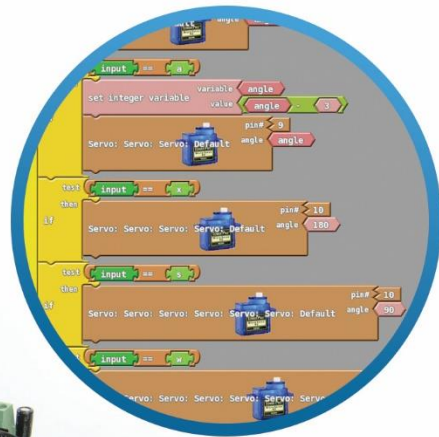
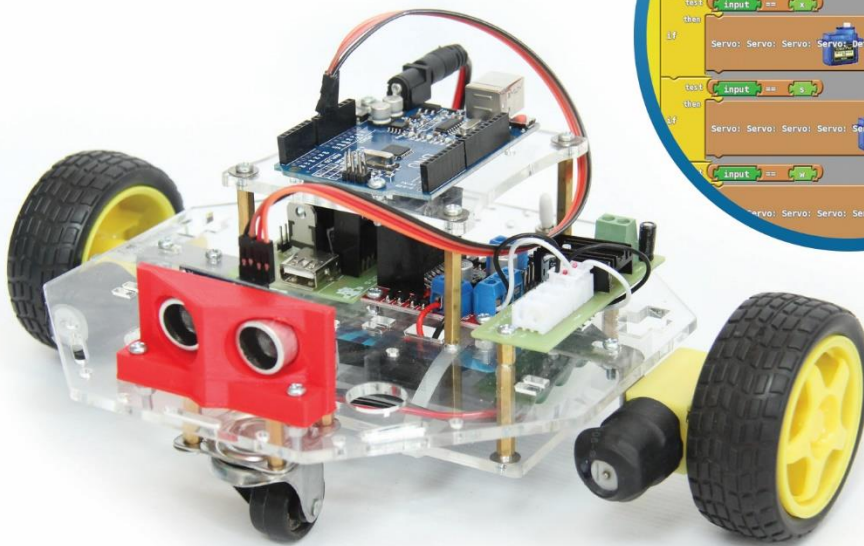


