IR_Digital_tube

Note: The program provided in this course is only applicable to Yahboom exclusive IR controller.

1. Purpose

In this course, we mainly learn to how to realize IR controller control Digital tube.

2. Programming method

Mode 1 online programming:

First, we need to connect the micro:bit to the computer by USB cable. The computer will pop up a USB flash drive and click on the URL in the USB flash drive: http://microbit.org/ to enter the programming interface. Add the Yahboom package: https://github.com/YahboomTechnology/tm1650 and https://github.com/lzty634158/yahboom_mbit_ir to start programming.

Mode 2 offline programming:

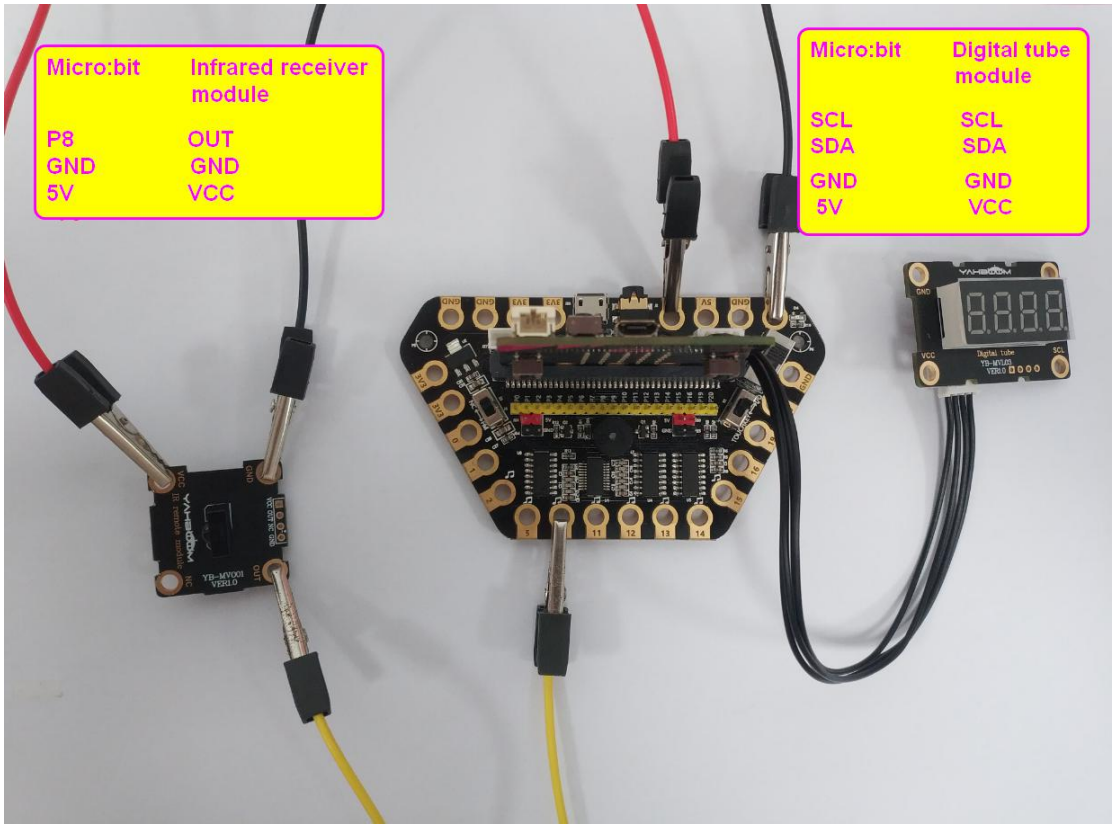
We need to open the offline programming software. After the installation is complete, enter the programming interface, click[New Project]. Add Yahboom package: https://github.com/YahboomTechnology/tm1650 and https://github.com/lzty634158/yahboom_mbit_ir , you can start programming.

