

IoT Assignment-2 [4 Marks]

Task: On the **Wokwi simulator**, design a traffic control system incorporated with the following **functionalities**:

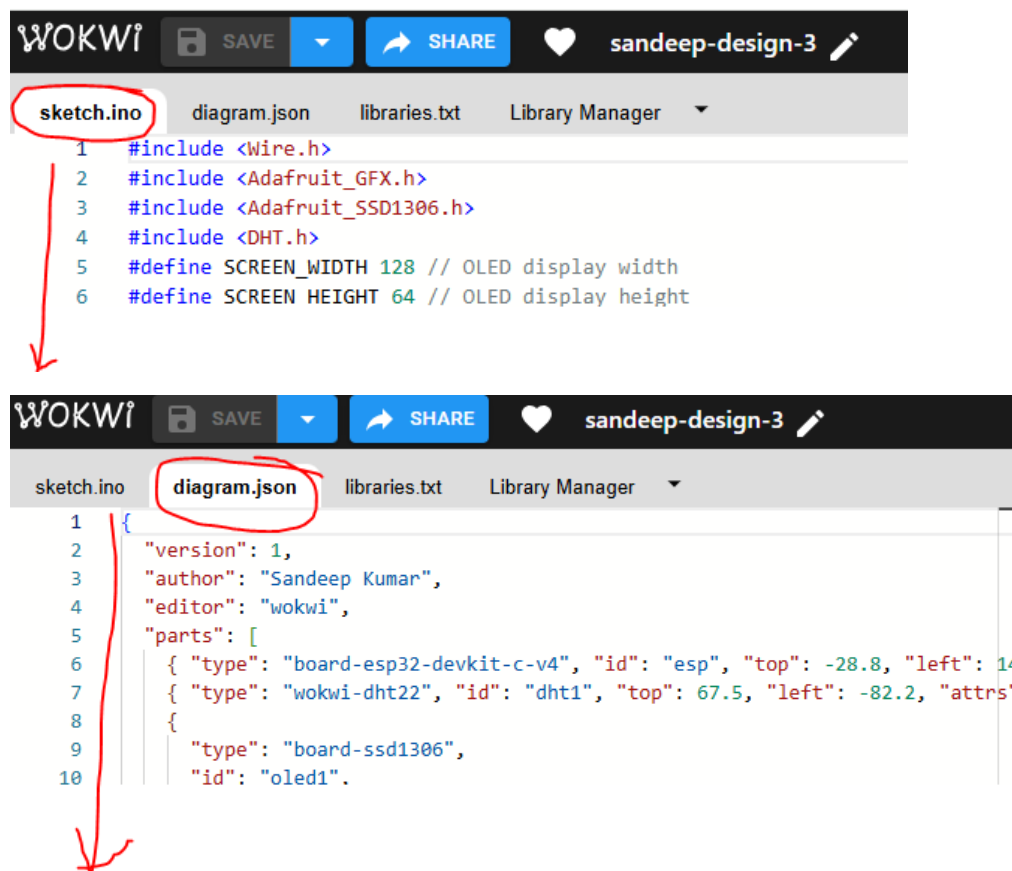
(i) **Green, Yellow and Red LEDs** will be turning on for 10 seconds one after the another in cyclic order. E.g. first the Green LED turns on for 10 sec, then it turns off and Yellow LED will turn on for 10 sec, then it turns off and Red LED will turn on for 10 sec. The same will be repeated again starting from Green LED and so on.

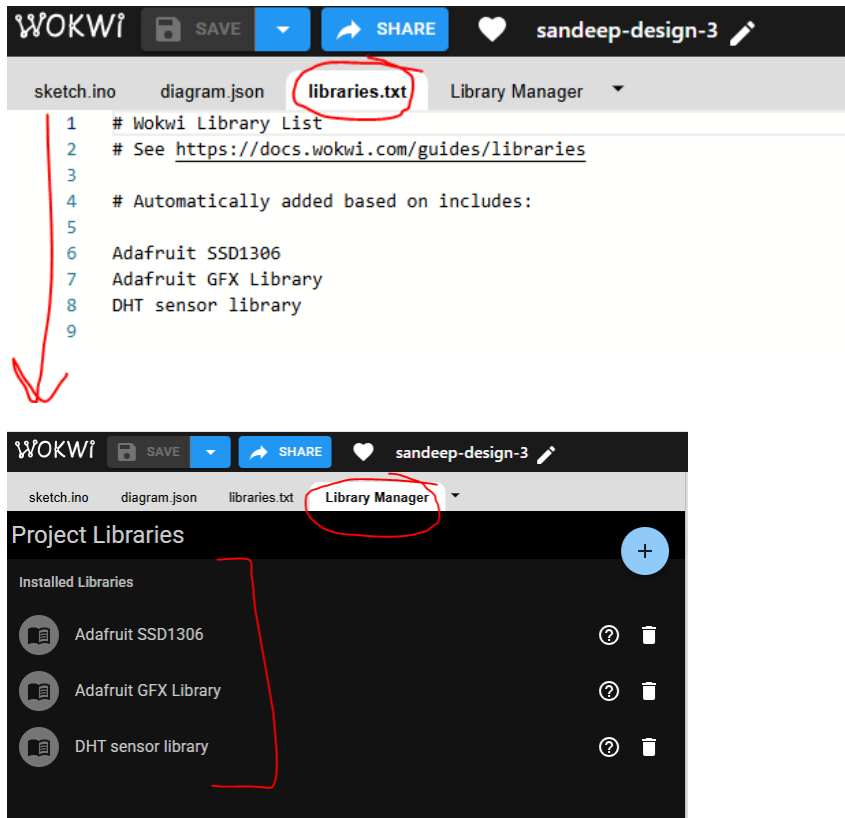
(ii) Use the **ultrasonic sensor** to detect the crossing of RED light. During the RED light signal, if any vehicle (*object of ultrasonic sensor*) moves such that the distance reported by sensor is less than 10 cm, then a **buzzer** must be sounded up and **OLED display (SSD1306)** must show the message "*Red Light Crossed*".