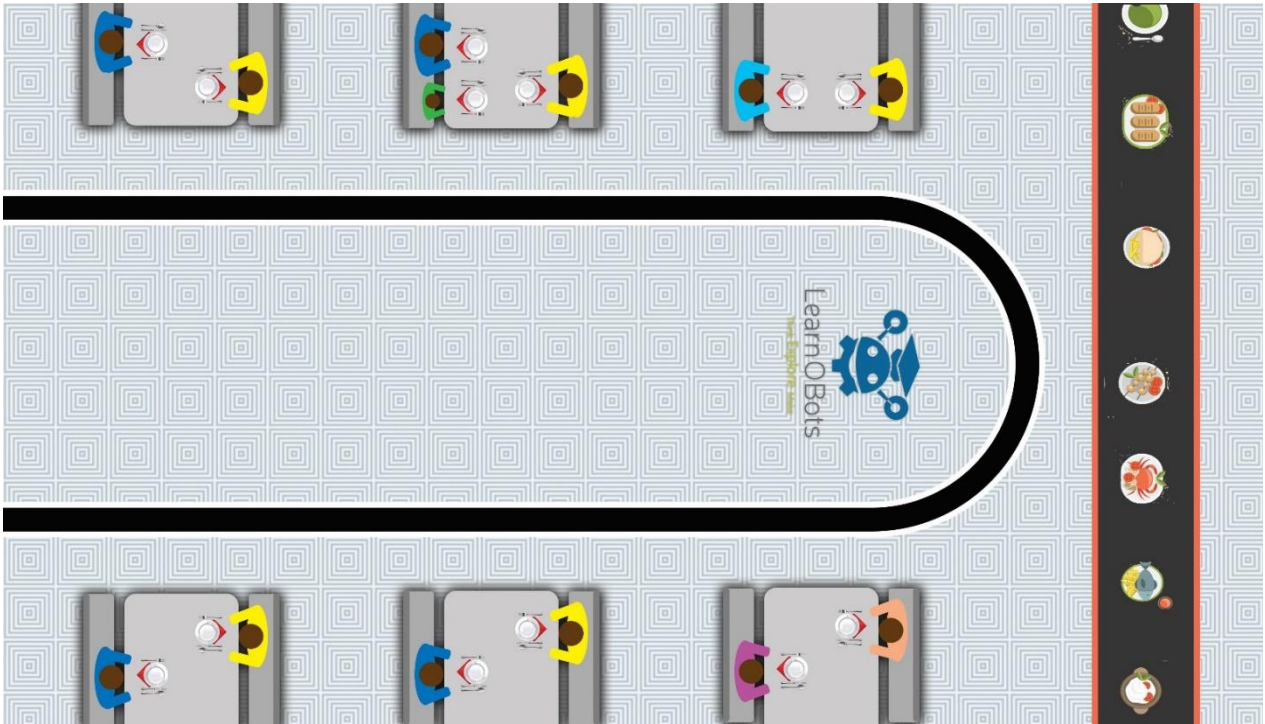
Line Following Codi



THE PERFECT COMPANION TO LEARN
PROGRAMMING, ROBOTICS AND ELECTRONICS

Line Following Manual for CODIBOT

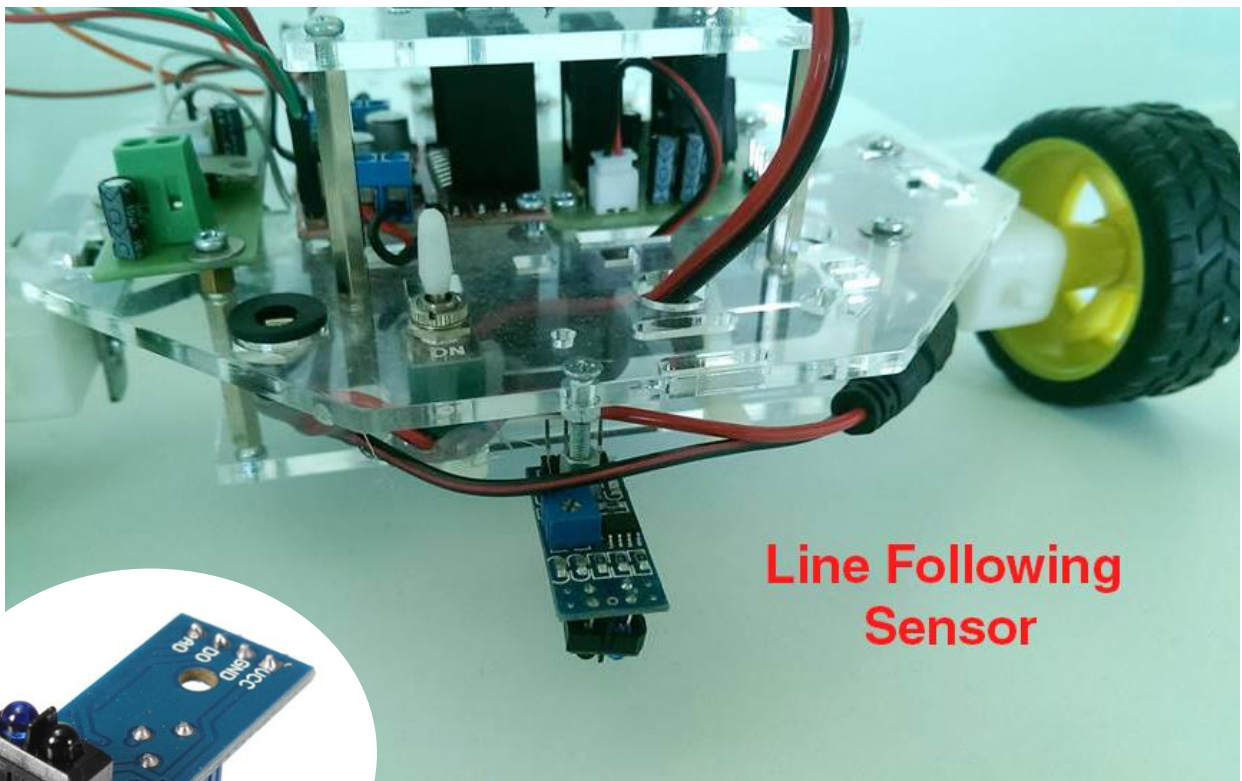
In this activity, we will make CODI follow a line, to do that, use a black tape that is 2inch wide and make a track of your choice, here is an example:



The line and the background should be in contrast that means that if the line is dark colored the background should be light colored otherwise the sensor won't work.

