CAMP # 2 ACTIVITIES

REF : myFlowLab-1602-2

REAL-WORLD PROTOTYPE PROJECTS WITH ARDUINO UNO

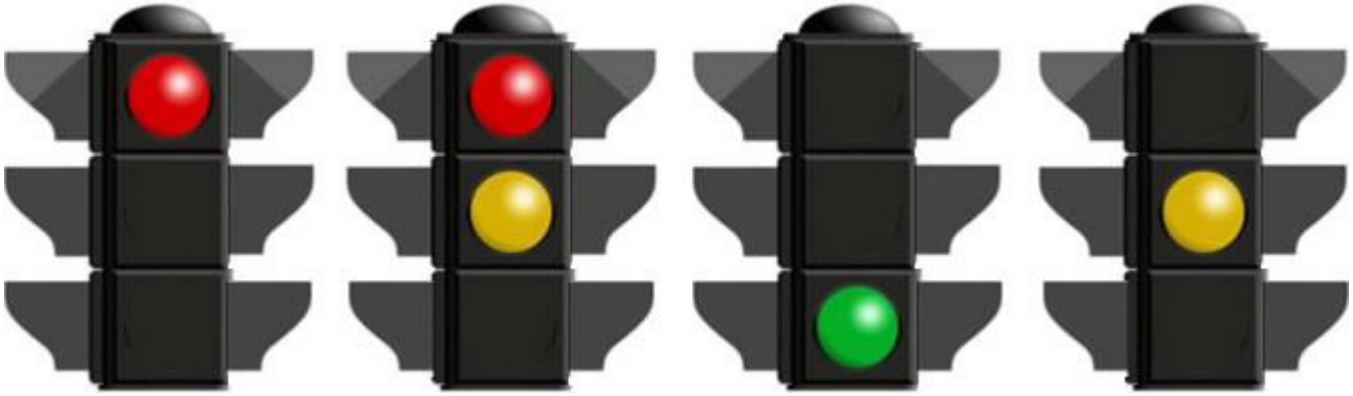
BUILD

MATROLL myFlowlab

Day 1

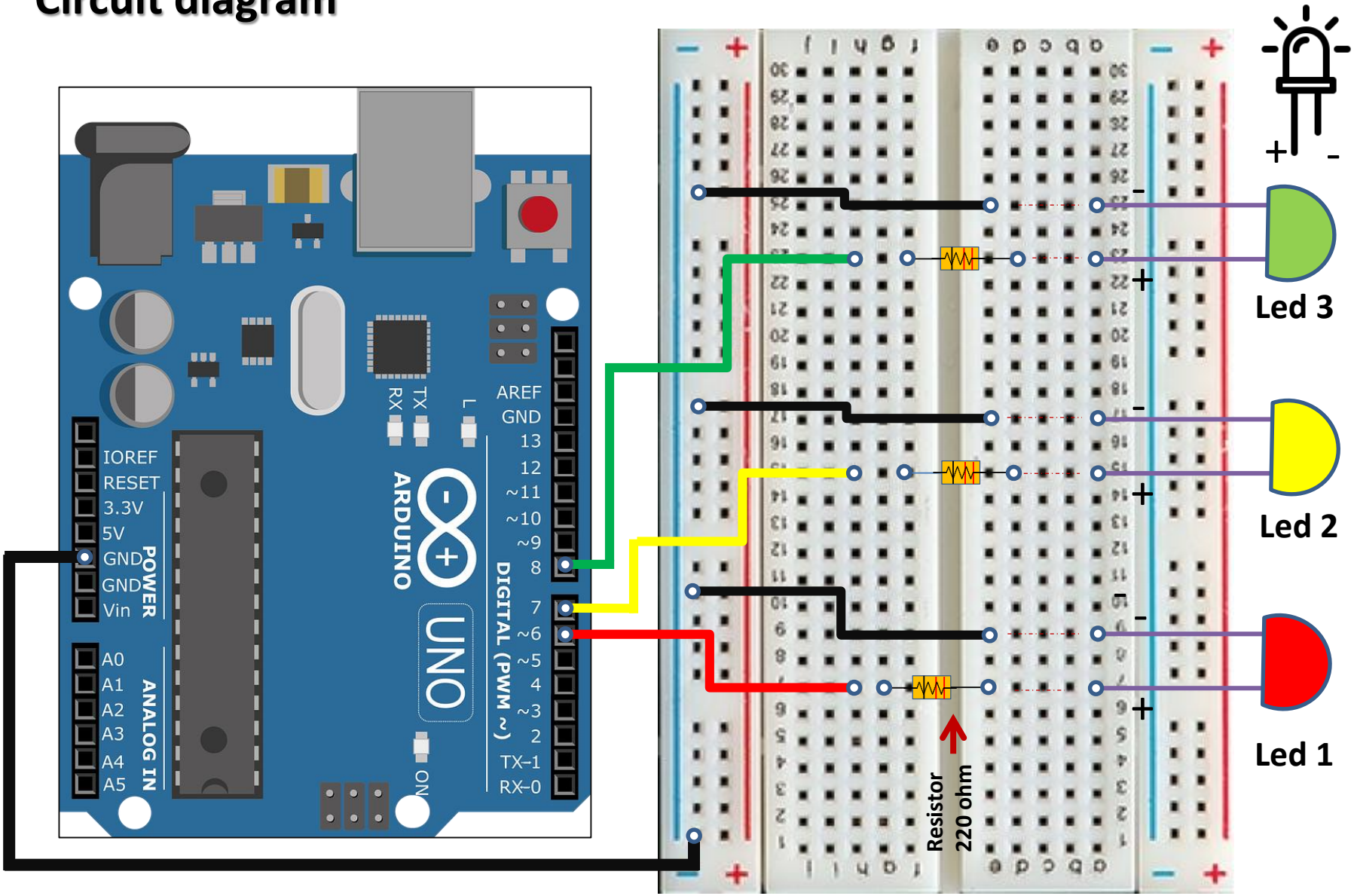
Electronic Prototype projects

C2_P1
Traffic Light Control System
Project #11



C2_P1 Traffic light Project #1

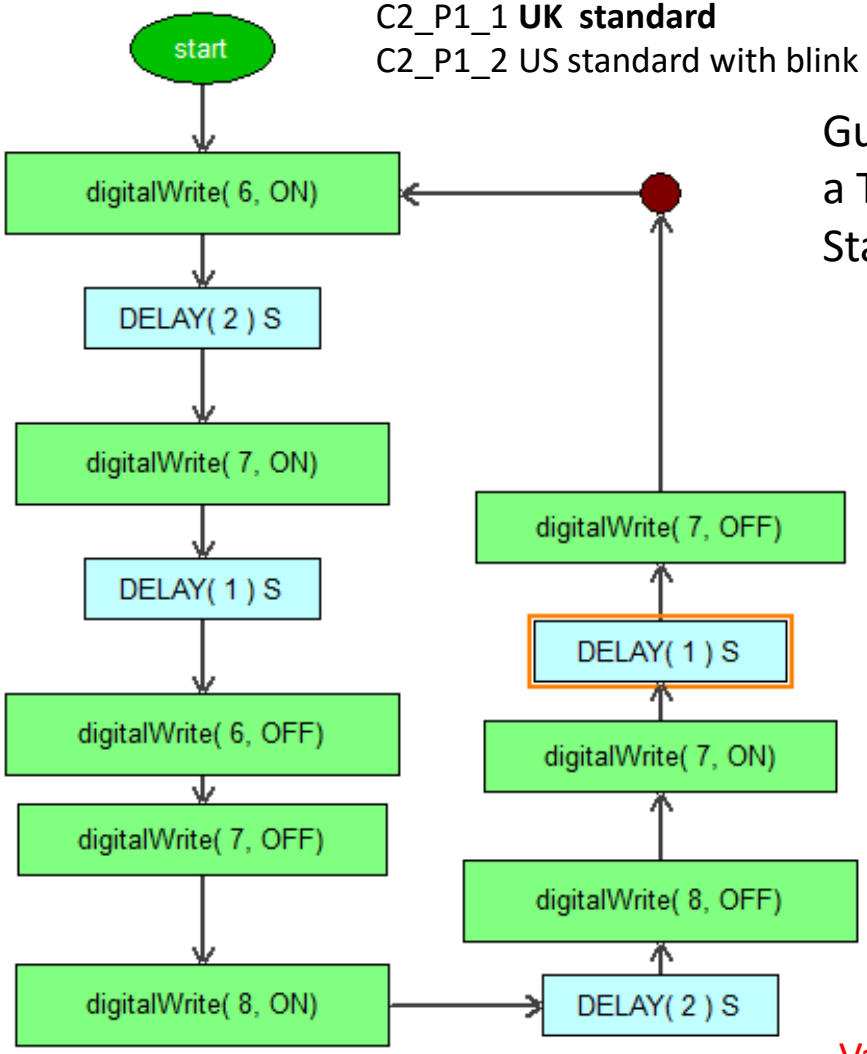
Circuit diagram



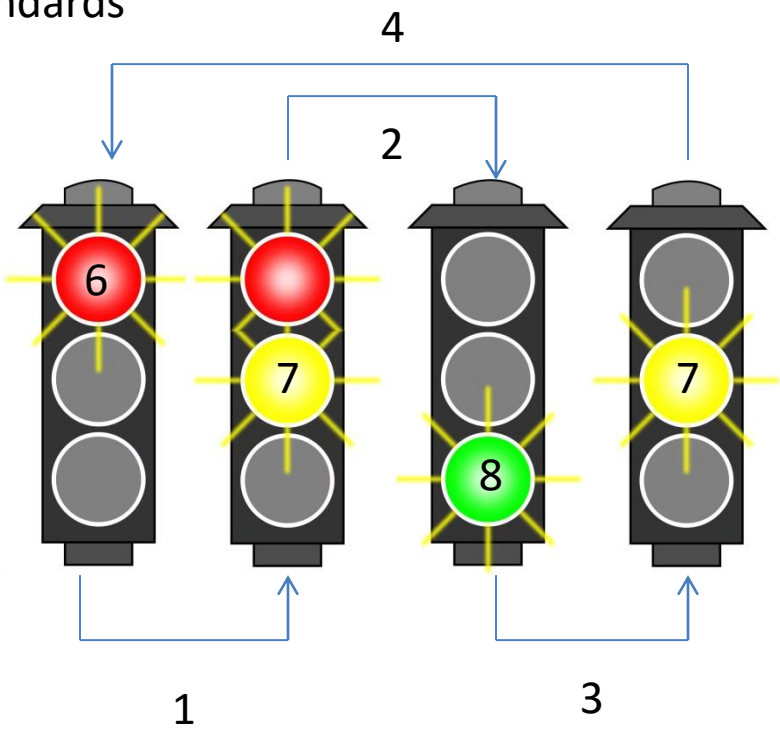
Traffic Light Control Project program

C2_P1

C2_P1_1 **UK standard**
C2_P1_2 US standard with blink



Guide student to write a program to control a Traffic as per sequence below – The UK Standards

