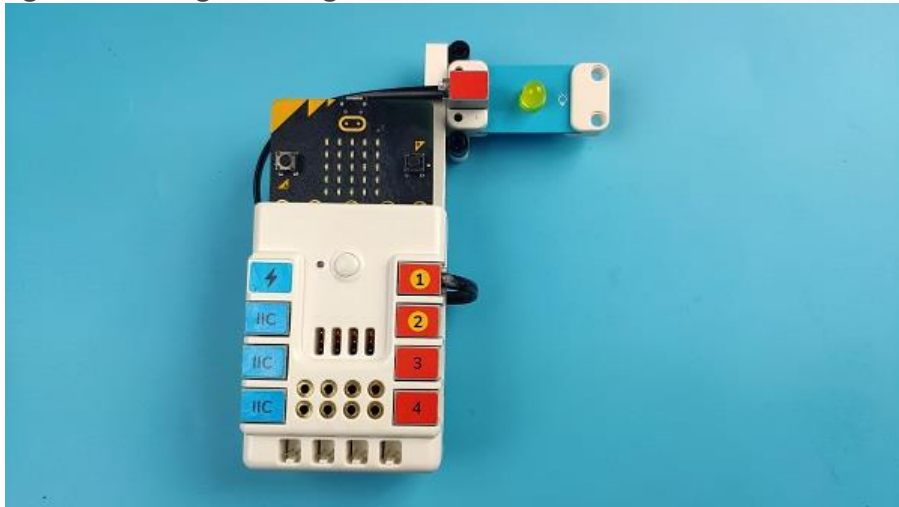


8. Case 07: Smart Lamps

8.1. Introduction

Use the light intensity of the micro:bit to make a smart light, which automatically turns on or off the LED light according to the light level.



