TRAFFIC LIGHT CONTROL using VSD Squadron Mini development board

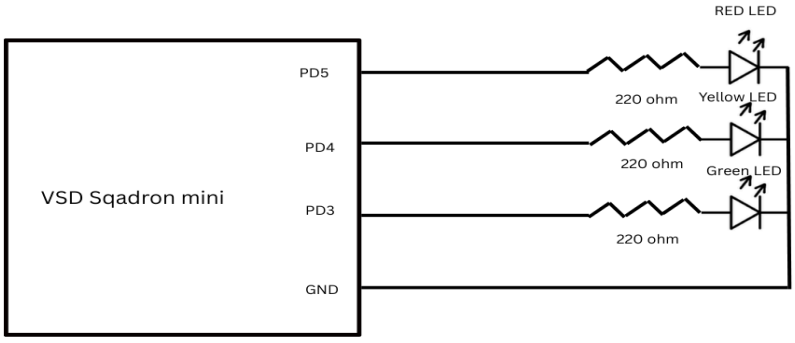
Overview:

This project demonstrates a simple traffic light controller implemented using the VSDSquadron Mini RISC-V development board. The setup includes three LEDs—Red, Yellow, and Green—representing standard traffic signal lights. Each LED is connected to specific GPIO pins (PD5, PD4, and PD3) on the development board through current-limiting resistors to ensure safe operation. The board controls the LEDs in a timed sequence, emulating real-world traffic light behavior. This project is designed to introduce fundamental concepts of GPIO manipulation, digital output control, and timing logic using the RISC-V architecture, making it an excellent learning tool for embedded systems and microcontroller programming.

Components required:

- VSD Squadron Mini development board
- Red LED
- Yellow LED
- Green LED
- 220 ohm resistor - 3
- Bread board
- Jumper wires

Pinout diagram:



Circuit diagram:

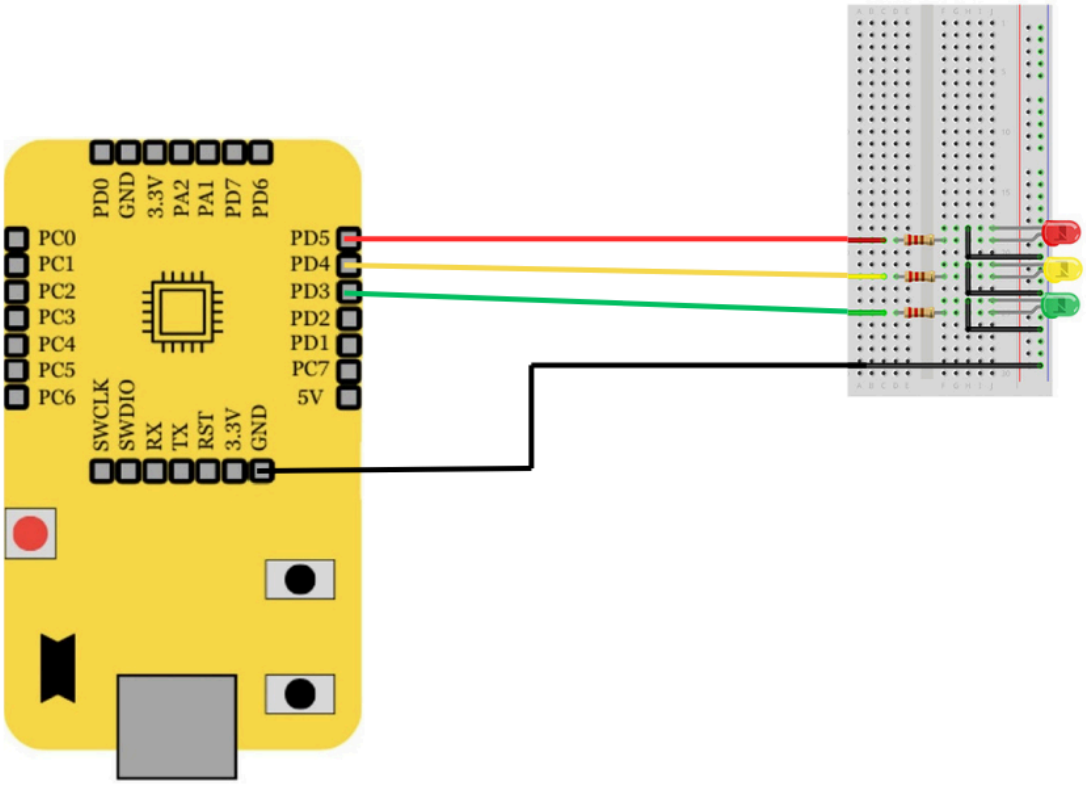


Table for pin connection:

VSD squadron board	Component	Through resistor
PD5	+ve of Red LED	220 ohm
PD4	+ve of Yellow LED	220 ohm
PD3	+ve of Green LED	220 ohm
GND	-ve of all 3 LED	-