

IoT Assignment-3 [4 Marks]

Task: On the **Wokwi** simulator, design a home automation system with **ESP32** offering the following features:

(i) Automatic street light: Light should be ON in darkness (evening) and OFF during sunlight.

[Hint: Use **LDR sensor**]

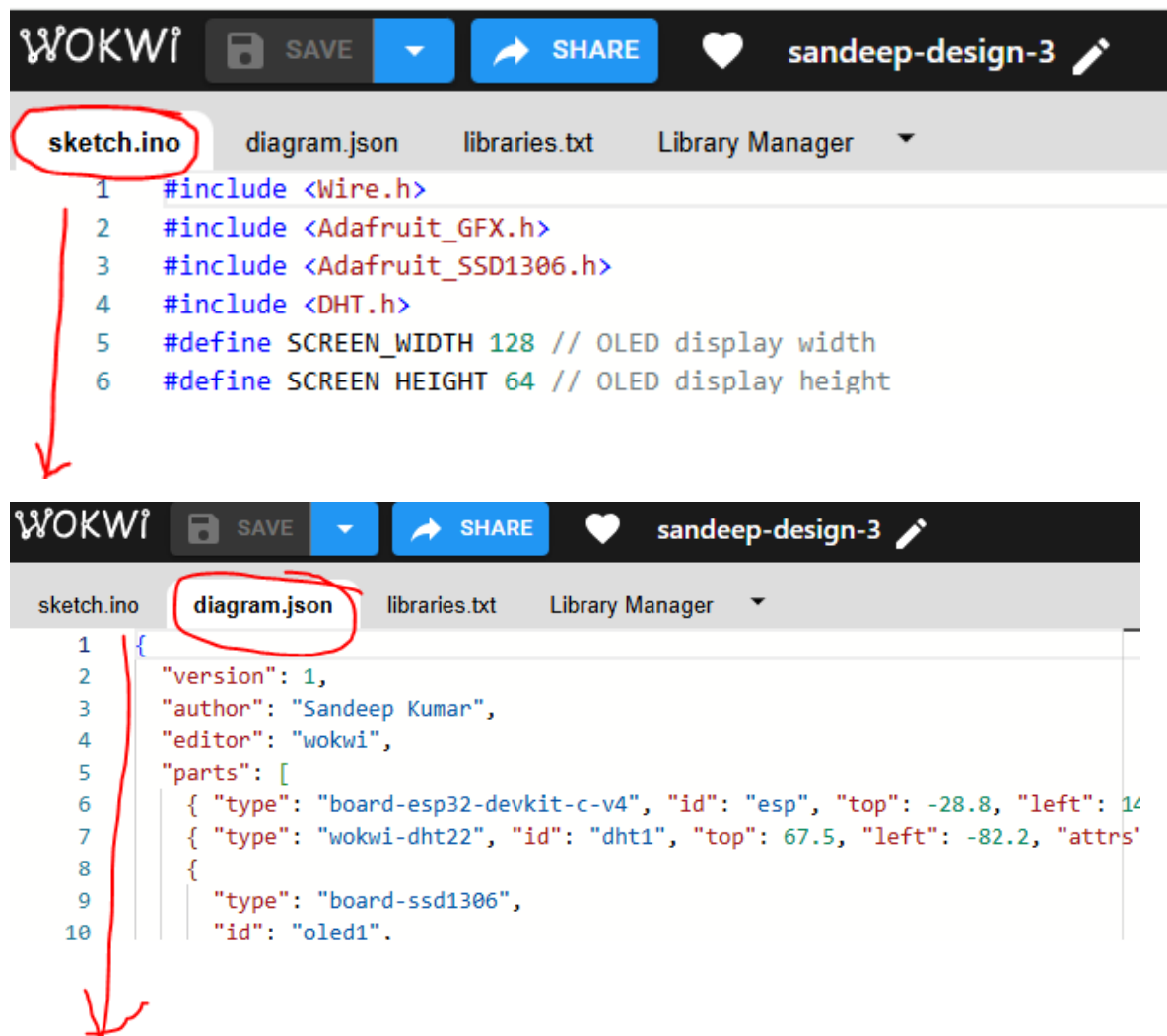
(ii) Smart Air Conditioning: As temperature rises above certain value (e.g. 30°C), use a relay to switch ON a motor (fan). Furthermore, the motor should be switched OFF as the temperature goes below 30°C.