STEP 1:

Take off the Sonar Sensor and attach the Line following sensor in one of the slots as shown in the picture.



STEP 2:

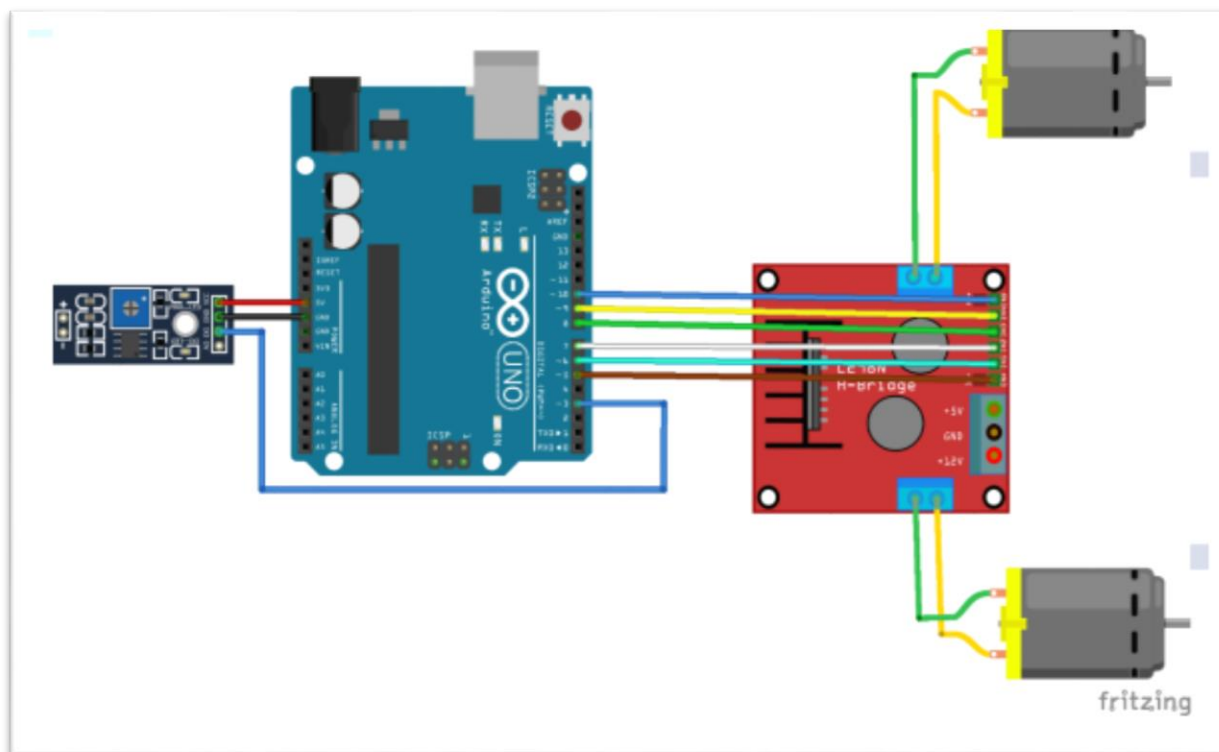
Connect the H-Bridge with the Arduino. (Refer the Getting Started Manual)

STEP 3:

There are 4 pins in Line Following Sensor. Vcc (+5V), GND, A0 and D0.

