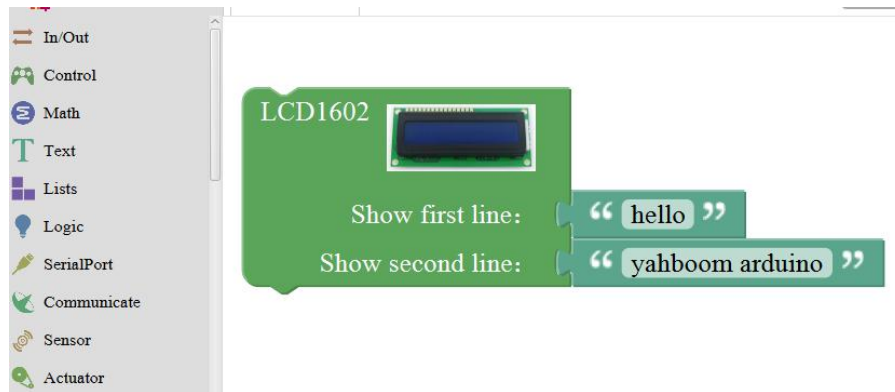# Course 18 -- 1602LCD

You need to follow the steps below to build blocks.

Introduction of 1602：

The actual object is shown below.

Main specification of 1602LCD:

Display capacity: 16 x 2 characters;

Working current: 2.0mA

Operating voltage: 5.0v

Size of character: 2.95 * 4.35 (W * H) mm.

1602 possess 16 pins:

Pin 1: VSS is ground power

Pin 2: VDD is connected to 5V positive power supply

Pin 3: V0 is the LCD contrast adjustment pin, which can be adjusted by a 10K adjustable resistor.