8.2. Quick Start

Materials Required

Nezha expansion board × 1

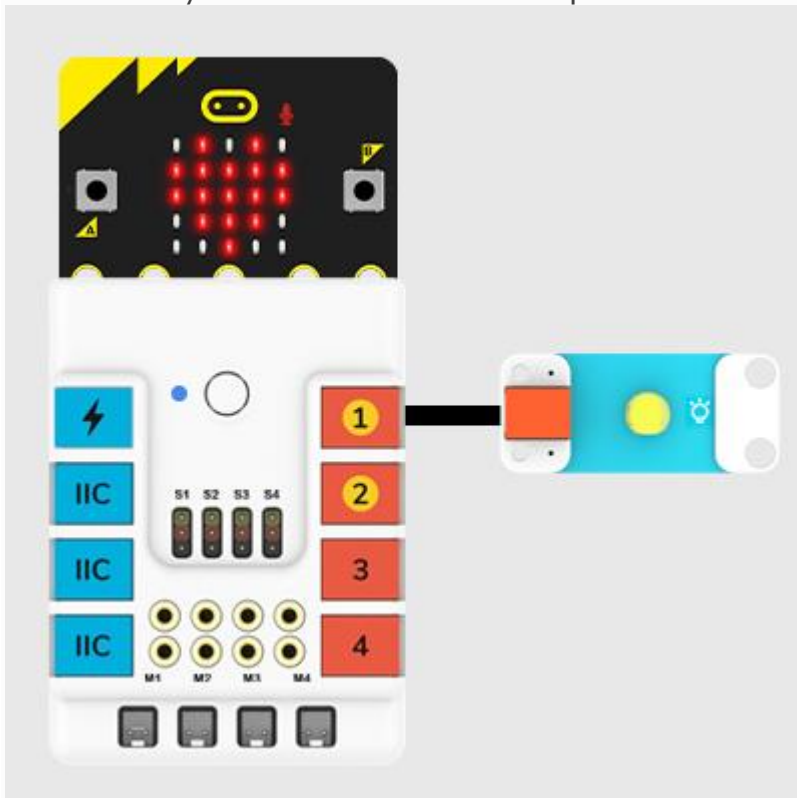
micro:bit × 1

LED-yellow × 1

RJ11 wires × 1

Connection Diagram

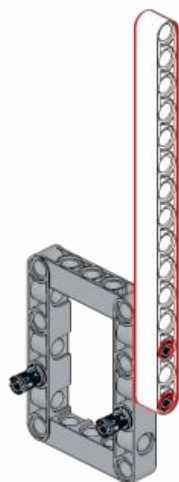
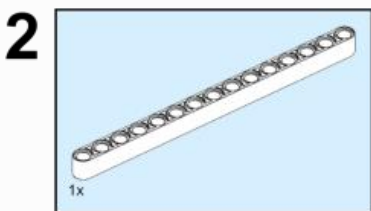
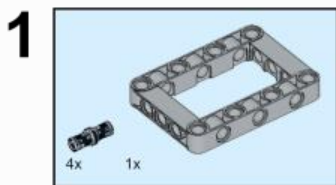
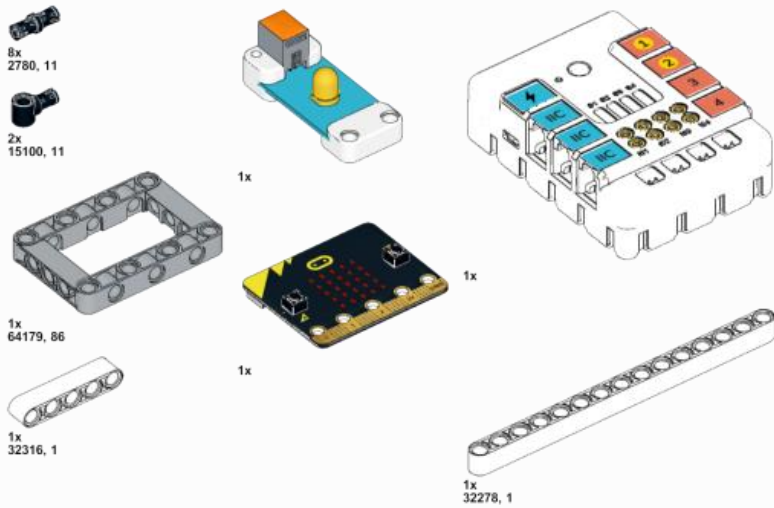
Connect the yellow LED on the Nezha expansion board as the picture shows.



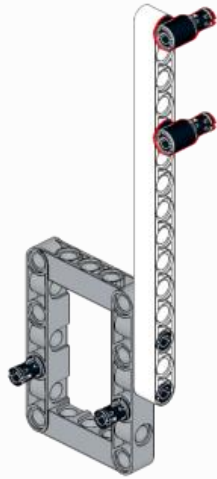
Assembly Video

Video reference: <https://youtu.be/oDzSJMkisO8>

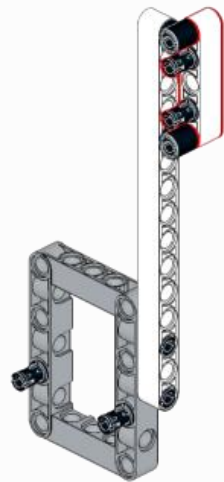
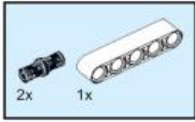
Assembly Steps



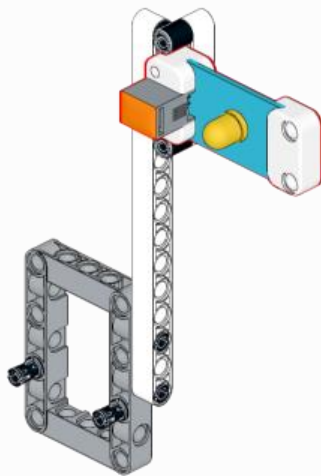
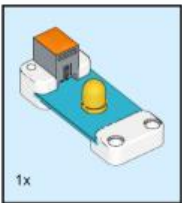
3



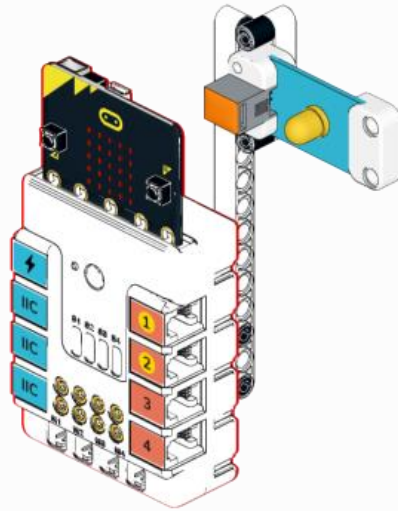
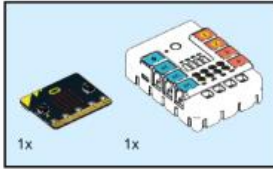
4