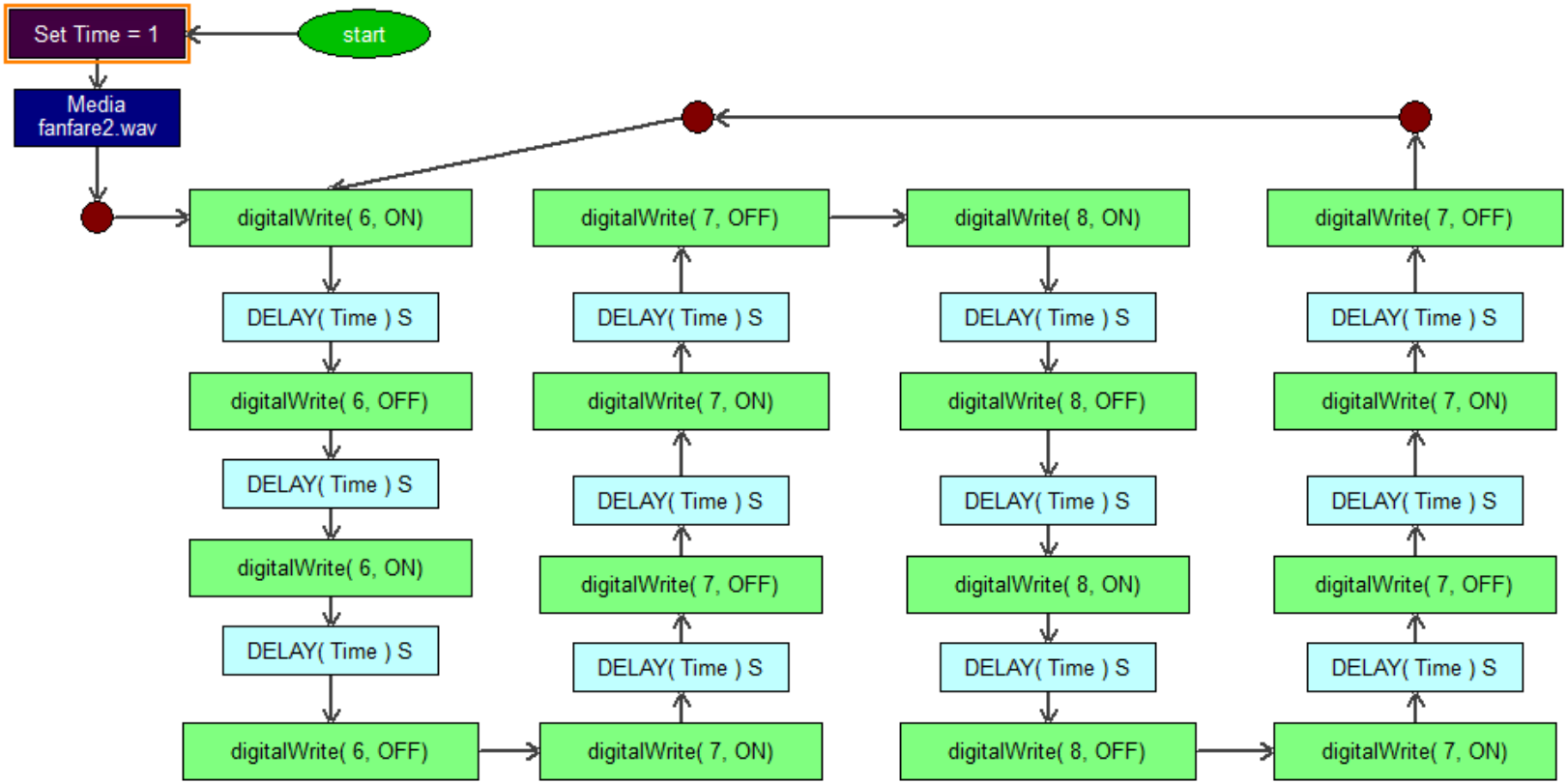


Variation: Get the students to program the Traffic Light based on American or any other Standards