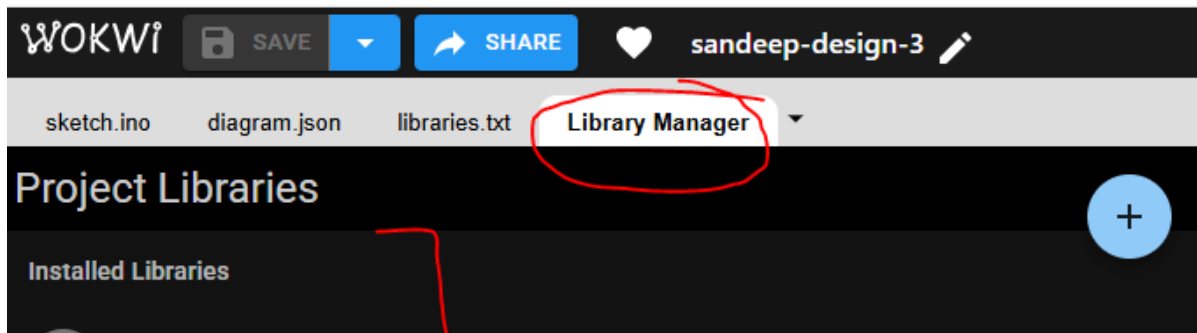
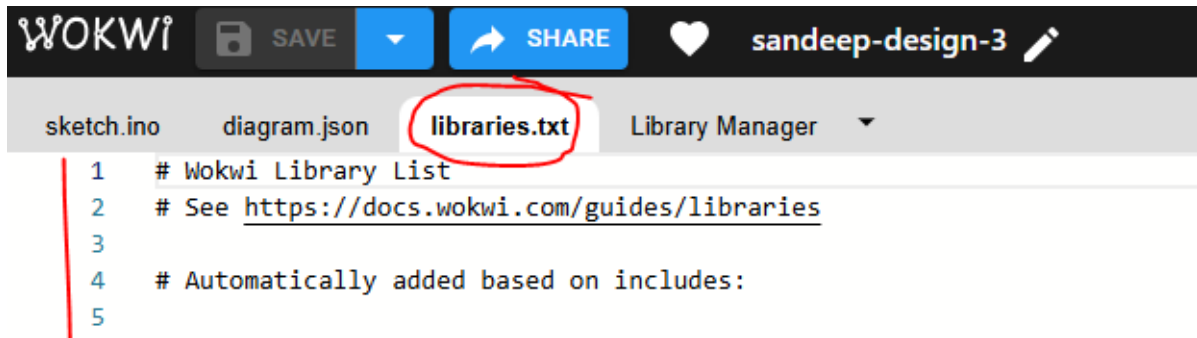
[Hint: Use **DHT22 temperature sensor** and a **servo OR stepper motor as fan**]

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 '**Assignment-3_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 **23 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.

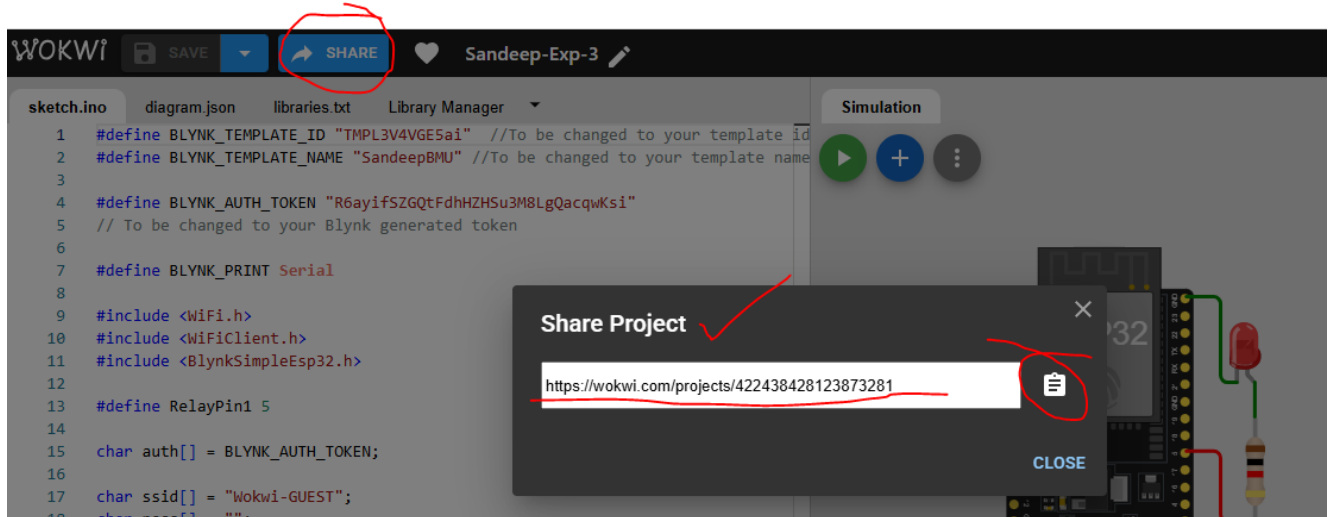
(3) If the link to your assignment (step-3 above) is **found as NOT-WORKING**, zero marks will be awarded.

(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.