3. About wiring

Digital tube module	Micro:bit
SCL	SCL(P19)
SDA	SDA(P20)
GND	GND
VCC	5V

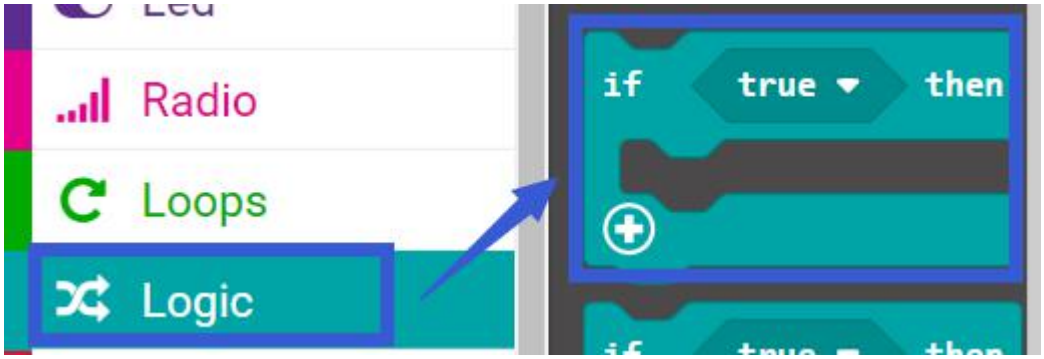
Infrared receiver module	Micro:bit
OUT	P8
GND	GND
VCC	5V

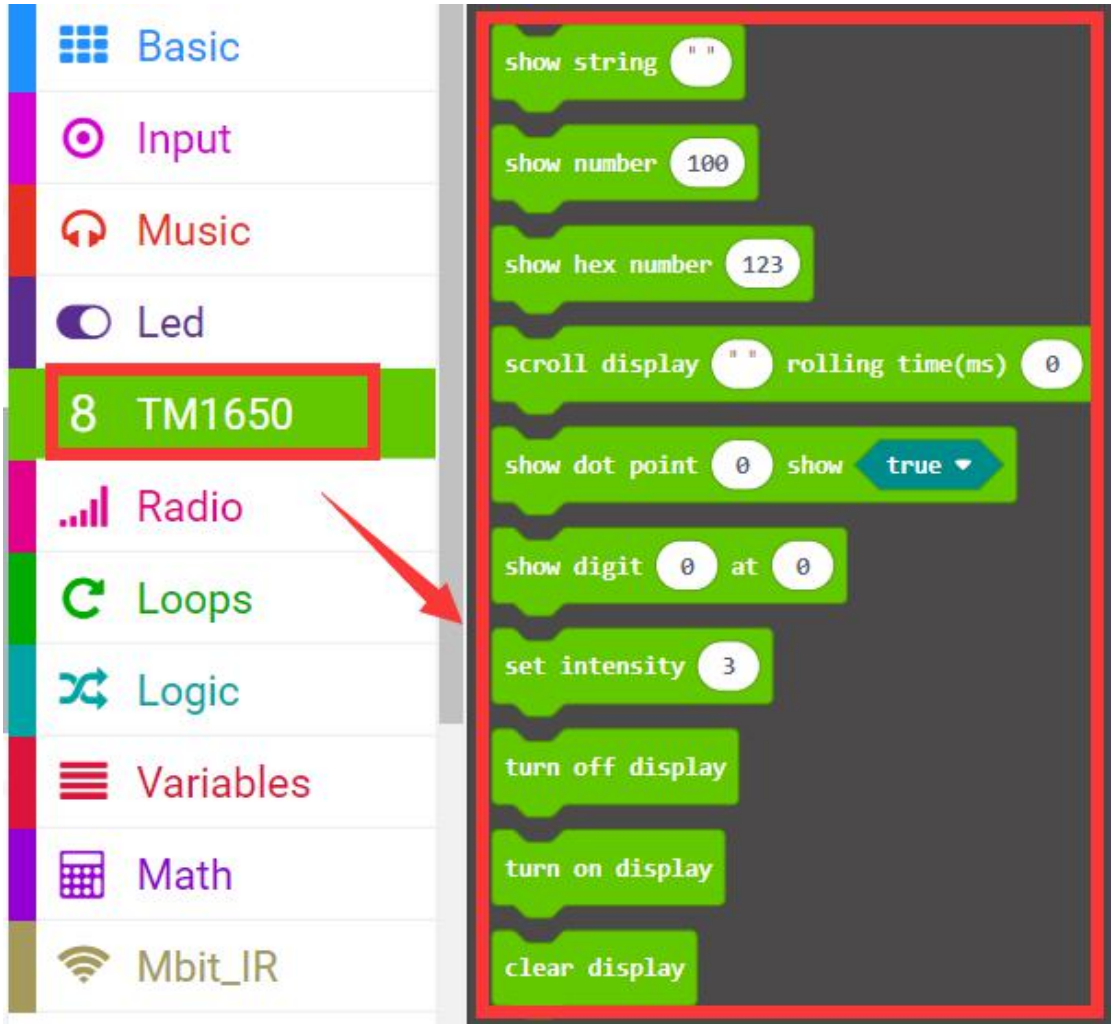
Note: Because the micro:bit cannot be directly connected to the module, we use the micro:bit alligator clip expansion board. As shown in the figure below.