Pin 4: RS is the register selection pin, data register is selected at high voltage and instruction register is selected at low voltage.

Pin 5: R/W is the signal line for reading and writing. Reading operation is carried out at high level and writing operation is carried out at low level.

Pin 6: E pin is the enable pin. When this pin changes from high level to low level, the LCD module executes the command.
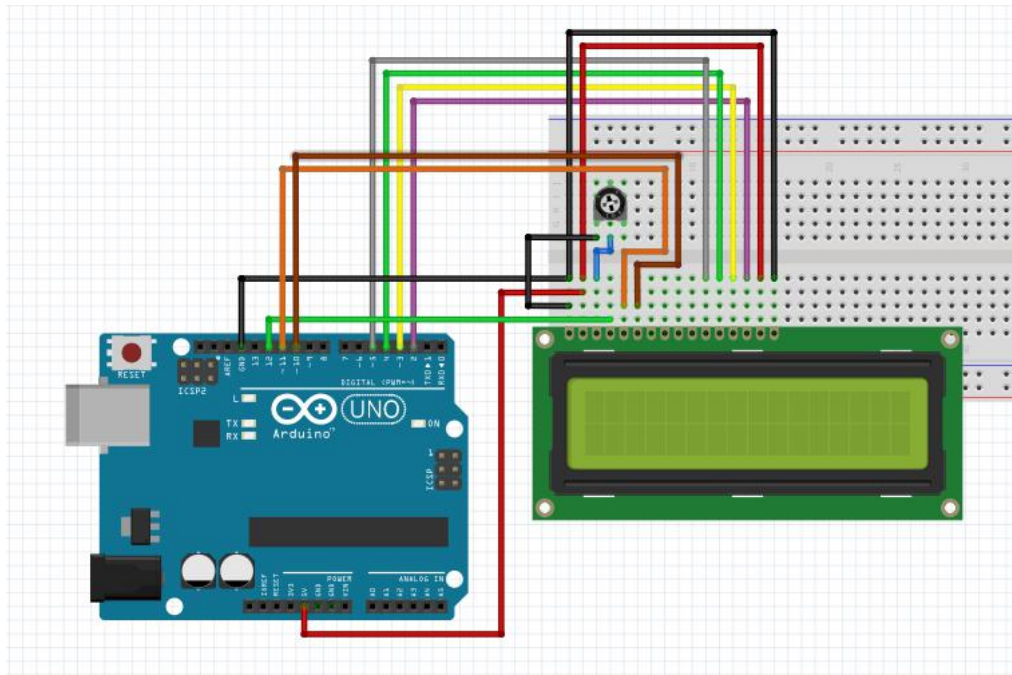
Pin 7 ~ Pin 14: D0 ~ D7 is 8-bit two-way data line.
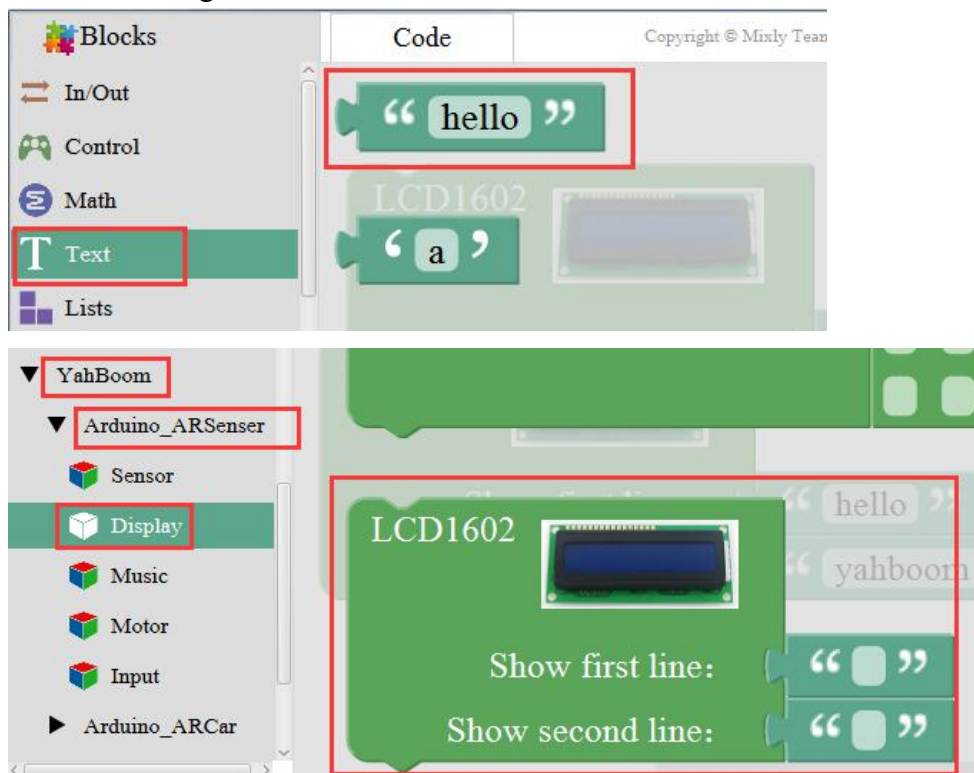
Pin 15: power positive pole of backlight.