Running LED blinking Project #2

C2_P2_1

Flow program



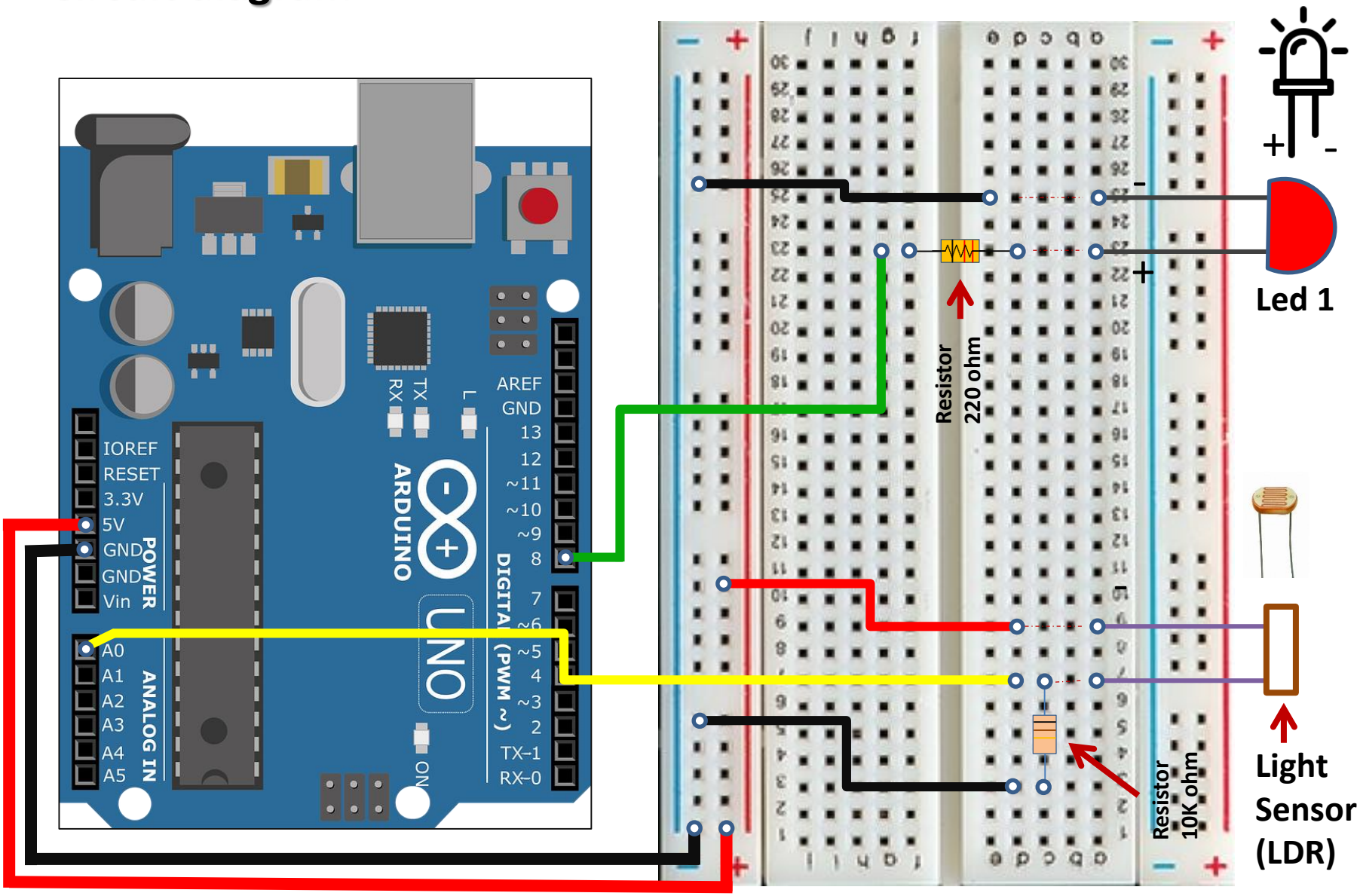
Day 2

Electronic Prototype projects

Activity #1

C2_P3 Light Sensor Project #3

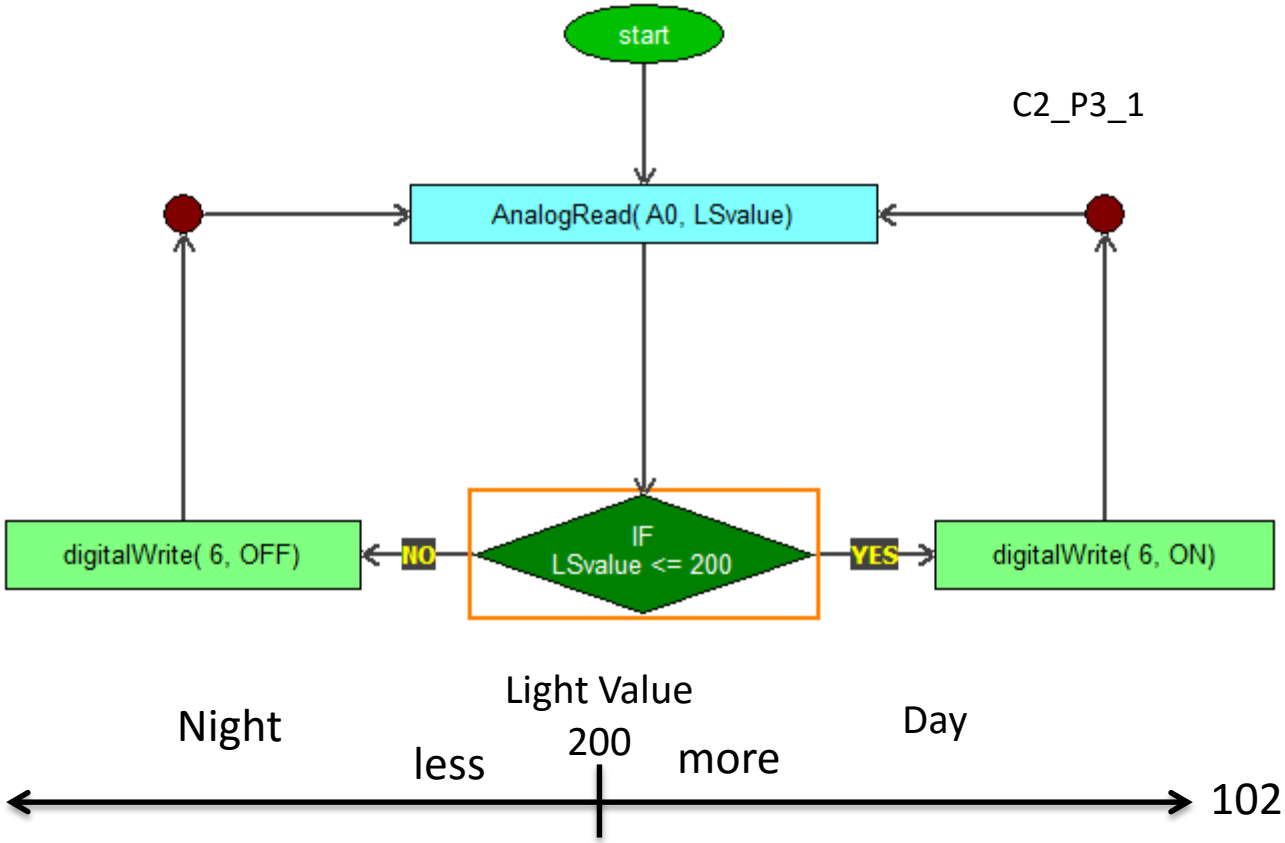
Circuit diagram



C2_P3_1

Day/Night Light Project

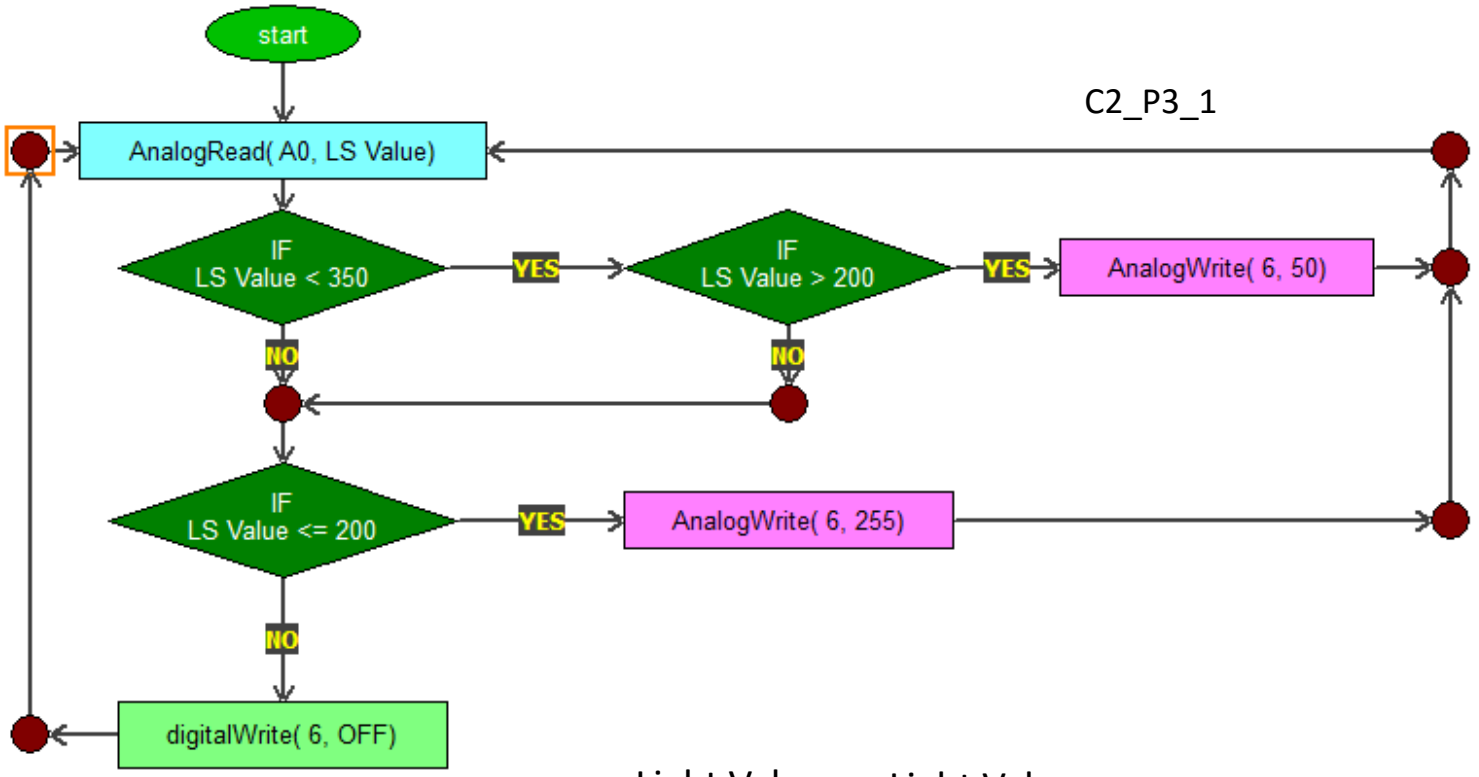
Using Light Sensor to Turn ON/OFF Light

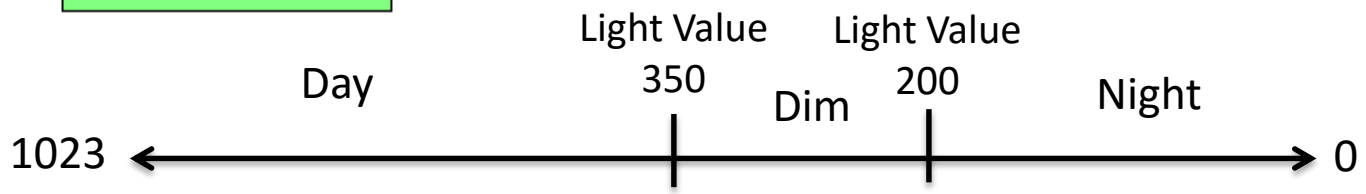


Get Student to adjust the correct
Value read from the sensor to determine day or night