Make the Connections between Arduino & Line Following Sensor as follows:

Line Following Sensor	Arduino
Vcc	5V
GND	GND
D0	Digital Pin 3



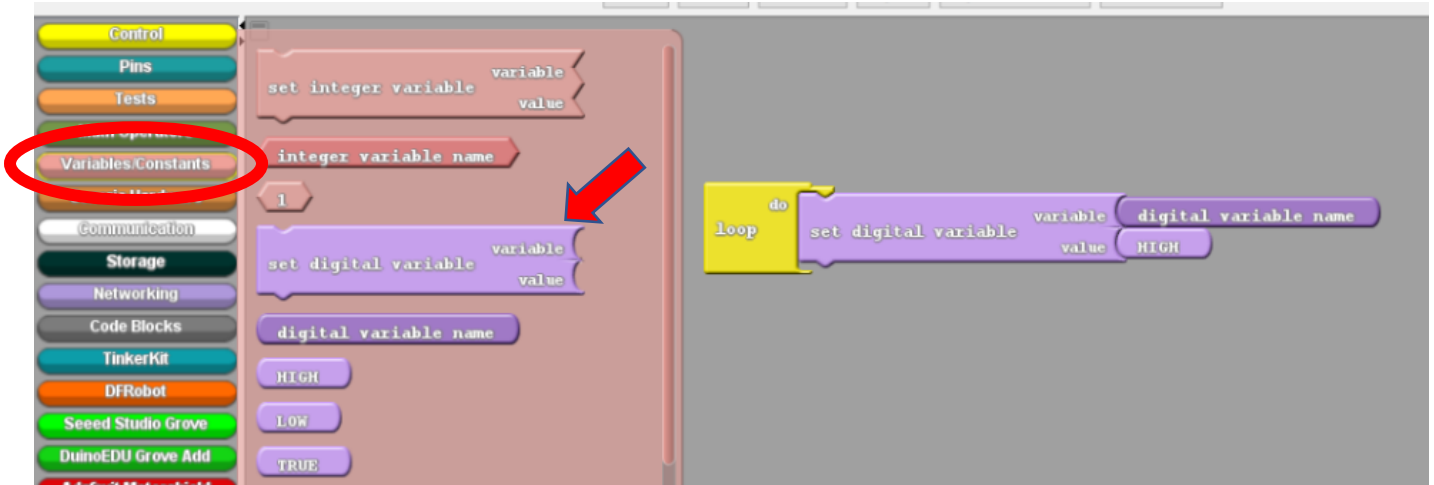
STEP 4:

Startup ArduBlock (Refer Getting Started Manual for Installation). Build the Code as follows:

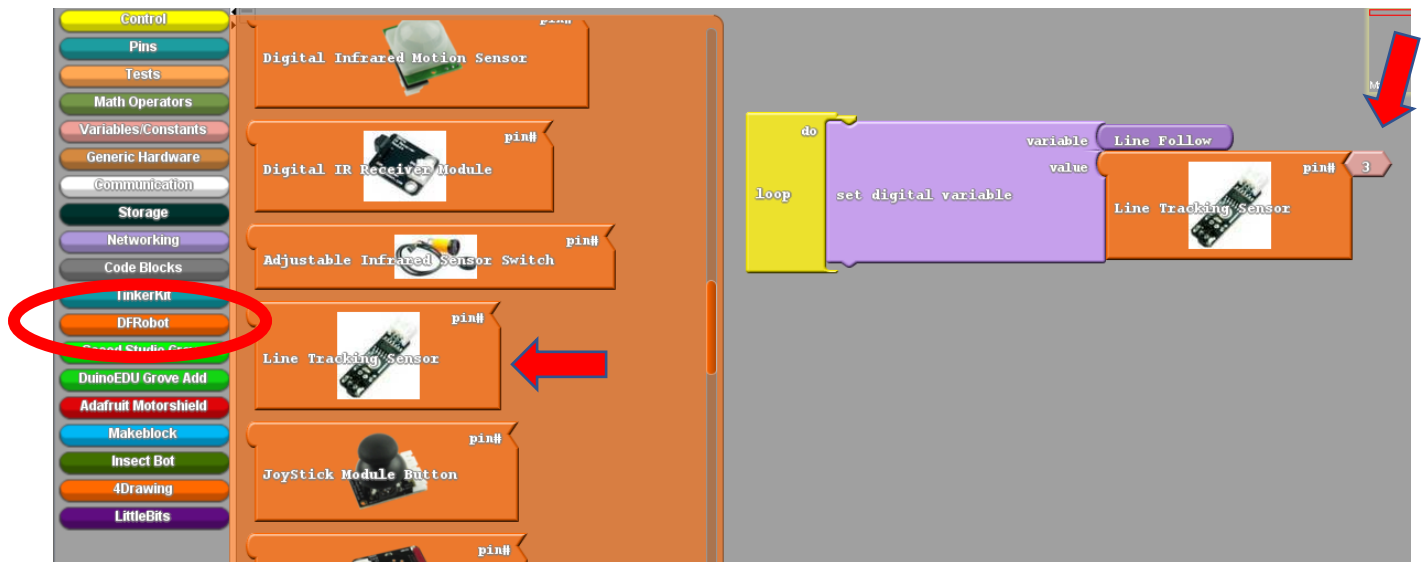
1. Select a “do loop” panel from the “Control” tab.



