

National Textile University, Faisalabad



Department of Computer Science

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Course Name:	Embedded IoT
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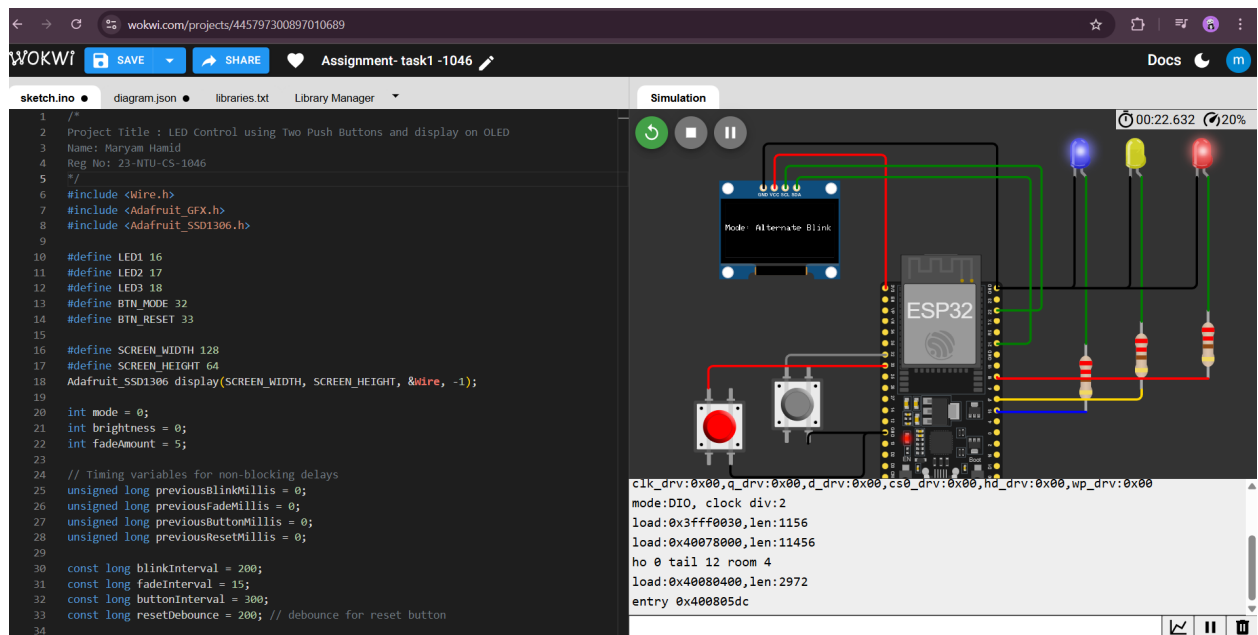
Question 3 — Implementation

Task A

Coding: Use one button to cycle through LED modes (display the current state on the OLED):

