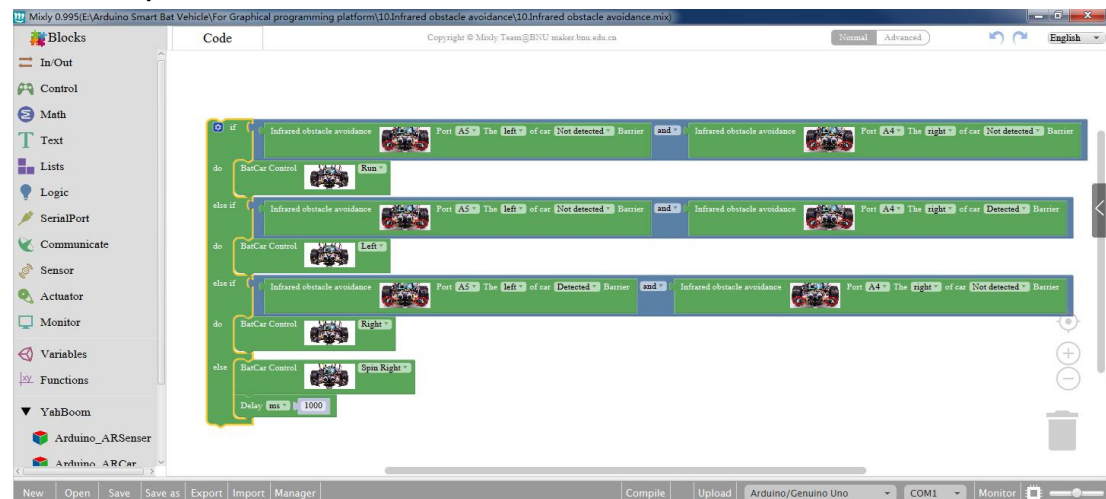
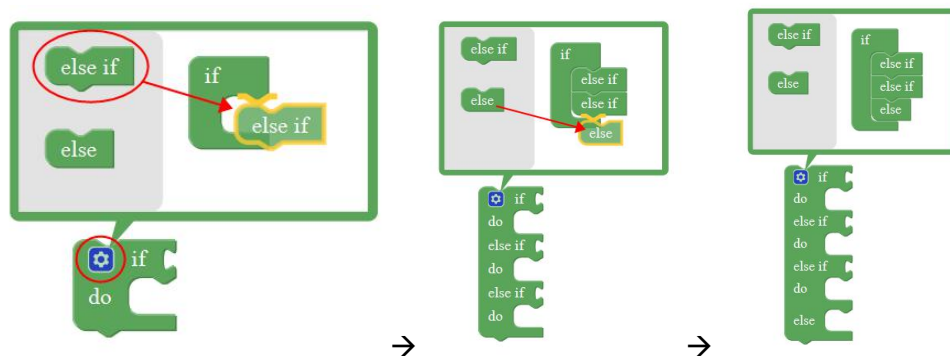
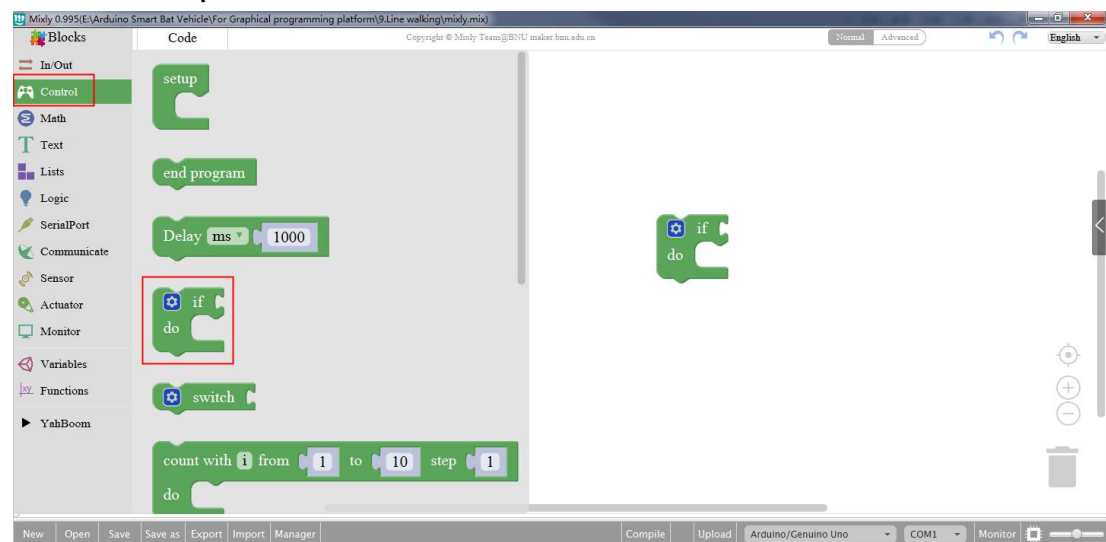


