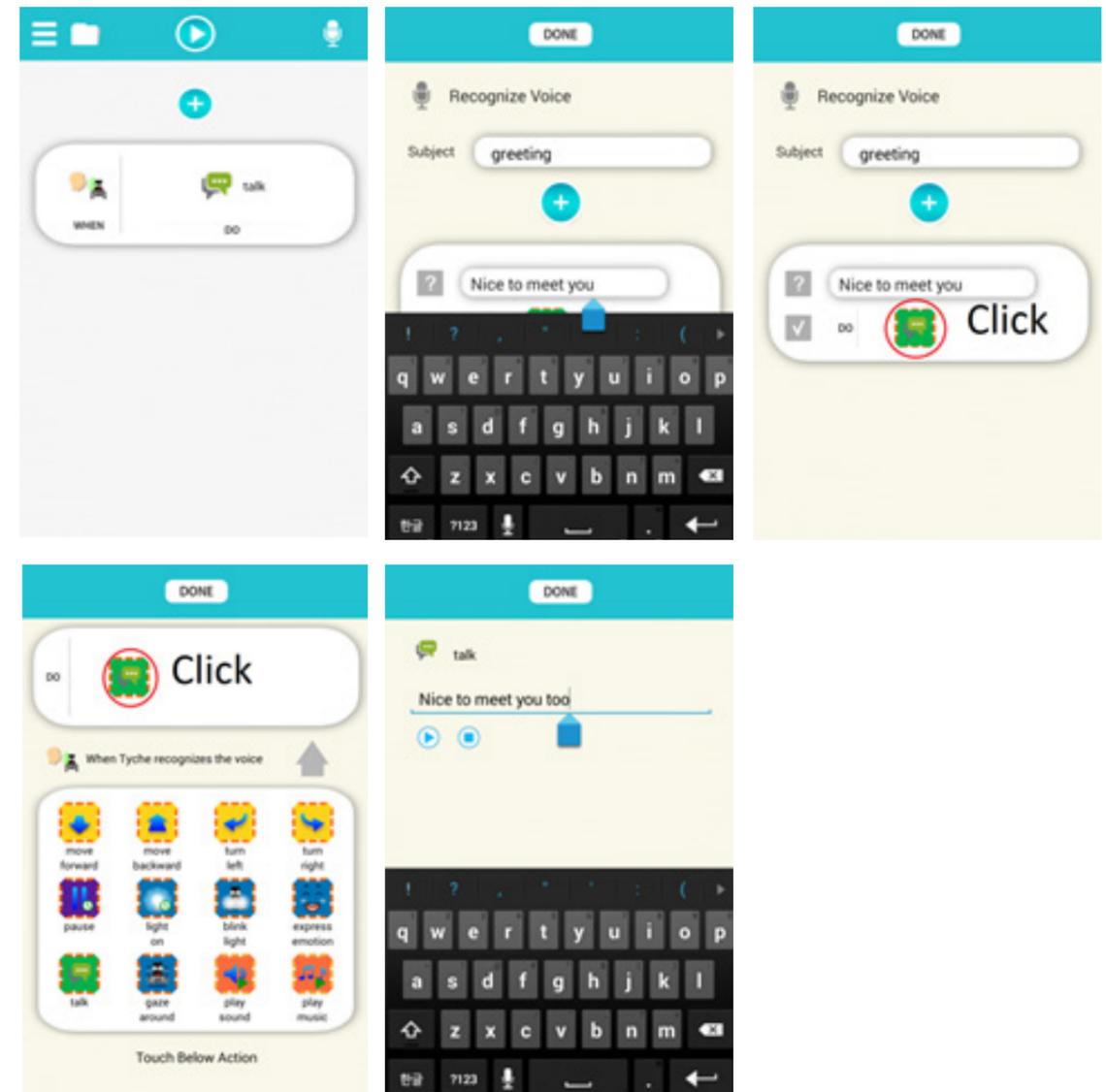
### D.LOUD SOUND



If you programmed correctly, Tyche will  
1. Make a surprised face and blink its light simultaneously when it hears a loud sound

## TYCHE Open Dialogue

### E.OPEN DIALOGUE



If you programmed correctly as the diagram above, Tyche will  
1. Say 'Nice to meet you, too' when you say "Nice to meet you."



BUILD YOUR OWN INTELLIGENCE

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**AIBrain Inc. USA**

1040 Noel Dr, #100 B & C, Menlo Park, CA 94025

**AIBrain Inc. Asia**

511, Institute of Computer Technology, Seoul National University 1, Gwanak-ro,  
Gwanak-gu, Seoul, Korea 08826

[www.tyche.club](http://www.tyche.club)