5



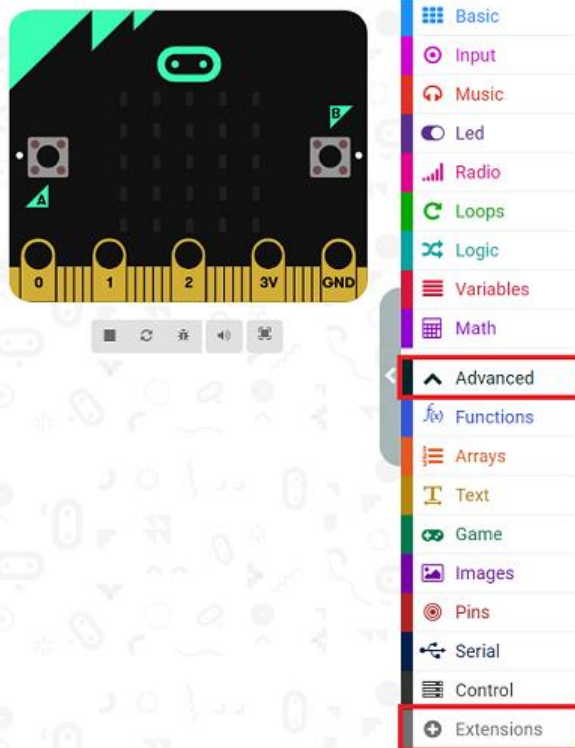
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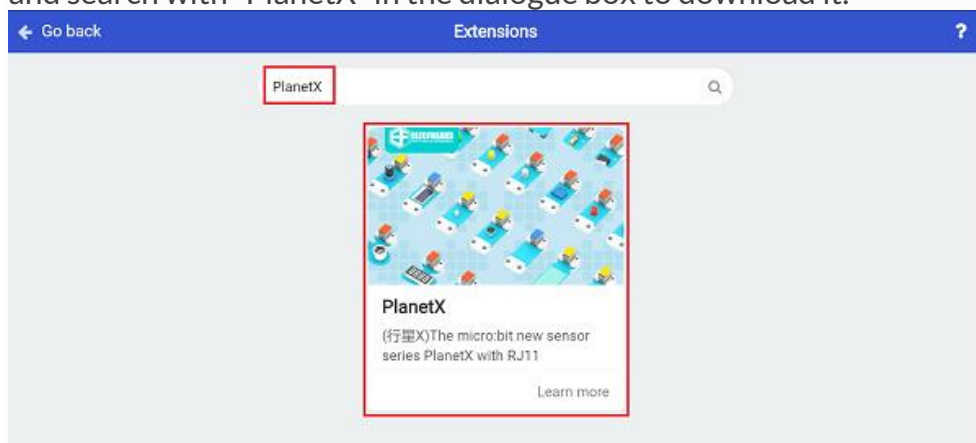
8.3. MakeCode Programming

Step 1

Click “Advanced” in the MakeCode to see more choices.



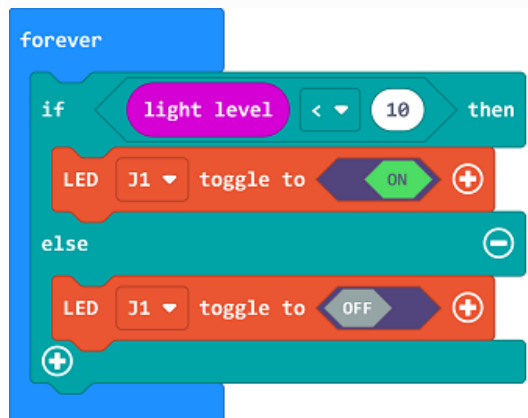
For programming, we need to add a package: click “Extensions” at the bottom of the MakeCode drawer and search with “PlanetX” in the dialogue box to download it.



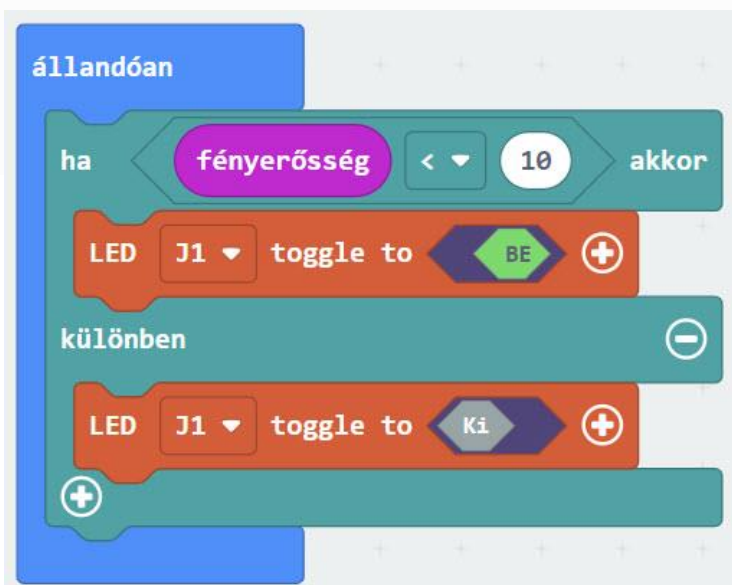
Notice: If you met a tip indicating that some codebases would be deleted due to incompatibility, you may continue as the tips say or create a new project in the menu.

Step 2

Code as below:



```
forever
  if light level < 10 then
    LED J1 toggle to ON
  else
    LED J1 toggle to OFF
```



```
állandóan
  ha fényerősség < 10 akkor
    LED J1 toggle to BE
  különben
    LED J1 toggle to Ki
```

Reference

Link : <https://makecode.microbit.org/haMDD2EftPLV>

You may also download it directly below:

Result

The LED lamps light on/off according to the light intensity.