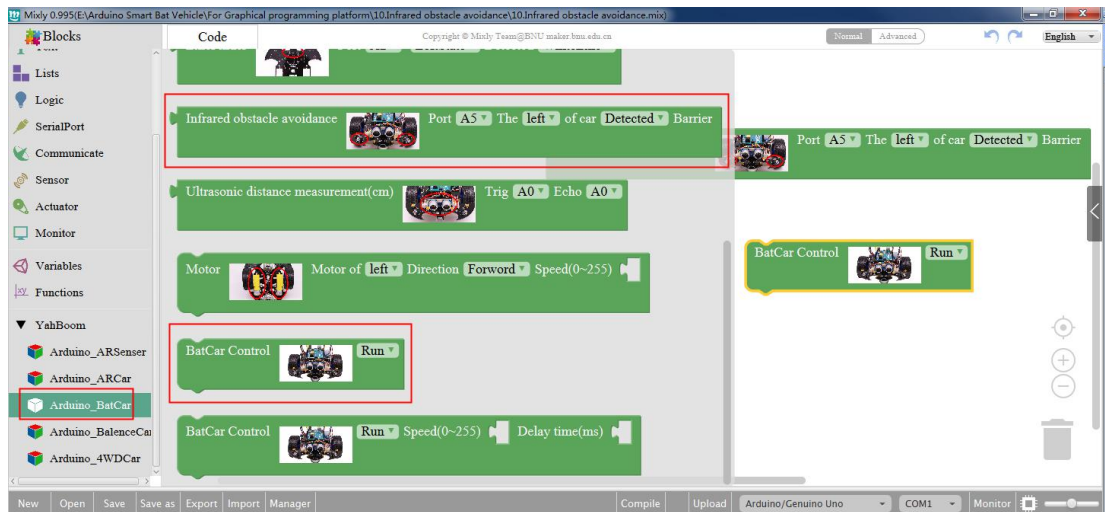
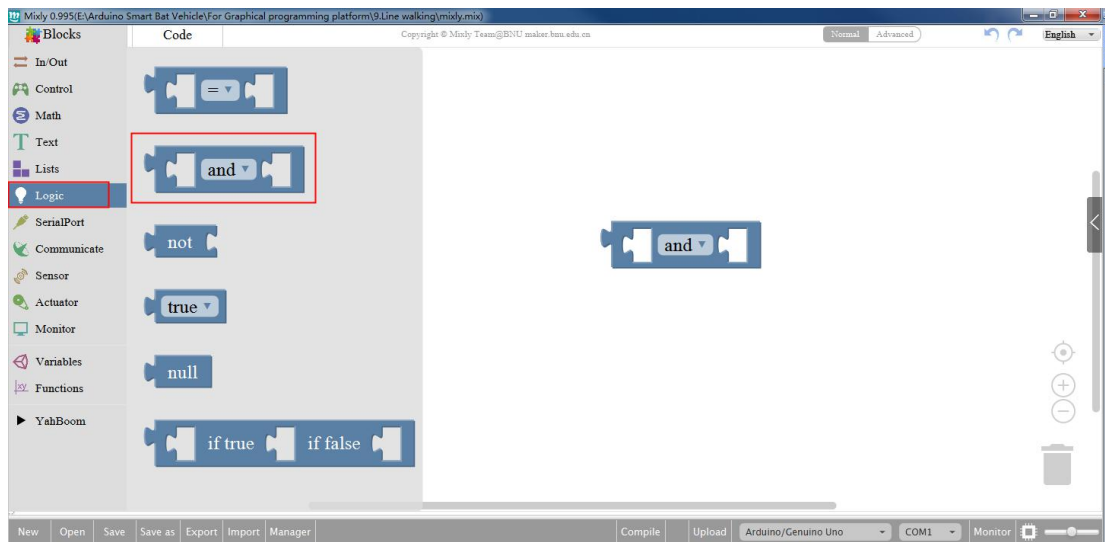
# 10. Infrared obstacle avoidance