1. Both OFF
2. Alternate blink
3. Both ON
4. PWM fade

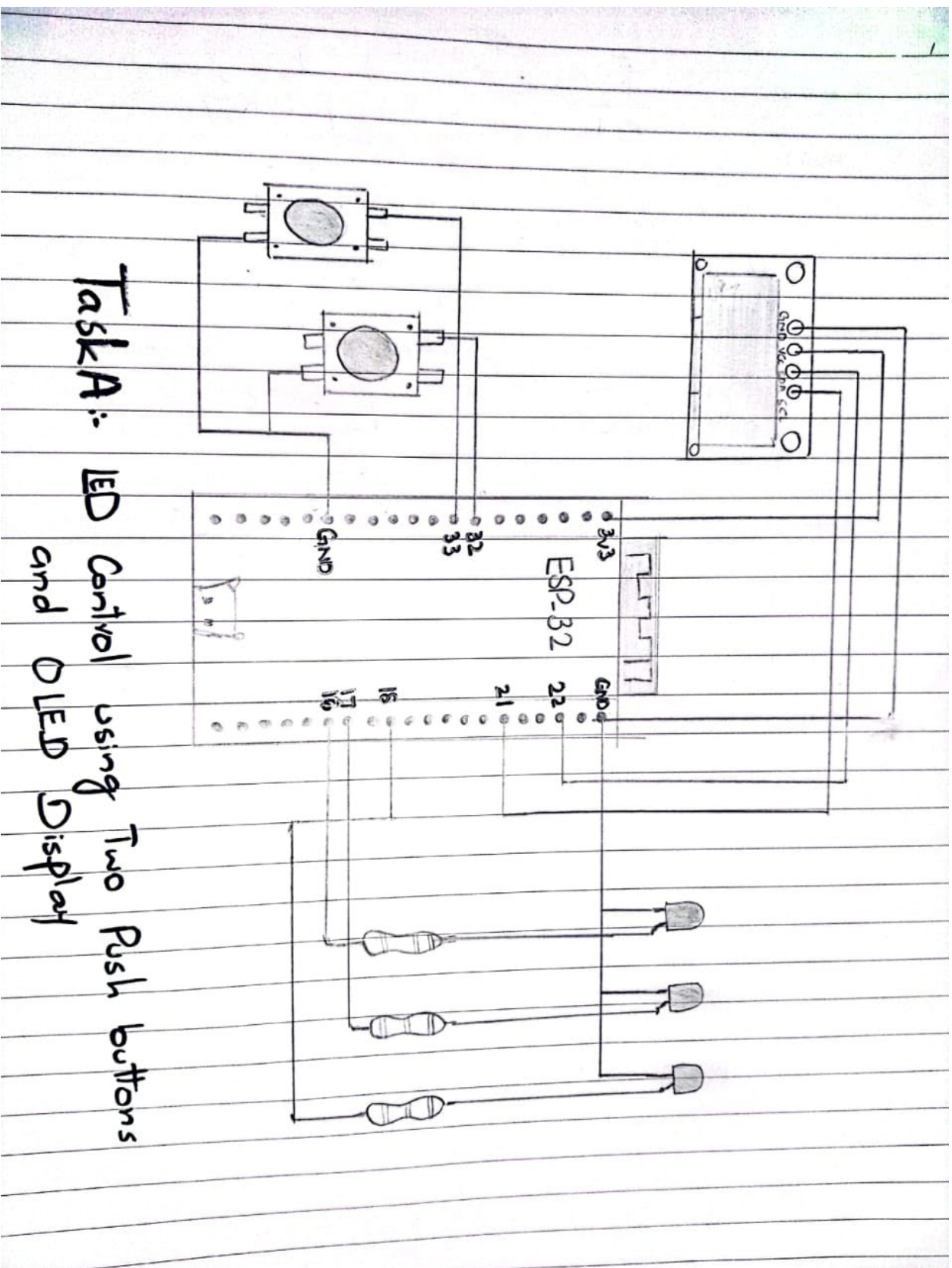
Use the second button to reset to OFF.



Wokwi Link:

<https://wokwi.com/projects/445797300897010689>

Hand Sketch Diagram:

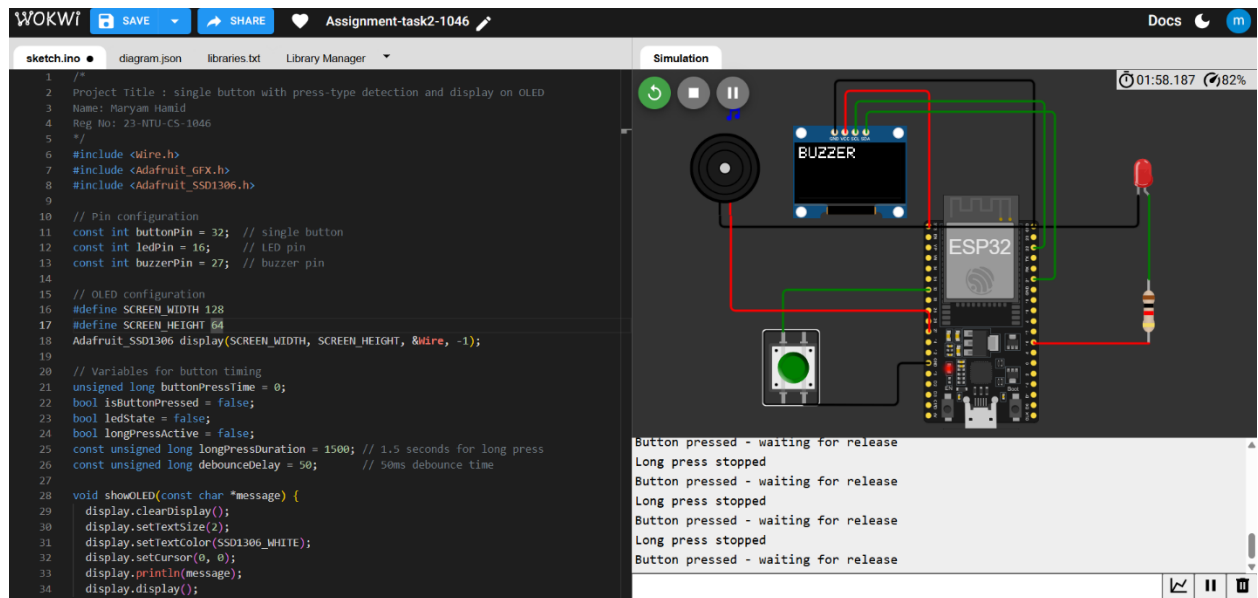


Task A:- LED Control using Two Push buttons and OLED Display

Task B

Coding: Use a single button with press-type detection (display the event on the OLED):

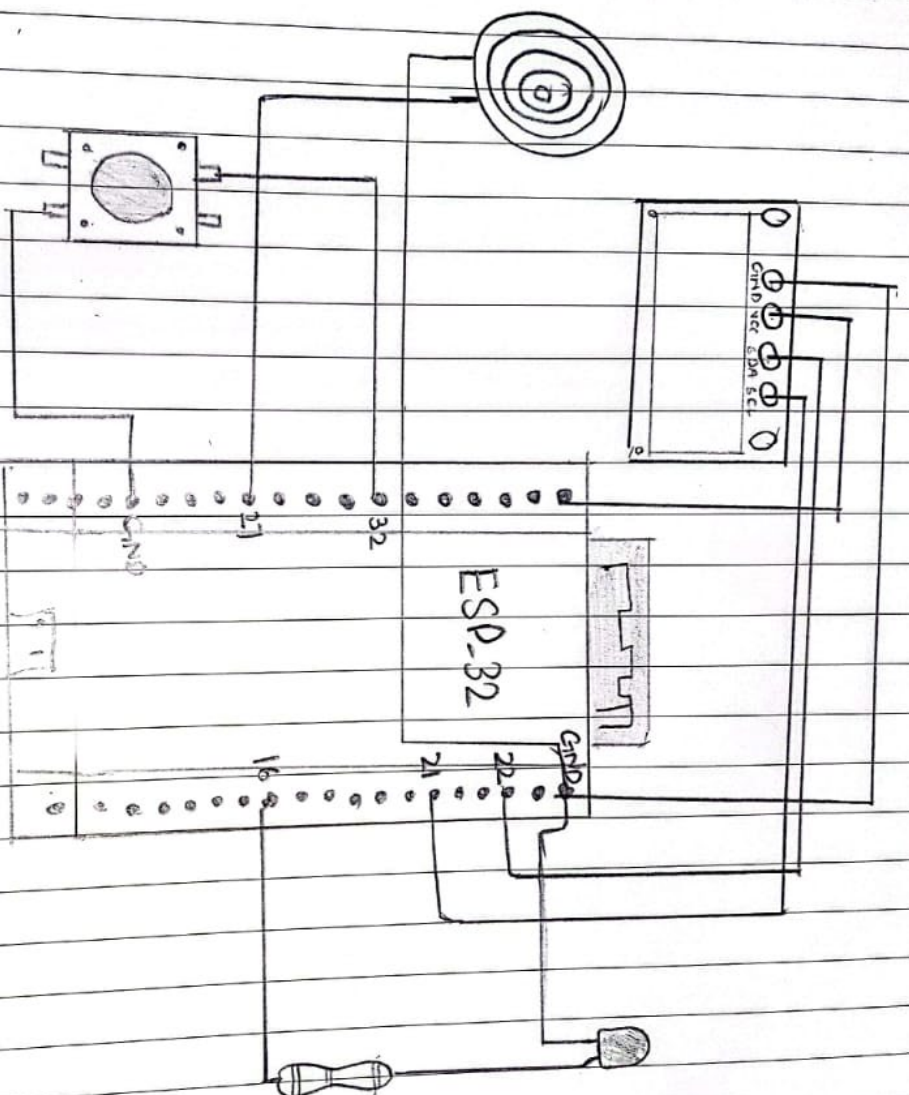
- Short press → toggle LED
- Long press (> 1.5 s) → play a buzzer tone



Wokwi Link:

<https://wokwi.com/projects/445805530407762945>

Hand Sketch Diagram:



Task B :: Single button with Press-Type detection and OLED Display