ZINE

Topic-MCB Programming and PCB designing

TEAM-3

Q.1 A push-button switch and an LED is connected to Arduino UNO. When we press the switch, the LED will glow. Simulate this circuit on tinker cad?

Q.2 Simulate the circuit of controlling a servo motor using a potentiometer on tinker cad?

Major Task:

Q.3 Program code to generate custom PWM signals on Arduino for an embedded system. Also, design a PCB of the same on Ki cad.

(a) Controlling LED intensity using PWM registers directly. (Without using analog Write function)

(b). Sweep a servo without using the Servo library controlled with IR remote. (Press 1 for right sweep i.e., from 0 to 180 degree and 2 for reverse)

(c). Design a custom PCB containing an Arduino Nano, IR receiver (for receiving signals from remote), Buck converter (for powering servo and Nano), a connector for servo and a connector for 12V power supply.

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