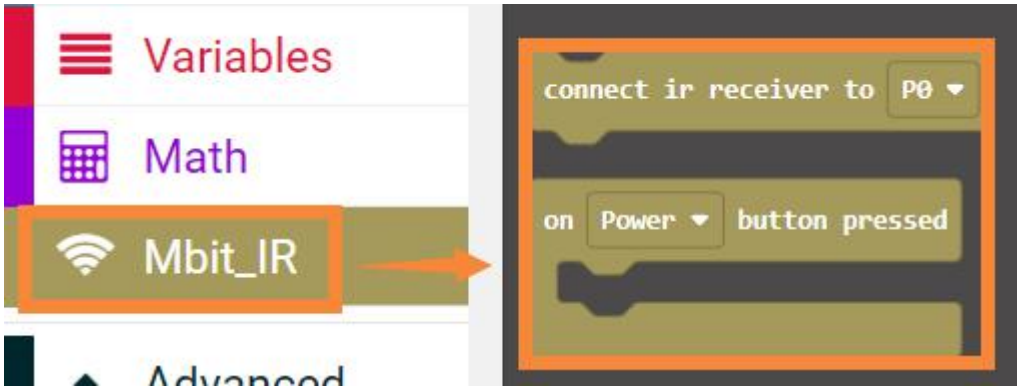


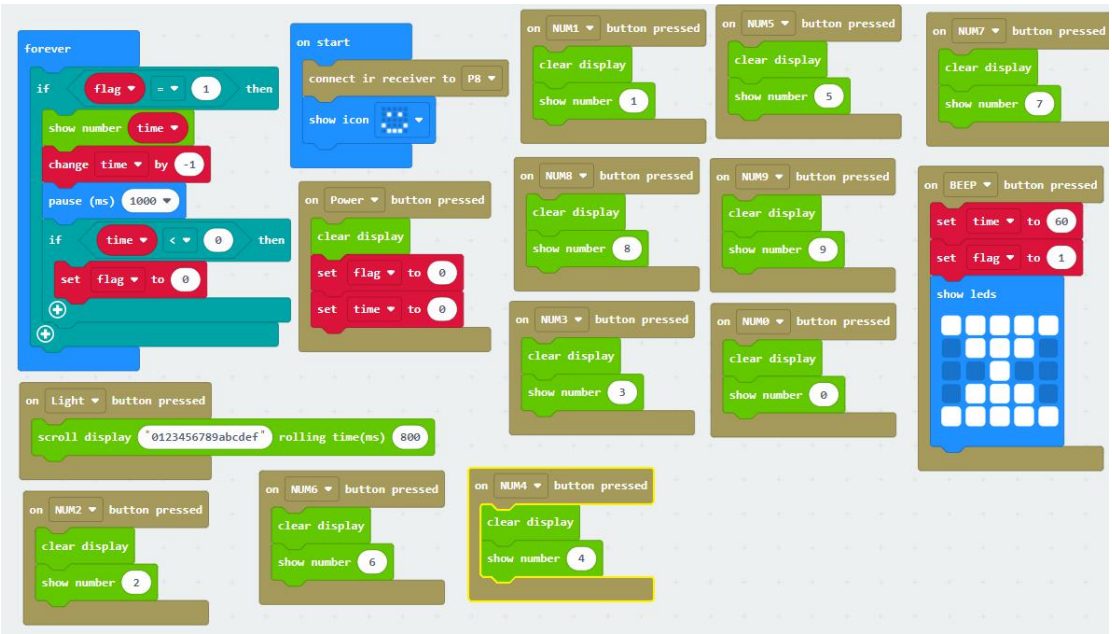
4. Combine building blocks

We need to use the following programming building blocks.


Radio
Loops
Logic
if true then


Basic
Input
Music
Led
TM1650
Radio
Loops
Logic
Variables
Math
Mbit_IR
show string ""
show number 100
show hex number 123
scroll display "" rolling time(ms) 0
show dot point 0 show true
show digit 0 at 0
set intensity 3
turn off display
turn on display
clear display


Variables
Math
Mbit_IR
Advanced
connect ir receiver to P0
on Power button pressed



5. Experimental phenomenon

After the program is downloaded successfully, the dot matrix displays a smiling face, and you can control the digital tube to display different content by pressing the button through the IR controller.