C2_P3_2

Ambient Light Detection
Using Light Sensor to turn ON and Fade LED

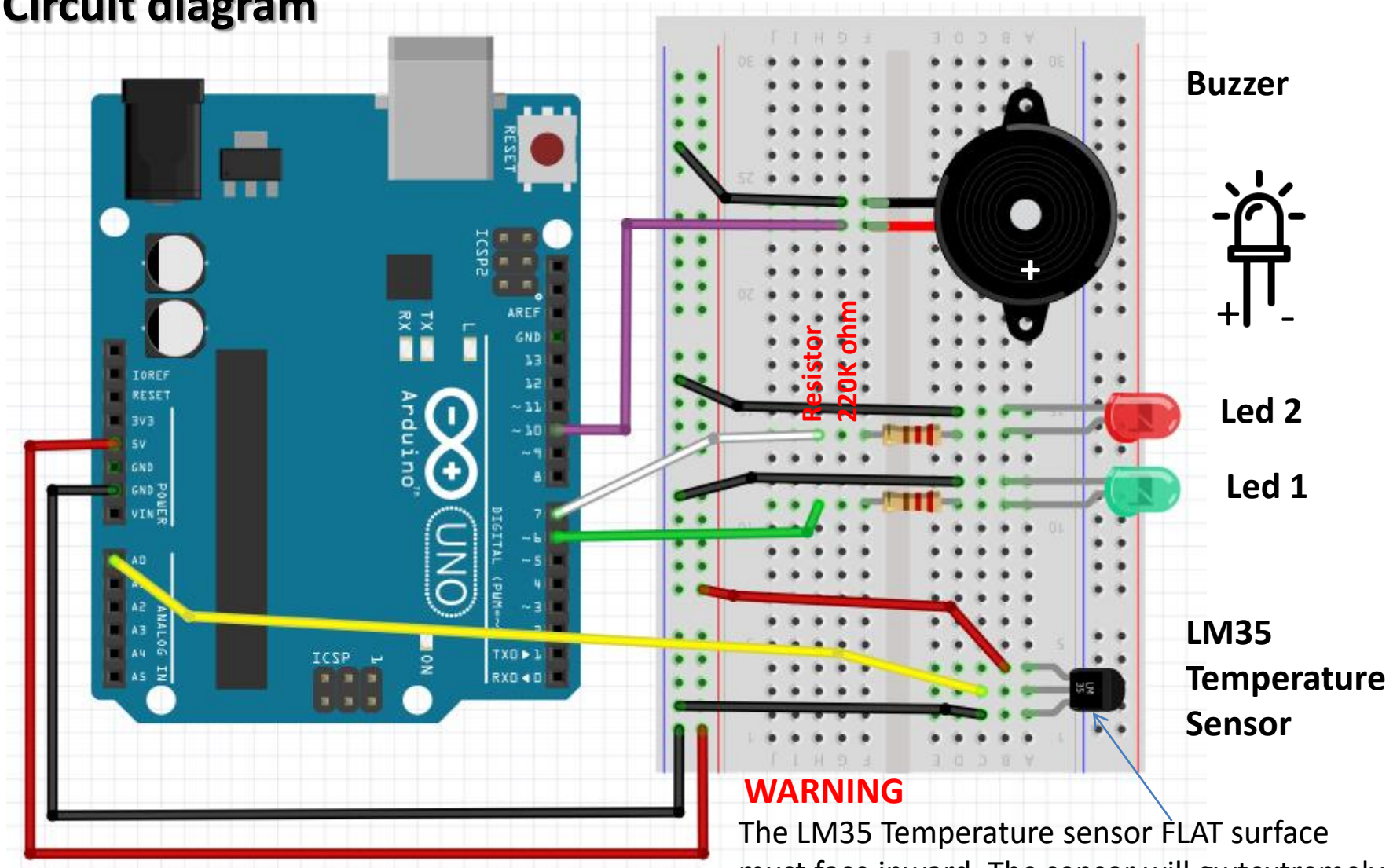




Get Student to adjust the correct
Light sensor value to Turn ON and Fade the LED

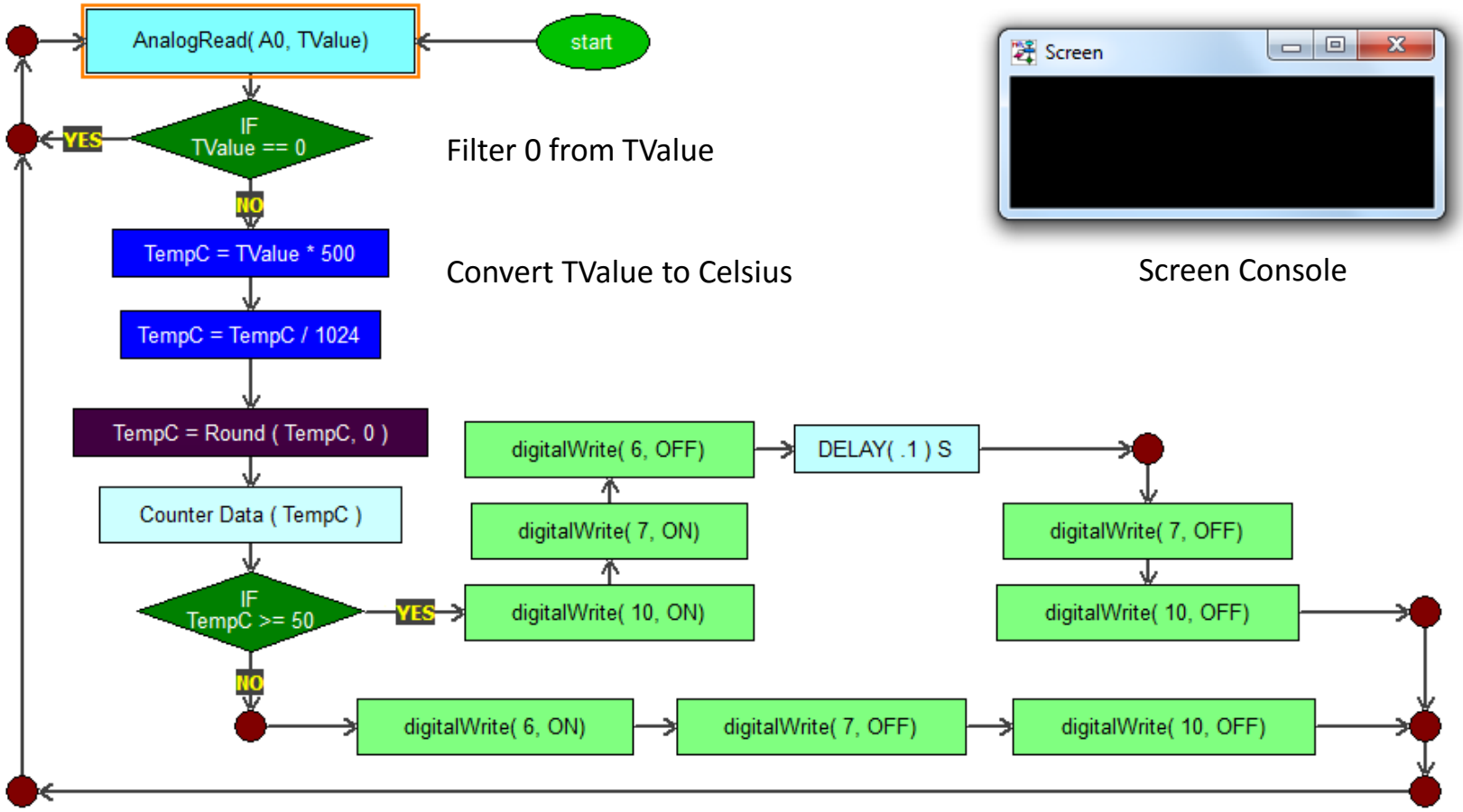
C2_P4 Temperature Sensor Project #4

Circuit diagram



C2_P4_1

Fire Alarm System Flow program
Using LM35 Temperature Sensor



Filter 0 from TValue