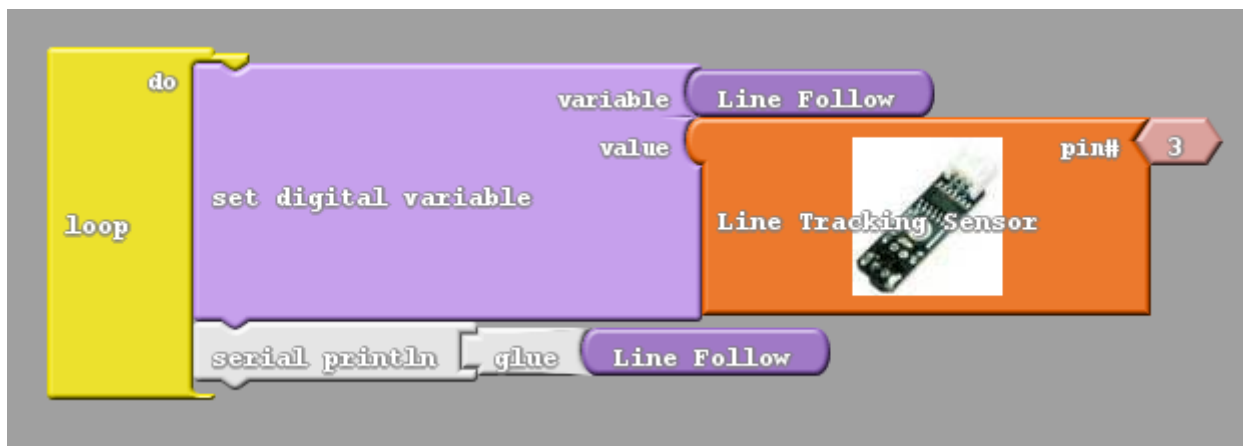
2. Select “set digital variable” from “Variables/Constants” tables and snap it as shown.



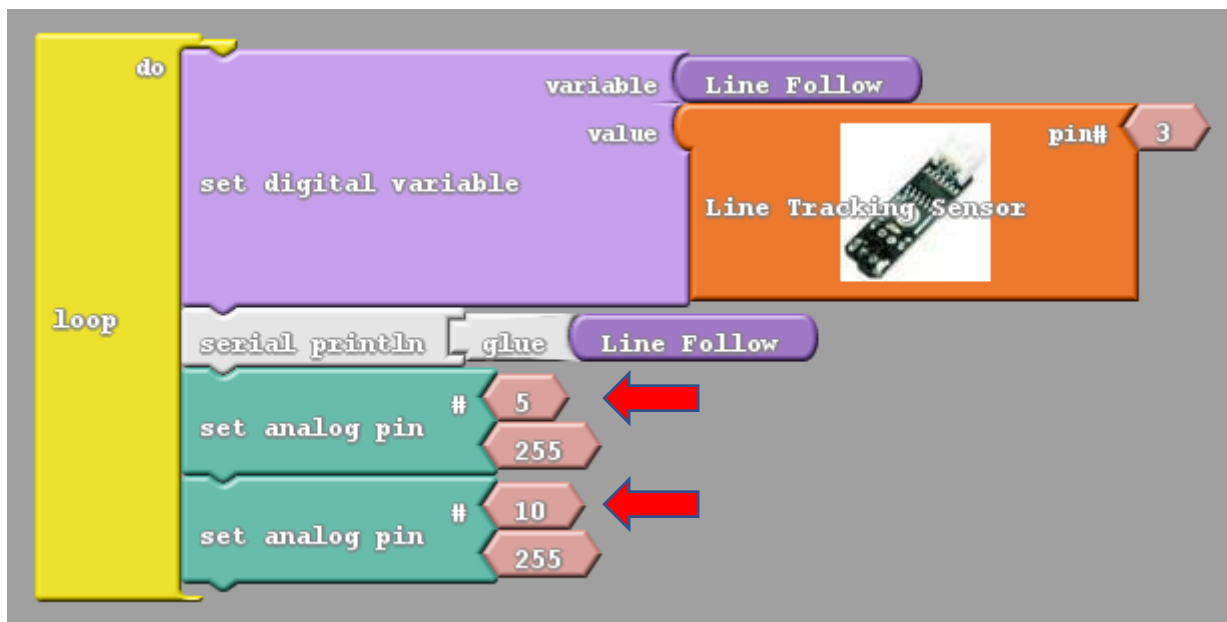
3. Change the variable name to Line Follow as shown, Snap out the Round panel from the Value slot and insert the "Line tracking Sensor" from the "DFRobot" tab. Change the Pin # to 3.