Follow this picture to connect the modules:



## 1. Modules of experiment:

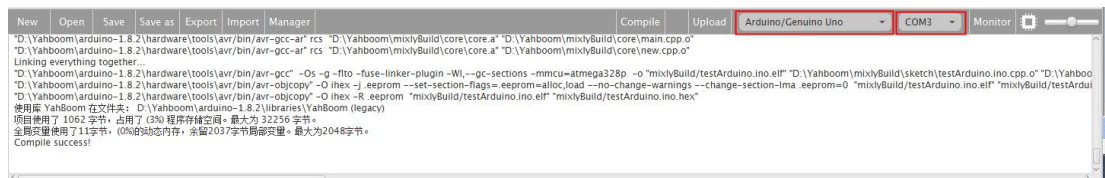




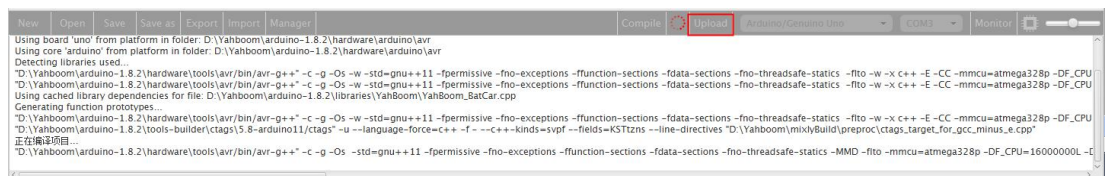
## 2 .Experiment



(1) Complete the connection of modules and click the button “Compile”. You can see “Compile success” in the dialog window until compile completed. If you see “Compile failed” means that there is something wrong with the connection of modules. Check and fix it.



(2) Choose “Arduino/Genuino Uno” and correct serial port as shown.



(3) Now that configuration is complete, you can click the button “Upload”.

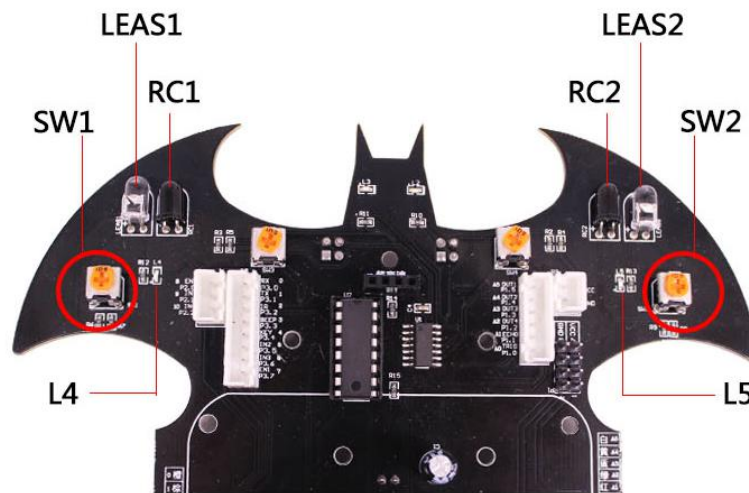


(4) Finally, It's done if you see “Upload success” in the dialog window. Now unplug the USB line and debugging. After that, place the BatCar on the ground and power on, it will run and avoid the obstacle.

#### Debugging:

- ① Adjust potentiometer [SW1] to make the infrared light-emitting diode [LEAS1] and infrared light-receiving diode [RC1] away from obstacle less than 10 cm, then LED light [L4] illuminates, otherwise, it goes off.
- ② Adjust potentiometer [SW2] to make the infrared light-emitting diode [LEAS2] and infrared light-receiving diode [RC2] away from obstacle less than 10 cm, then LED light [L5] illuminates, otherwise, it goes off.

Caution : Don't excessively rotate potentiometer while adjusting. It should be within 30°.



Expand Experiment: Can you change the logic of the program to make it tracking the obstacle instead of avoiding? Let's try to do it and we will tell you how to do it next class.