Convert TValue to Celsius

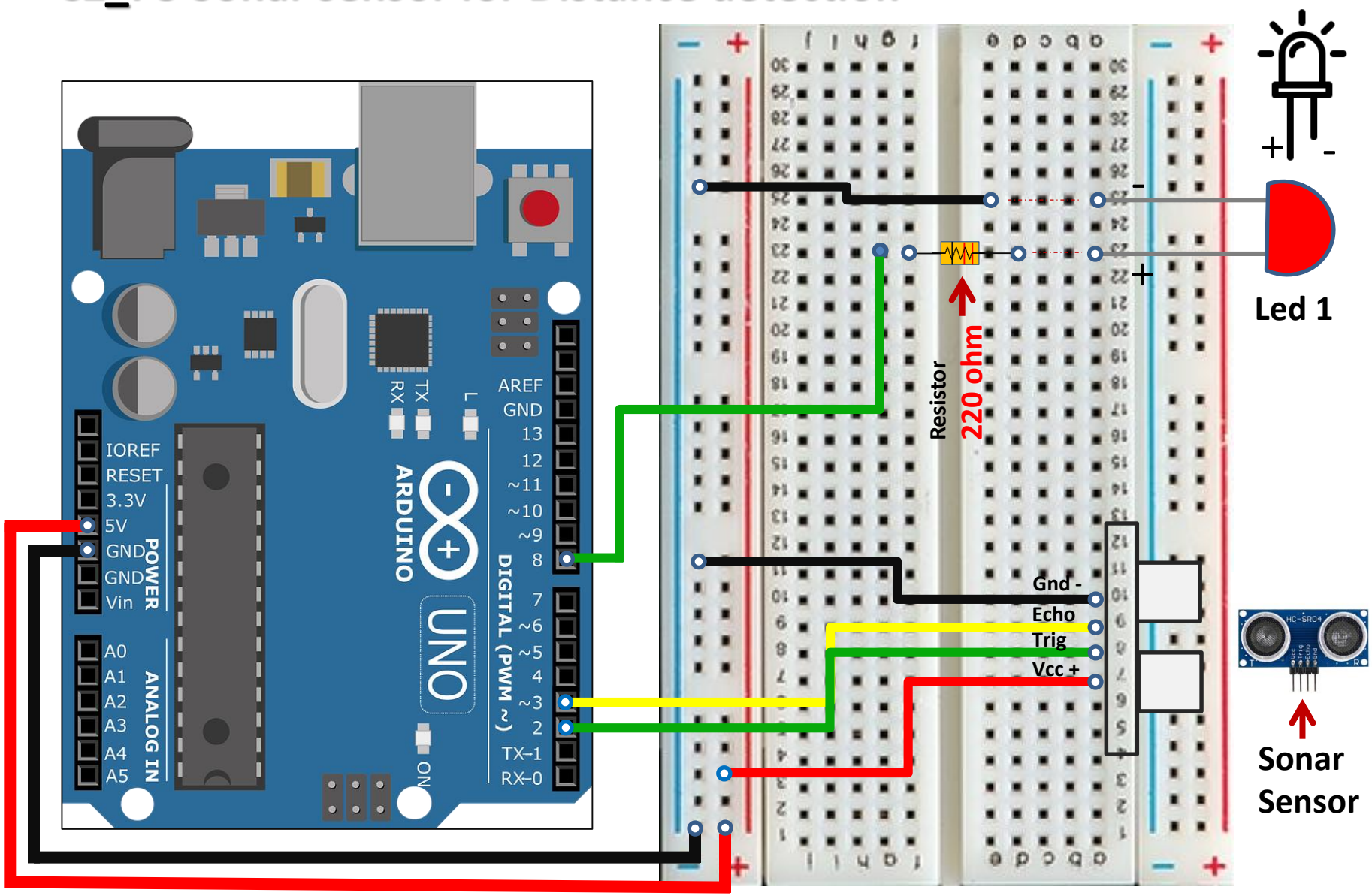
Screen Console

Day 3

Electronic Prototype projects

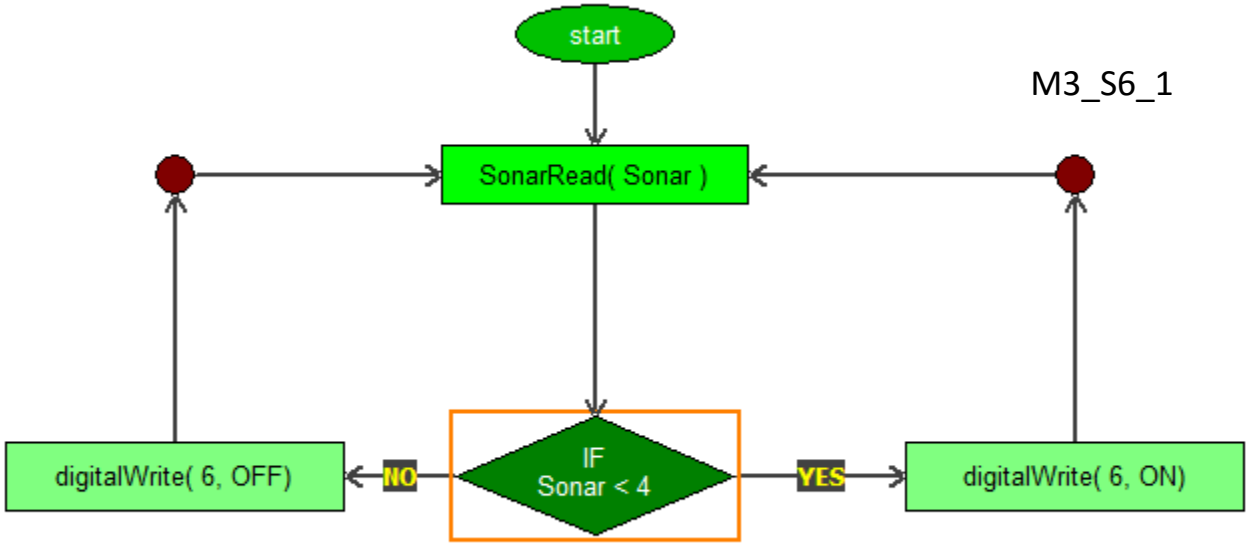
Activity #2

C2_P5 Sonar sensor for Distance detection



C2_P5_1

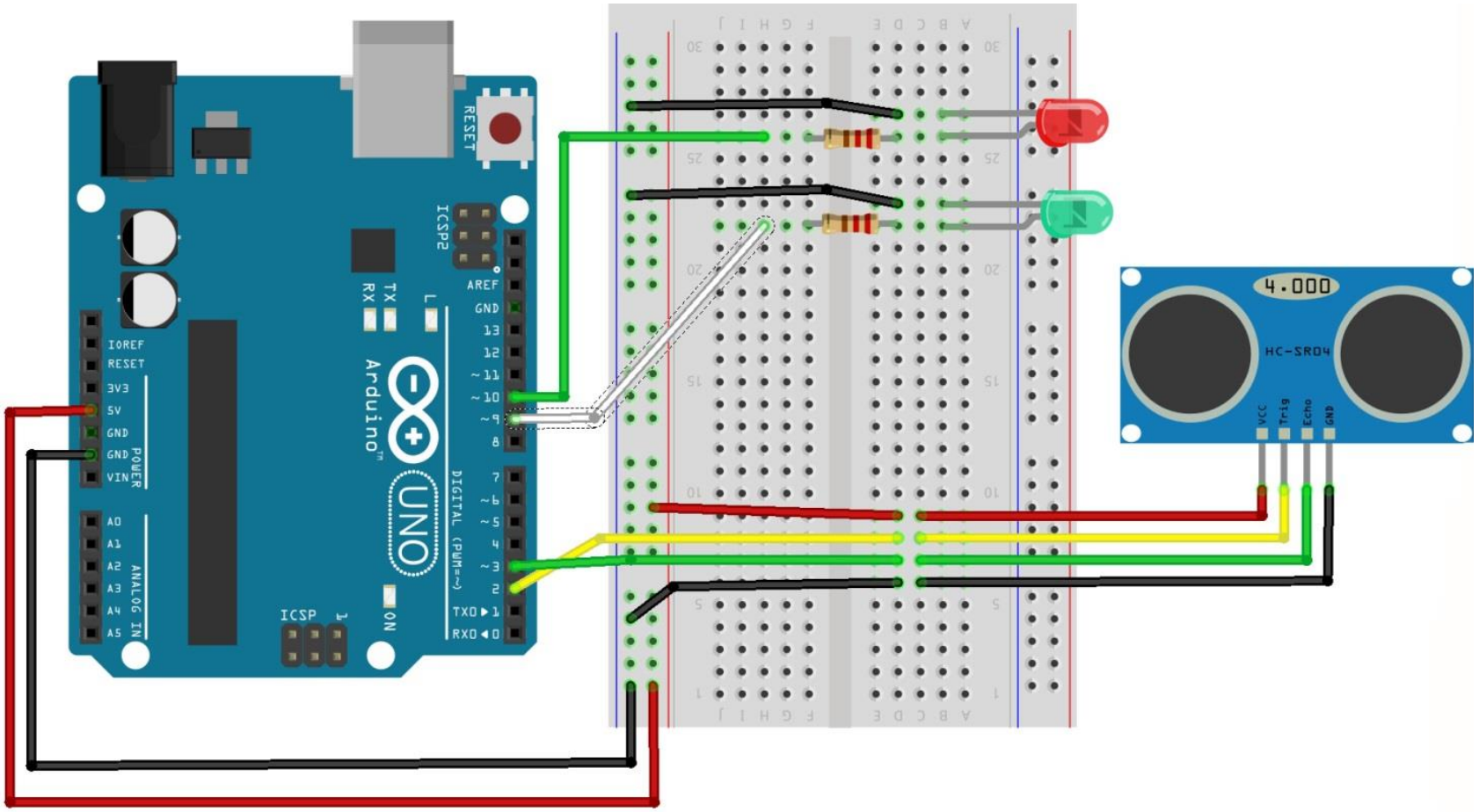
Turn On LED when intrusion detected
Flow program



Get Student to adjust the correct
Distance, read by the sensor to determine detection