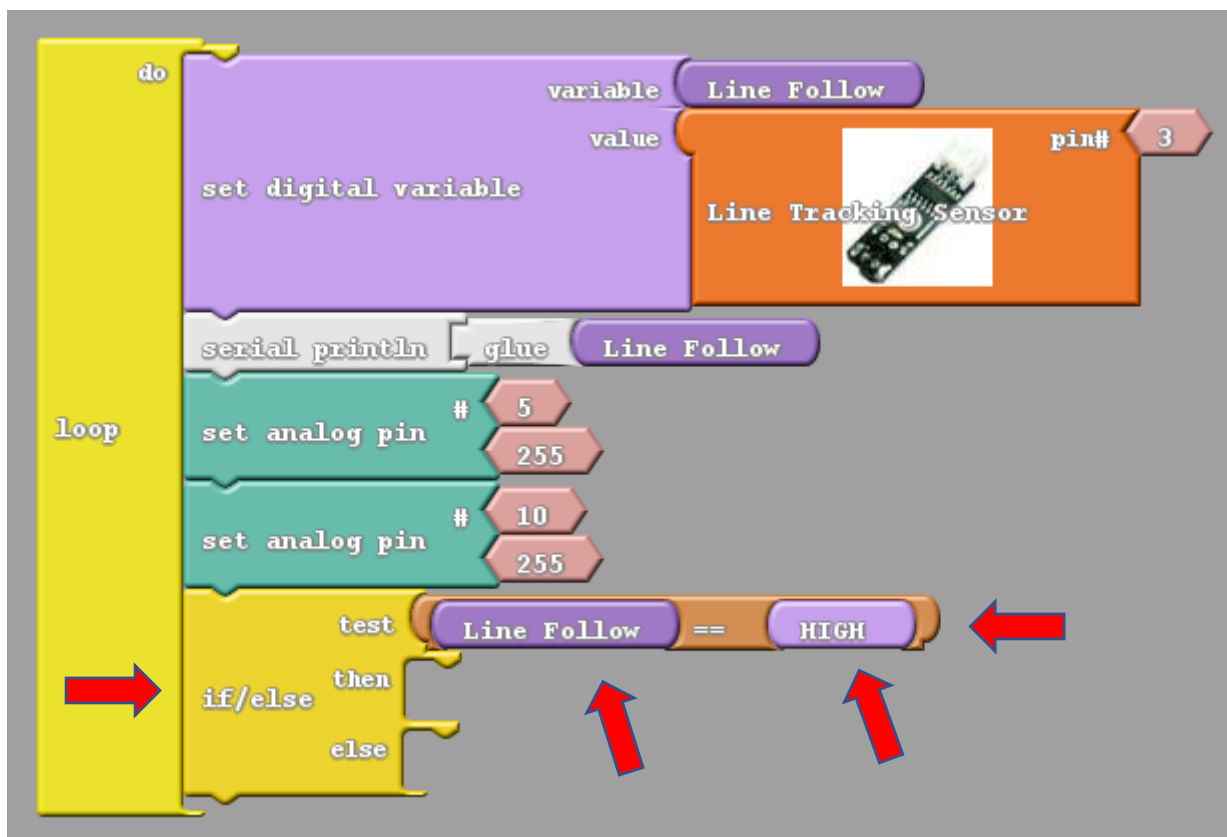
4. Snap a "Serial Println" panel form the Communication tab as shown, Replace the message panel with the glue panel, go to the panel in which we typed "Line follow", right click on it and clone it. Drag the clone and snap it to the glue panel as shown.