Pin 16: power negative pole of backlight.
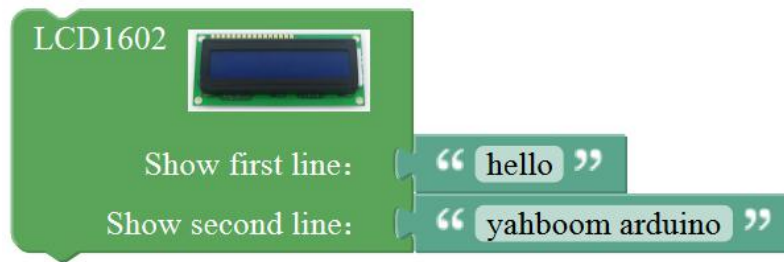
Actual object connection diagram：

We need to connect the circuit as shown in the figure below.

Steps of experiment:

1.You need to choose the building blocks which you need for this experiment, as shown in the figure below.

2.You need to combine the selected blocks, as shown in the figure below.

3.You need to you need to click "**Compile**". and wait for the completion of the compiler, the following box will prompt the compiler successfully, if prompt the compile failure is the problem of building block splicing.


4. After the compilation is completed, the word "**Compile success!**" will appear in the lower left corner, indicating that you have successfully compiled the program.

5. In the menu bar of Mixly, we need to select the port that the serial number displayed by the device manager (for exmaple:COM6) and **Arduino/Genuino Uno.** As shown in the figure below.
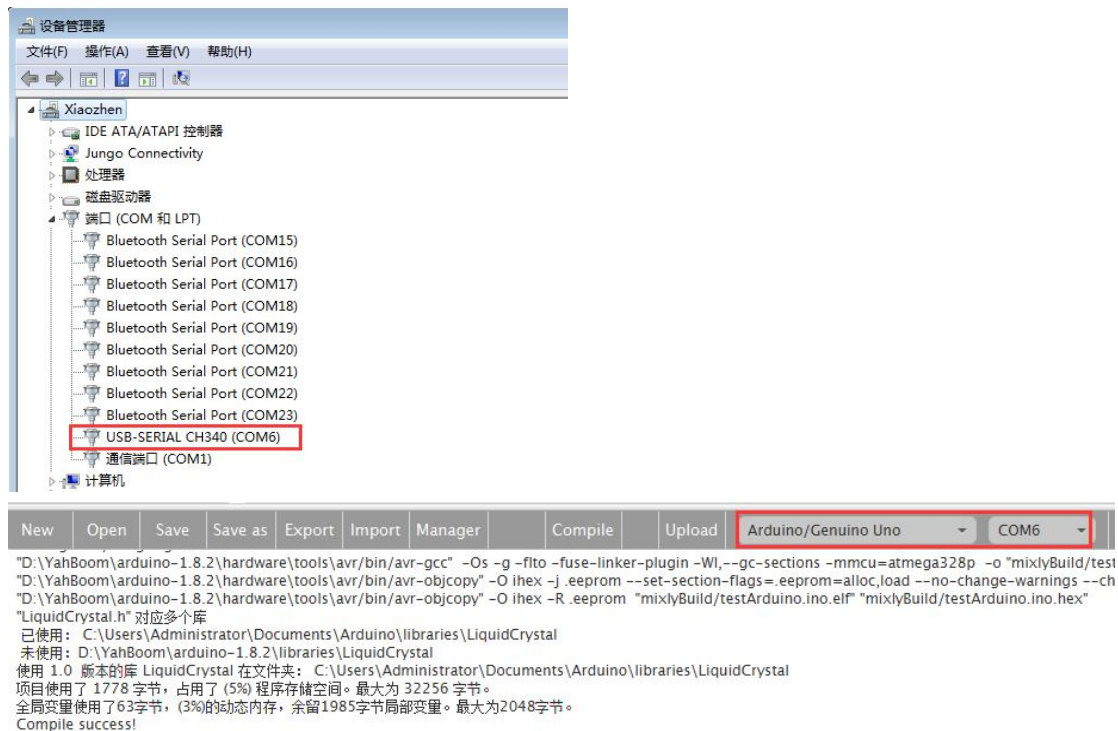
6. After the selection is completed, you need to click "**Upload**" to upload the code to the Arduino UNO board. When the word "**Upload success**" appears in the lower left corner, the code has been successfully uploaded to the Arduino UNO board, as shown in the figure below.
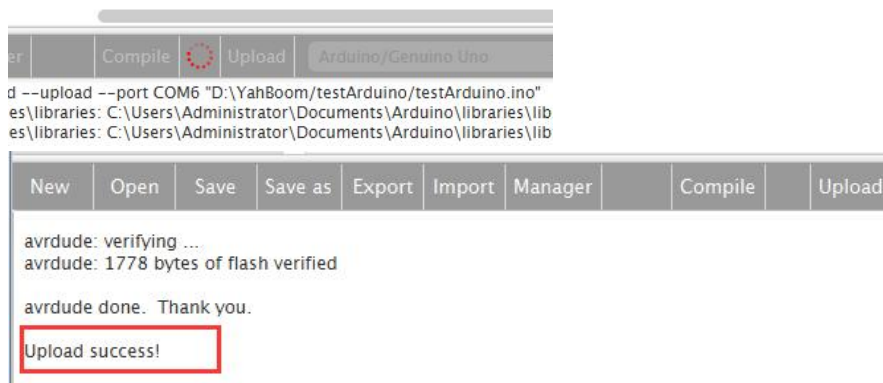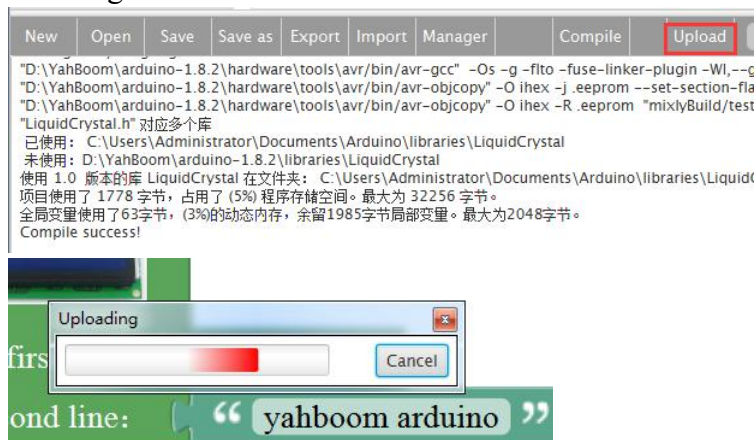
7.After the code is uploaded. We can see that the hello yahboom arduino is shown on the LCD1602.