C2_P6 Distance and Measurement Using Sonar Sensor

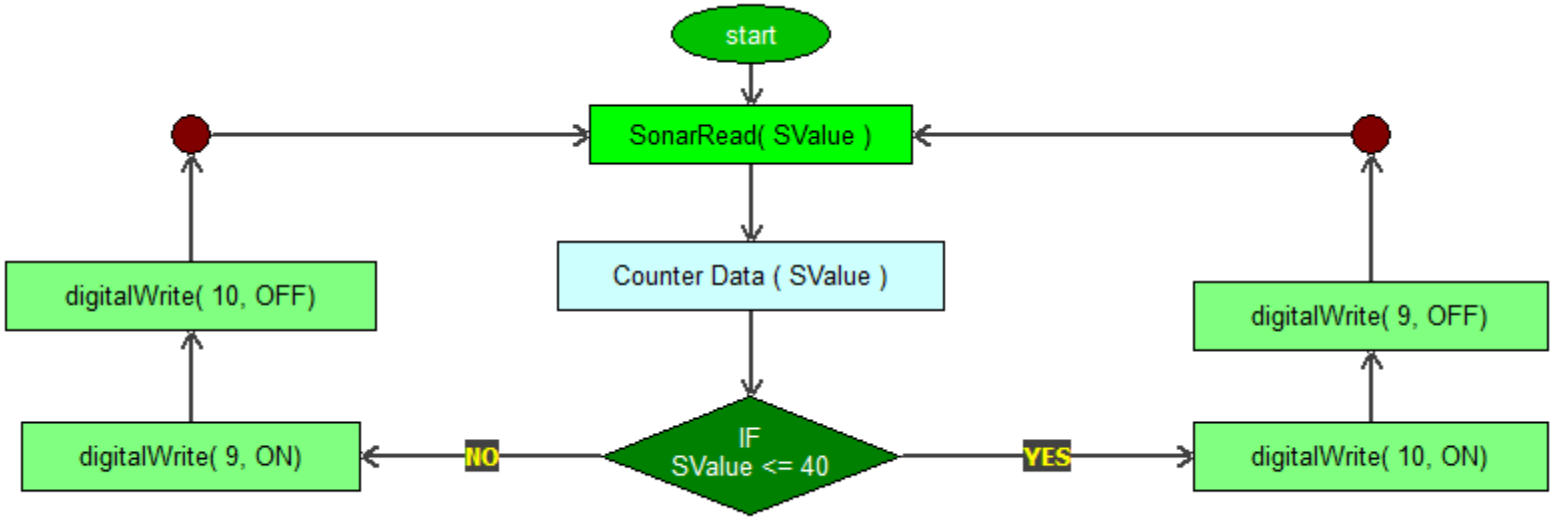
Circuit diagram



Discuss with student other real world applications application

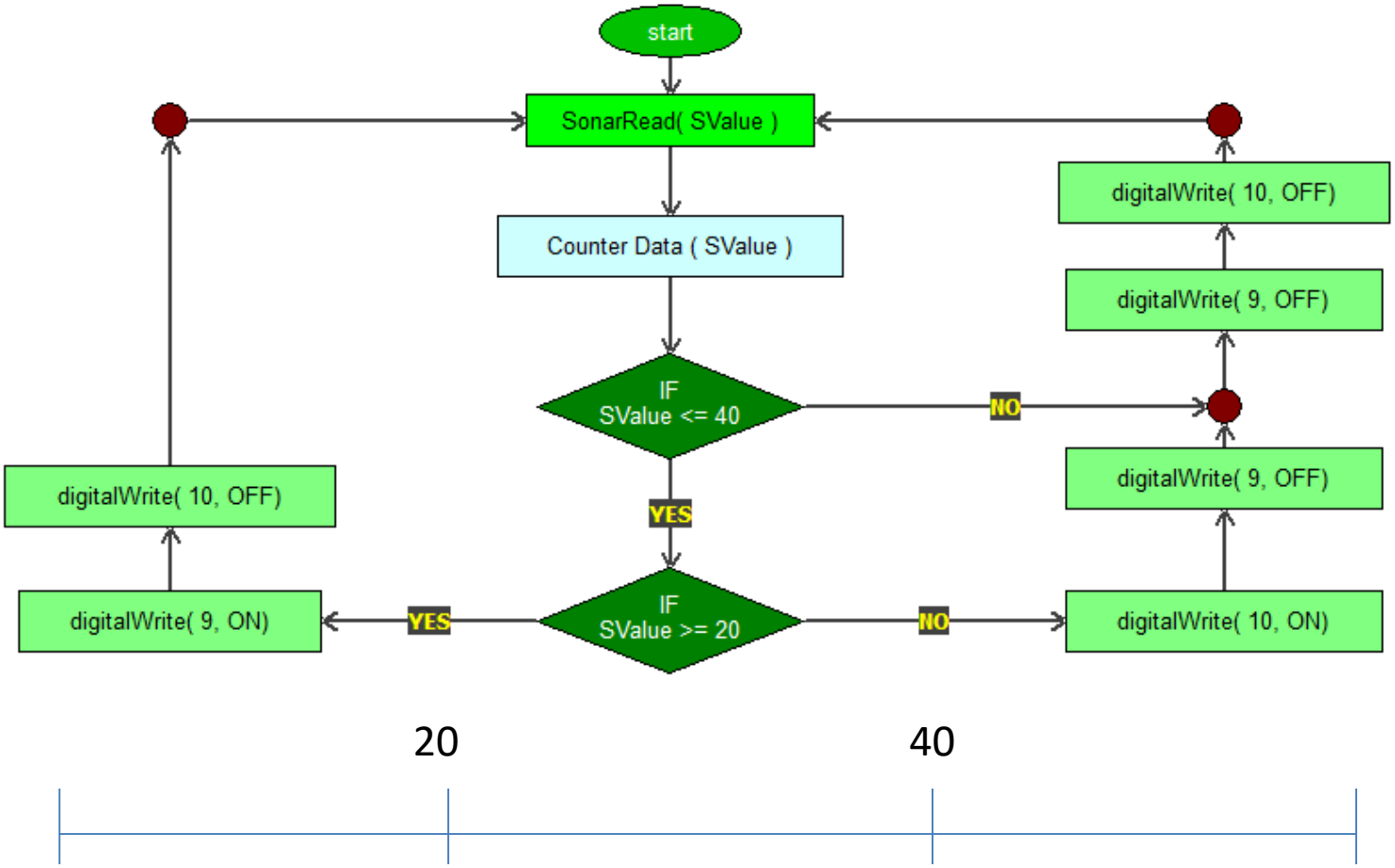
C2_P6_2

Turn ON LED RED when intrusion detected
Within certain distance else Turn On Green LED



C2_P6_1

Distance measurement project using Sonar sensor
Flow Program

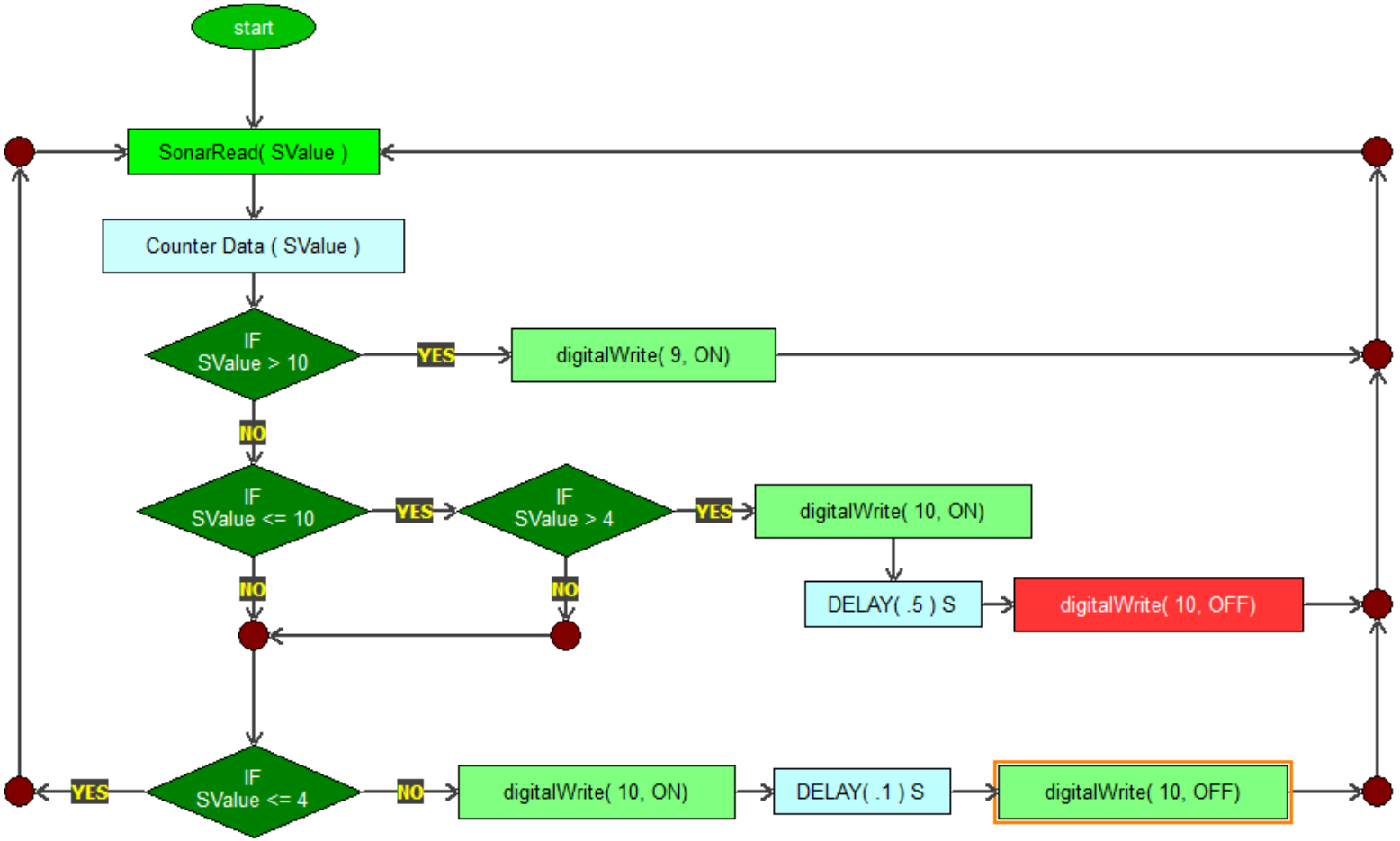


C2_P7 Water level measurement project using Sonar sensor

Water Level measurement project

C2_P7_1

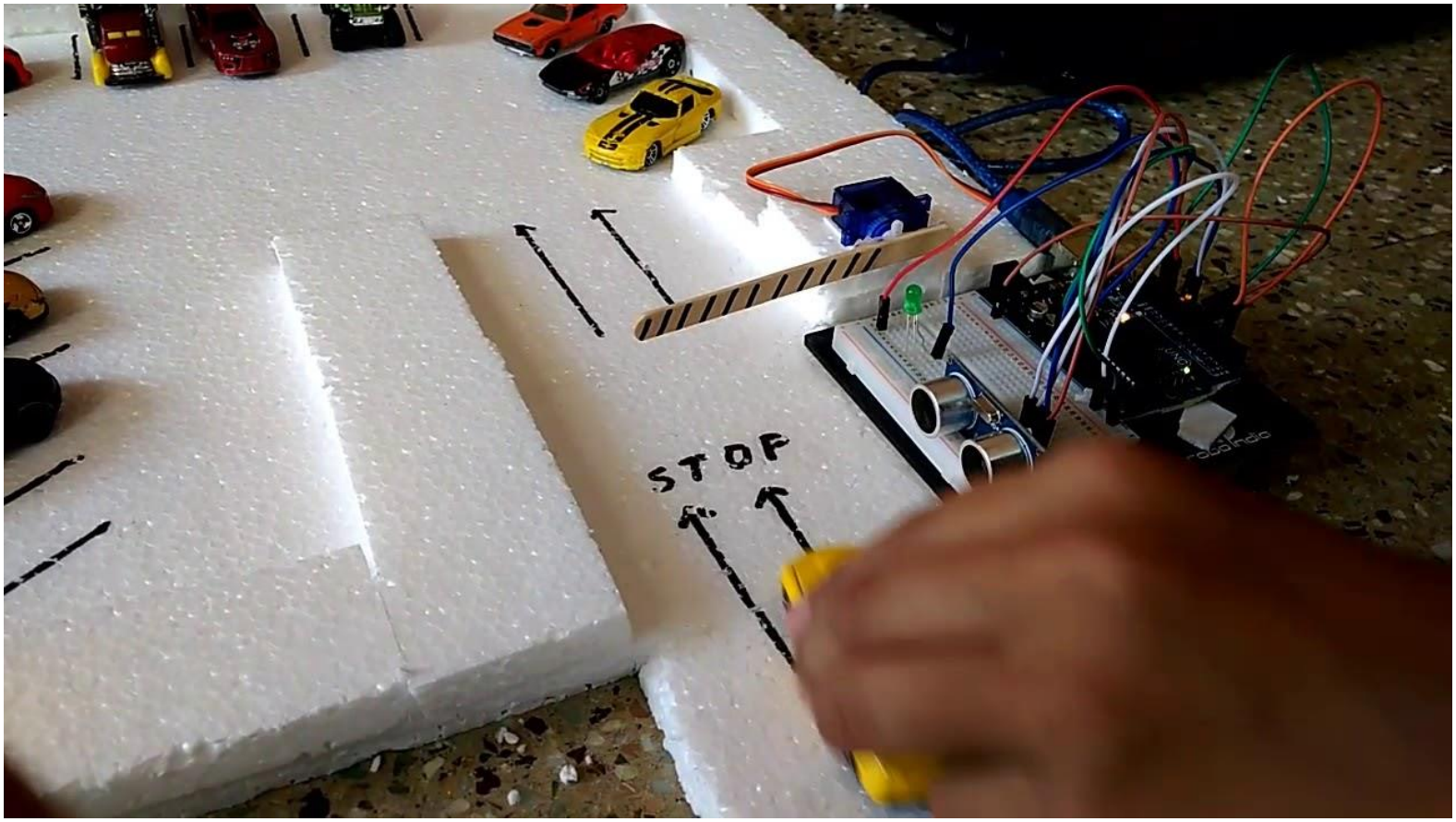
Water level measurement project
using Sonar sensor



