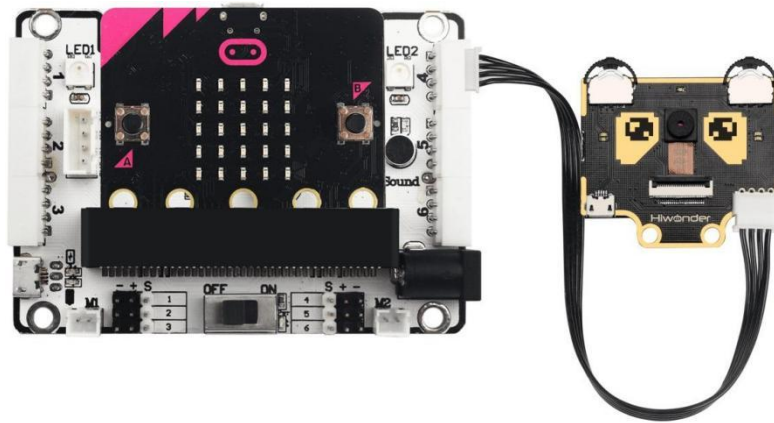


Lesson 2 Facial Recognition Integration with micro:bit

1. Preparation

Connect WonderCam to micro:bit Expansion Board Port 4.



2. Learning Objective

- ① To know the connectivity of WonderCam on micro:bit Expansion Board.
- ② To understand the program logic.

3. Program Logic

In this lesson, we will integrate the Visual module Facial Recognition function with the output from micro:bit Expansion Board. The program will initialize the Visual module follow by Facial Recognition with corresponding output action such as light up LED, sound alert etc.

4. Coding

◆ Adding Extension

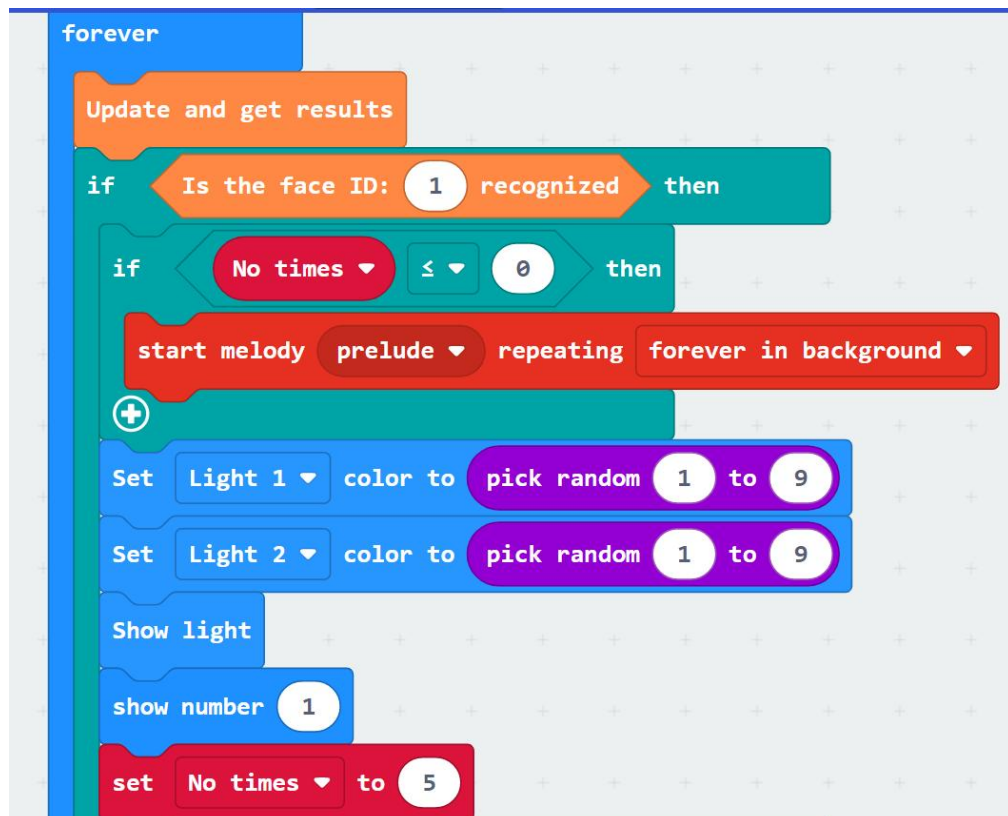
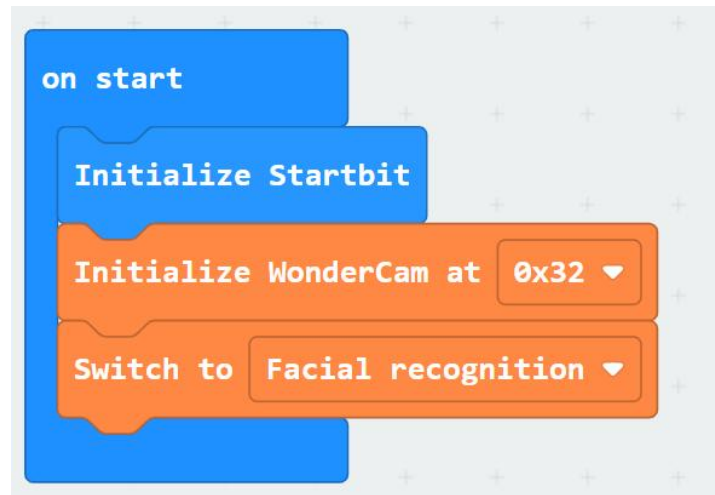
Go to <https://makecode.microbit.org/> and create New Project. In the MakeCode Toolbox, select Advanced, click on Extensions to add the following