Steps for submission:

(1) Design your project in **Wokwi** and put the snapshots of (i) **Sketch.ino**, (ii) **Diagram.json**, (iii) **Libraries.txt** and (iv) **Library Manager** in a word document.

See snap below to identify each of these:





(2) Subsequently, paste the snapshots of running simulation (**with results**) in the word document.

(3) Finally, paste the **link** to access and verify (simulate) your Wokwi design in the word document. *[The steps of generating the link are provided below].*

(4) Name the document as '**CSE Section No_Your enrolment No**' and submit it as a word document in your respective Google Classroom Sections. The deadline to submit this assignment is 16 Feb till 11:59 PM. **After this deadline, the G-Class link will not accept any assignment and the emailed assignments will NOT be accepted. No extension will be provided in the deadline at all.**

Important things to note:

(1) Only the fully worked-upon assignments (all above steps-1, 2, 3 completed) will get full marks.

(2) If the link to your assignment (step-3 above) is **not found**, zero marks will be awarded.

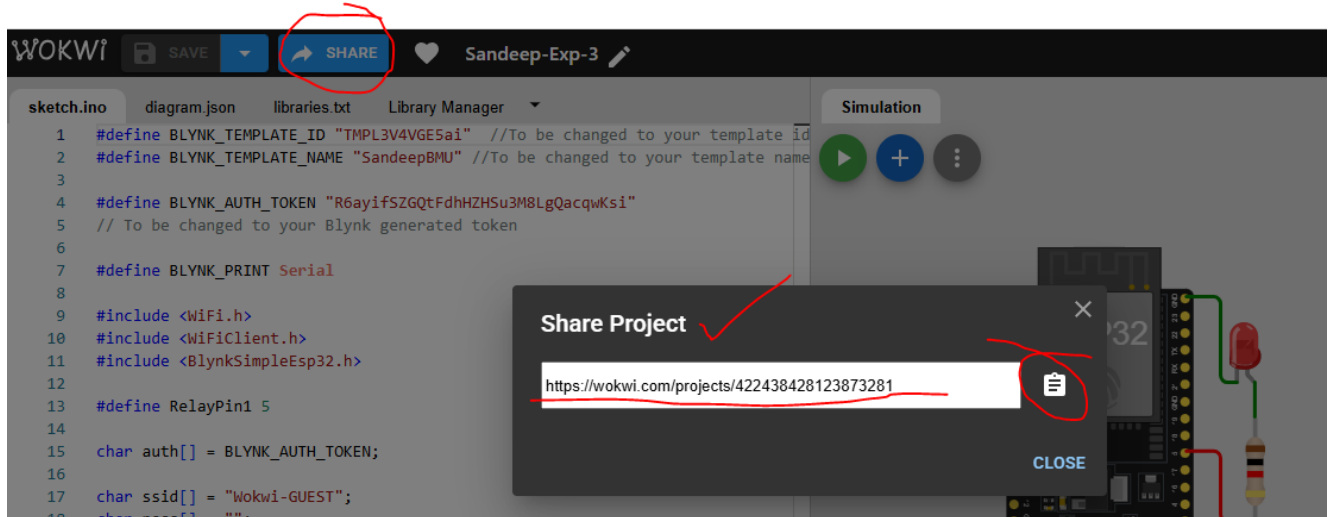
(3) If the link to your assignment (step-3 above) is **found as NOT-WORKING**, zero marks will be awarded.

(4) If the link to your assignment (step-3 above) is found bearing **SOMEONE'S ELSE NAME (as seen in Diagram.json)**, zero marks will be awarded.

How to share the link to simulate (verify) your design:

Login to your **Wokwi** account → Go to **Docs** tab on the top right corner → select (click) **my projects** → select (open) your design.

Click on **SHARE** and copy the link. (see snap below)



Test this link in another browser. It should show your project completely which can be simulated to see the results.

Paste this link in step-3 (word document) as mentioned above.