Day 4

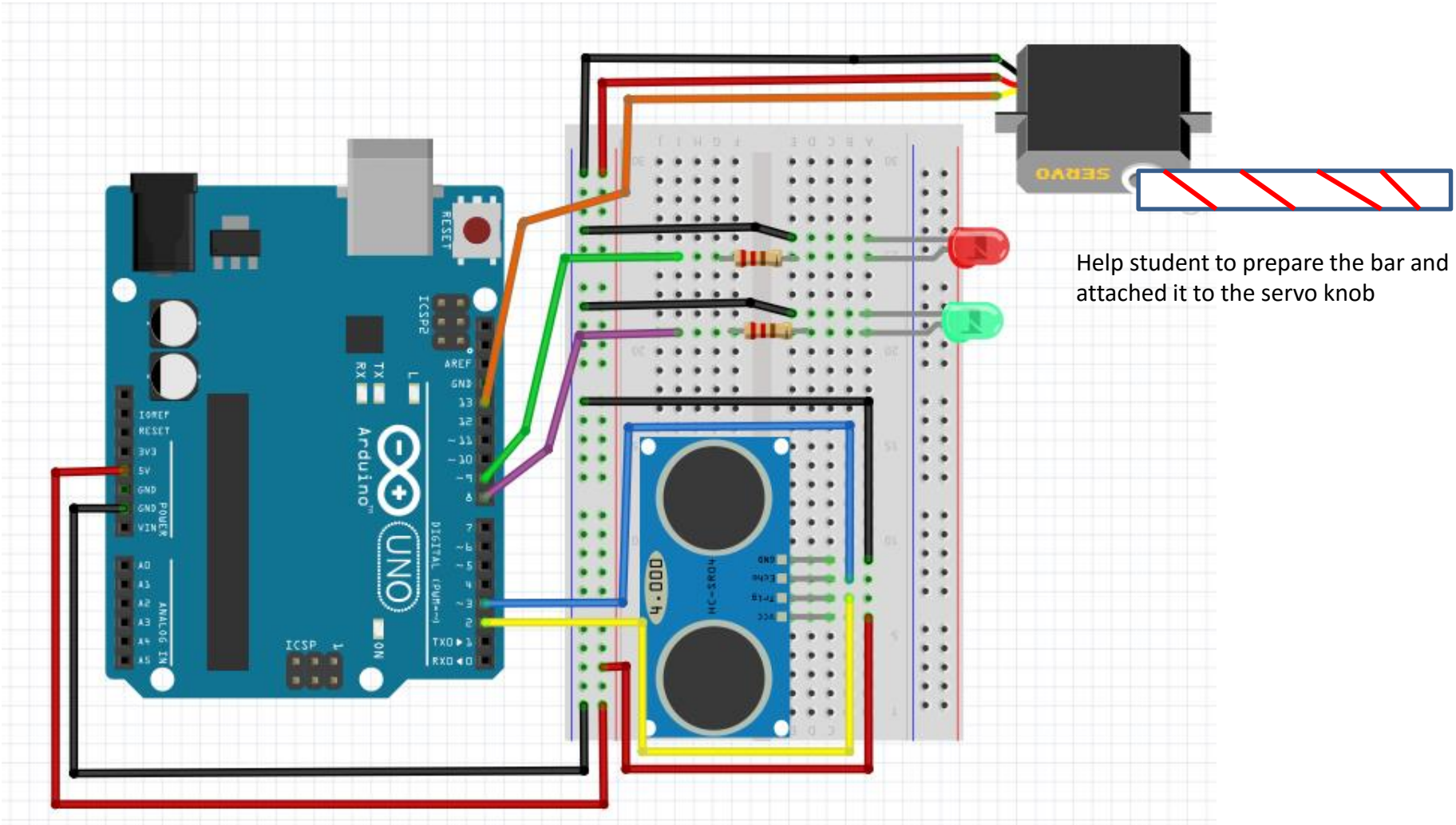
Robotic Prototype projects
using Servo motor
#1

C2_P8 Car Park Gate using Servo Motor and Sonar Sensor
Work with student to construct Project #8 - Car park Gate as show below