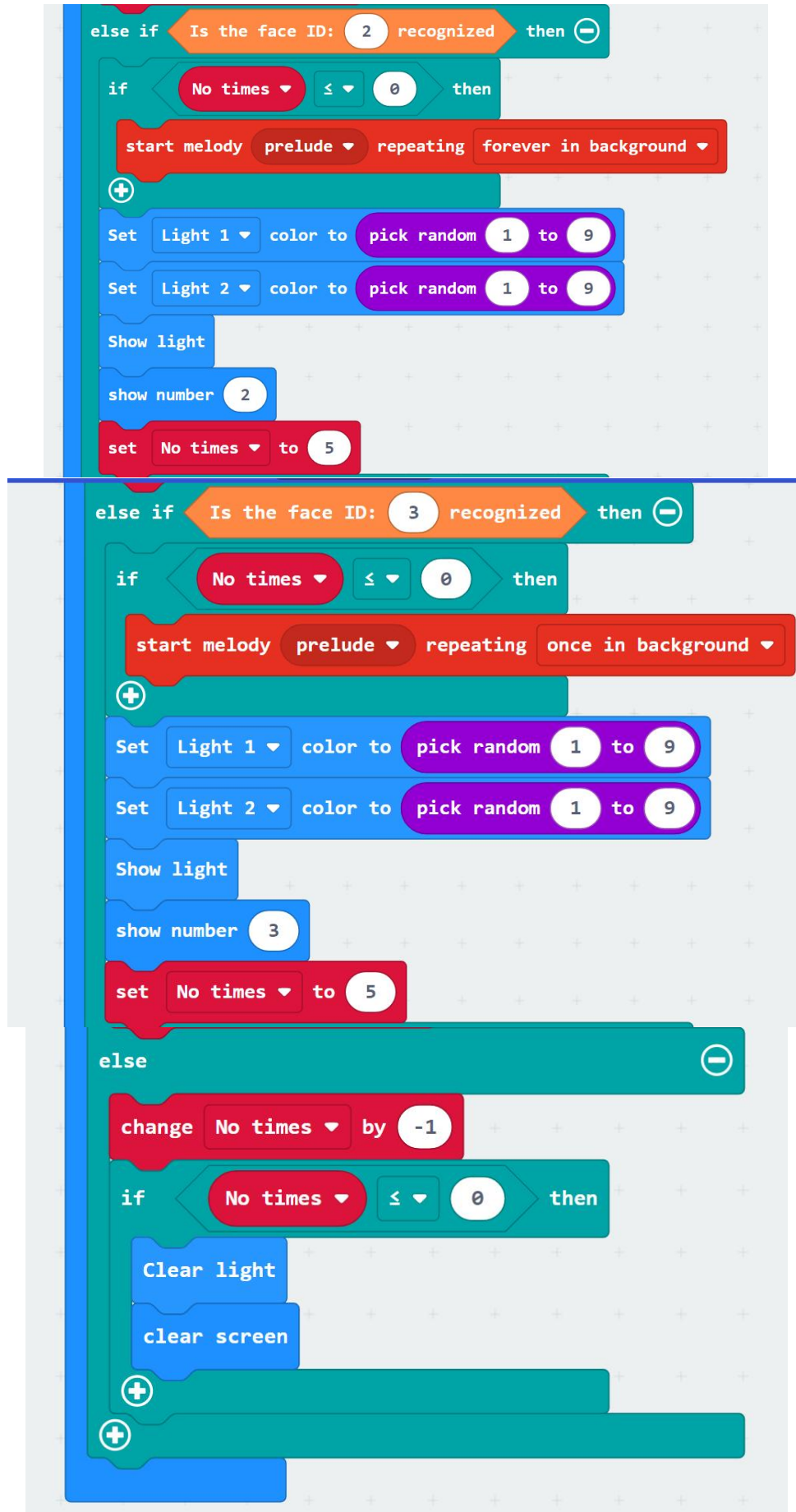
two extension packs:

<https://github.com/hiwonder/wondercam>

<https://github.com/Hiwonder/Startbit>

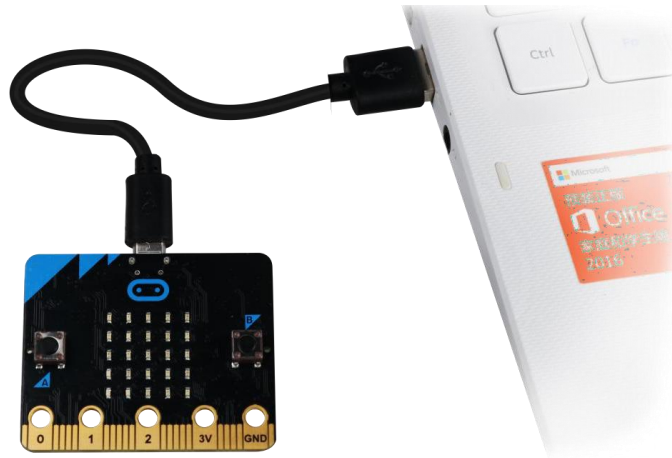
◆ Command Blocks





4.1 Pairing devices and program download

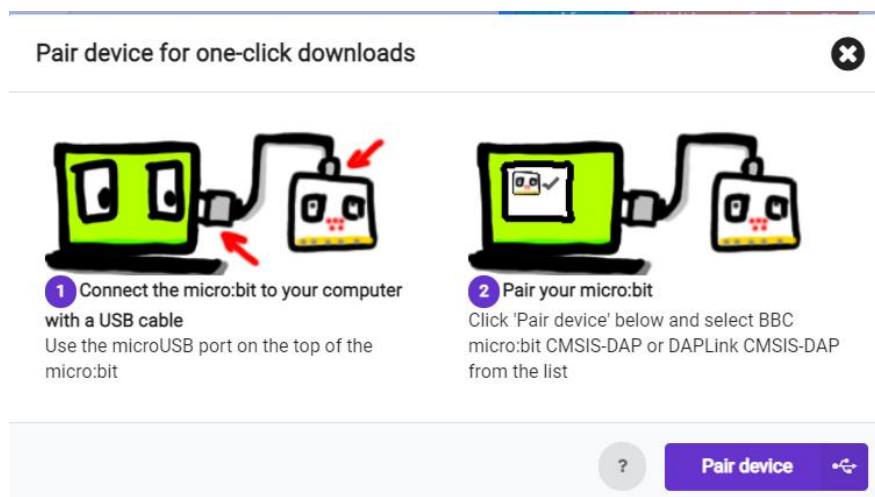
1) Connect micro:bit to computer.