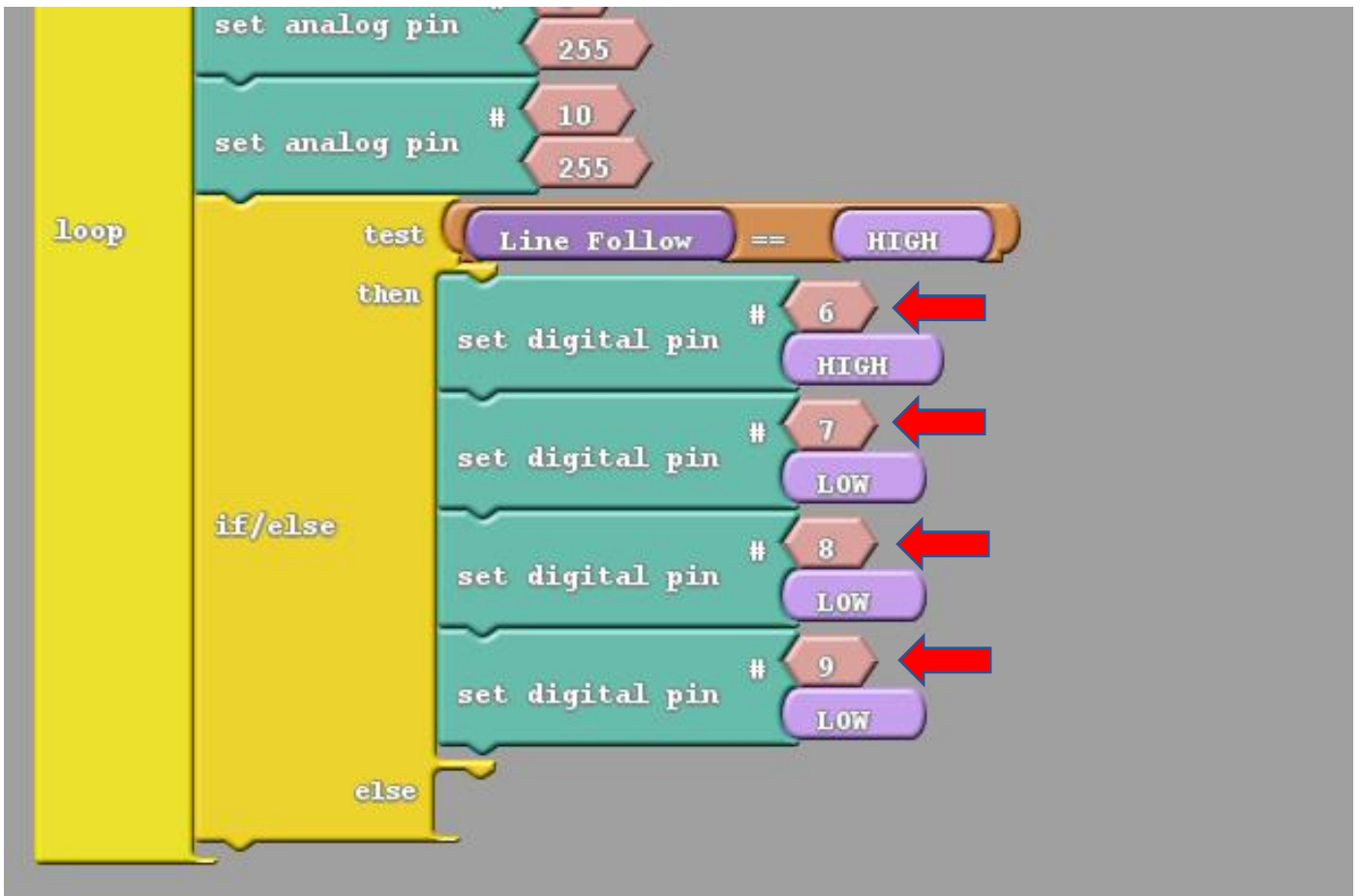
5. Snap two panels of "set analog pin" from the Pin tab to under the Serial Println, and label them as shown.