C2_P8 The Circuit -Car Park Gate using Servo Motor, LED's and Sonar Sensor

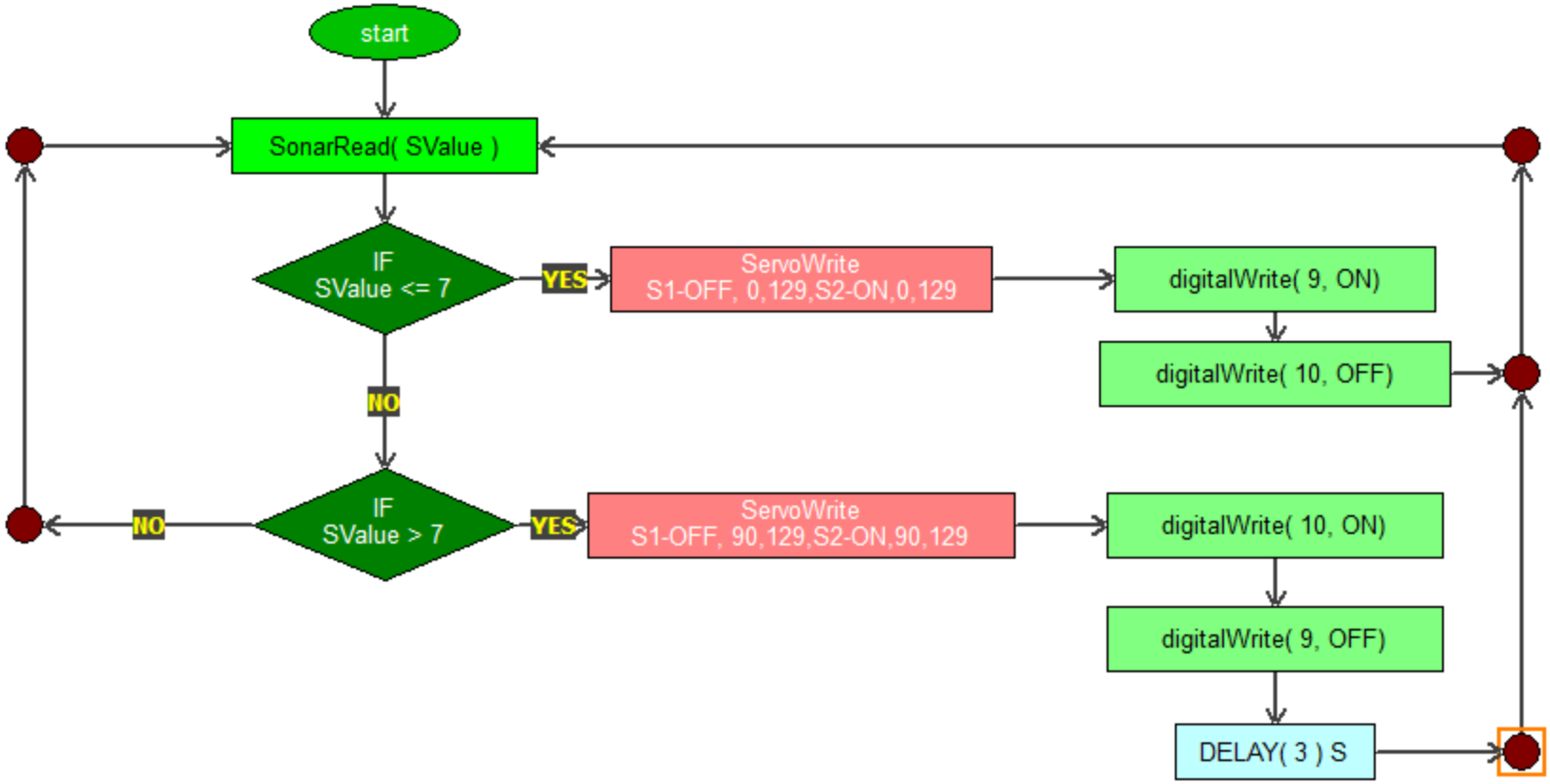
Circuit diagram



Help student to prepare the bar and attached it to the servo knob

CP_P8_1

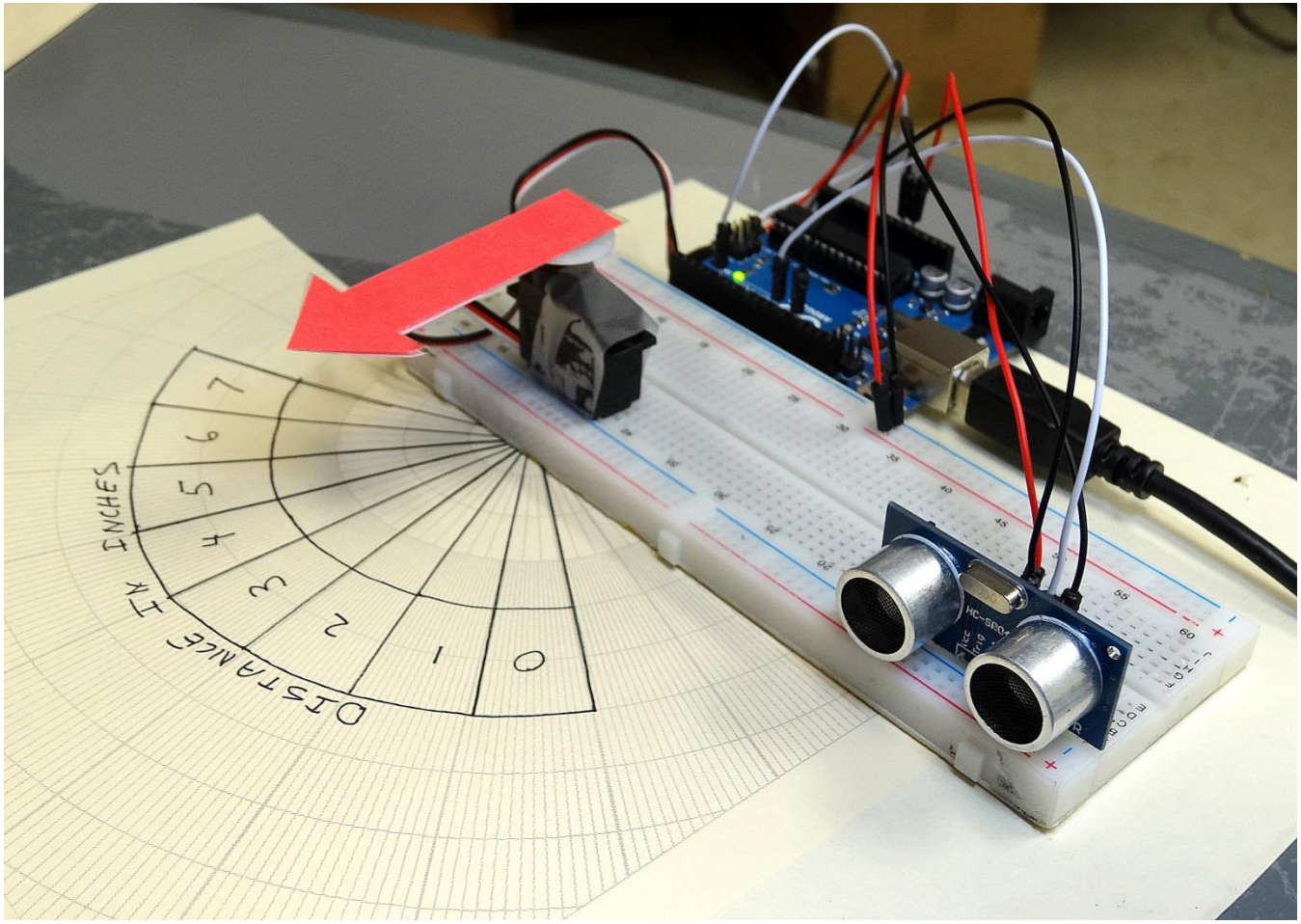
Flow Program Car Park Gate using Servo Motor, LED and Sonar Sensor



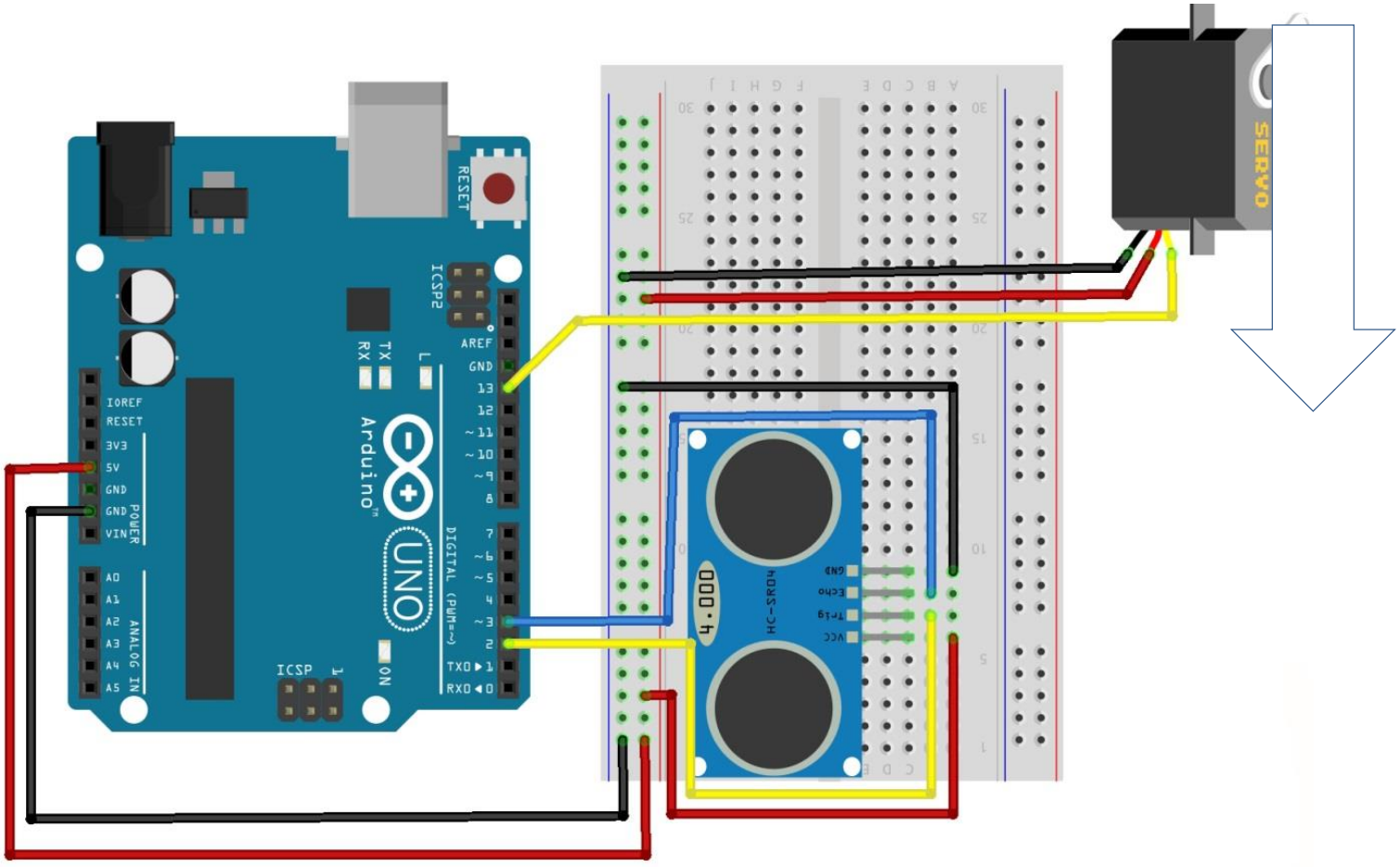
Day 5

Robotic Prototype projects
using Servo motor
#2

C2_P9 Analog Distance indicator Using sonar sensor feedback project

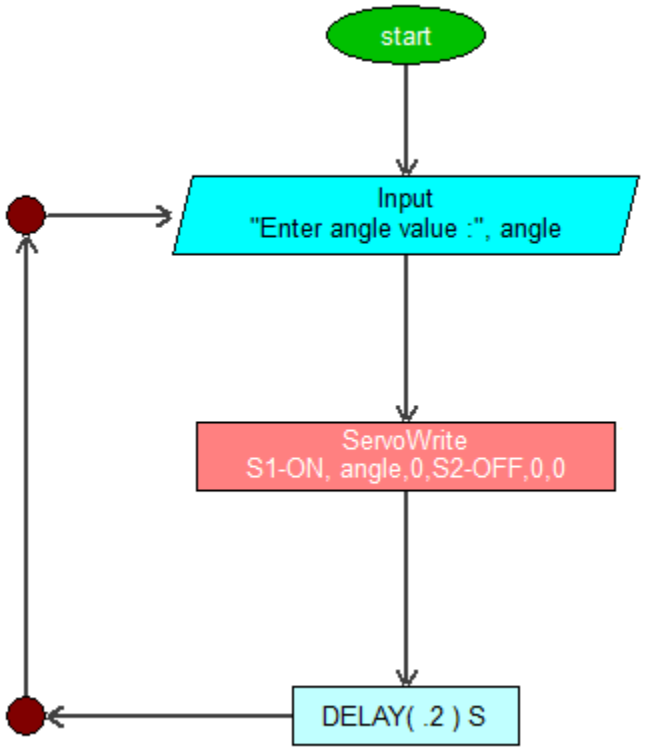


C2_P9 Analog Distance indicator Using sonar sensor project
Circuit Diagram



C2_P9_1 Analog Distance indicator Using sonar sensor feedback

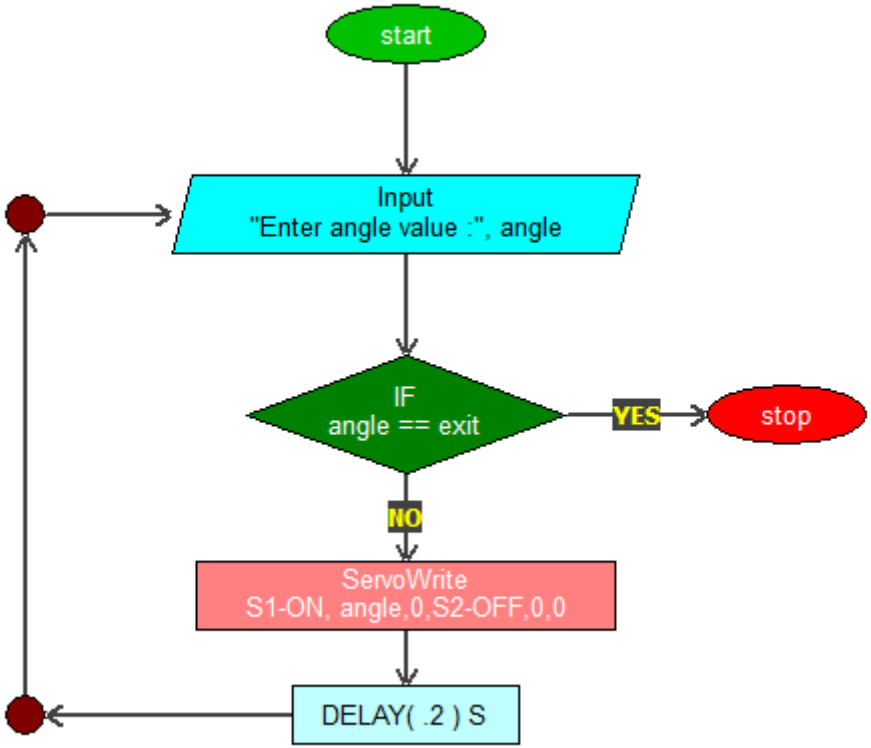
Flow Program



Example #1

C2_P9_2 Analog Distance indicator Using sonar sensor feedback

Flow Program



Example #2

END OF

CAMP # 2

ACTIVITIES