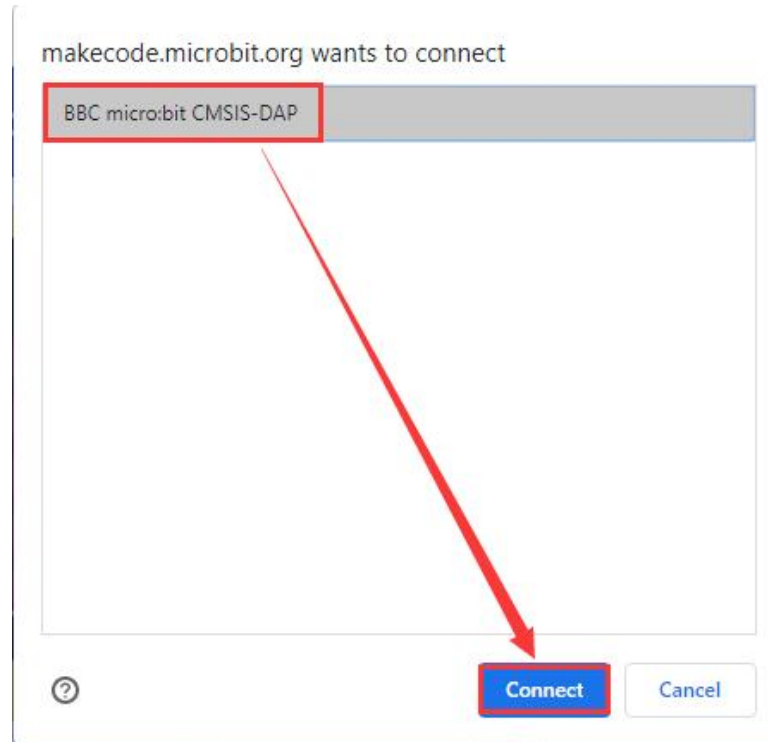
2) Click on “...” located beside “Download” and select “Pair device”.



3) Click on on “Pair device” on the Pop-up screen.

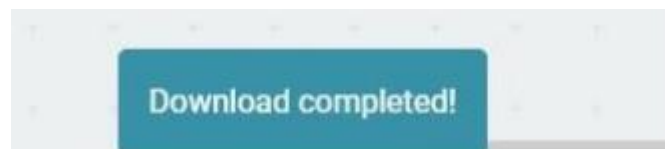


4) Click “Connect” as shown in image below.



5) Once connection is successful, click "Download". During downloading process, the yellow light on micro:bit will blink consistently, do not disconnect or change USB cable.

6) When download is finished, the light on micro:bit will remain on and screen will appear Download completed message.



This PC > MICROBIT (G:)				
Name	Date modified	Type	Size	
DETAILS.TXT	3/22/2016 4:30 PM	Text Document	1 KB	
MICROBIT.HTM	3/22/2016 4:30 PM	Chrome HTML Do...	1 KB	



Tips: In micro:bit drive there are two files as show in image above. DETAILS.TXT records the data information of the micro:bit board. MICROBIT.HTM links to micro:bit official webpage (computer need to be online when click).

5. Results

* Please refer to Lesson 2 Facial Recognition on how to program face recognition. Template for Face can be found in folder "Face Template".

After program is downloaded, connect micro:bit to Expansion board and switch power to ON. WonderCam will automatically start on Facial Recognition function.

Start by Learning Faces. When Face is recognized, the LED Lights on Expansion Board will light up and play music. Dot Matrix display will show the corresponding detected Face ID.