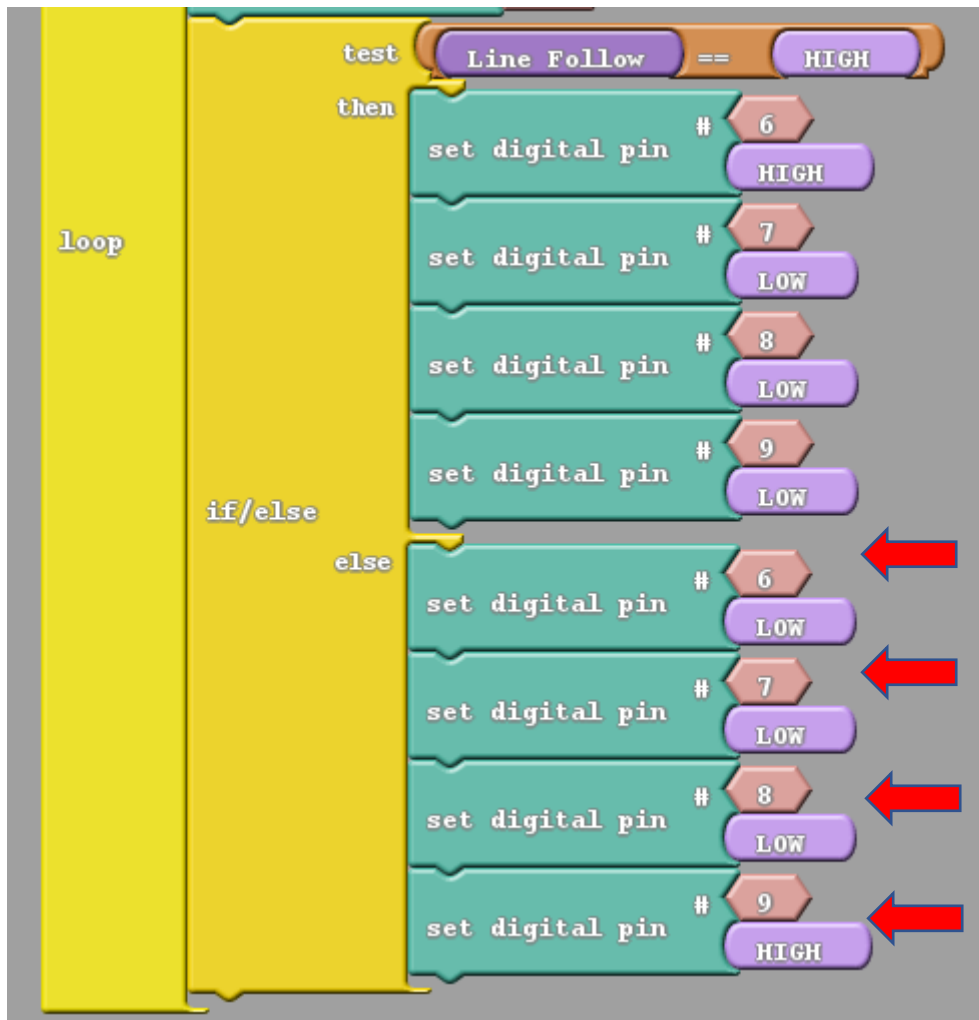
6. Select an if/else loop from the control panel and snap it under the "Serial Println" as shown. From the Test Tab select the "==" panel and snap it in the test slot. Clone the "Line follow" panel and insert it as shown. Select a "High" panel from the Variable/Constants Tab and snap it as shown.



7. Snap four panels of "set digital pin" in the then slot of if/else loop and label them as shown.



8. Go to the first "set digital pin" right click on it and clone it, it will duplicate that panel and the other 3 panels under it, snap these cloned panels in the else slot of the if/else panel and change their values as shown.



9. Now upload this code into the CODIBOT, disconnect CODI from the computer and place him on a dark line to follow.
10. Congrats CODI can now deliver stuff to people's homes.

