

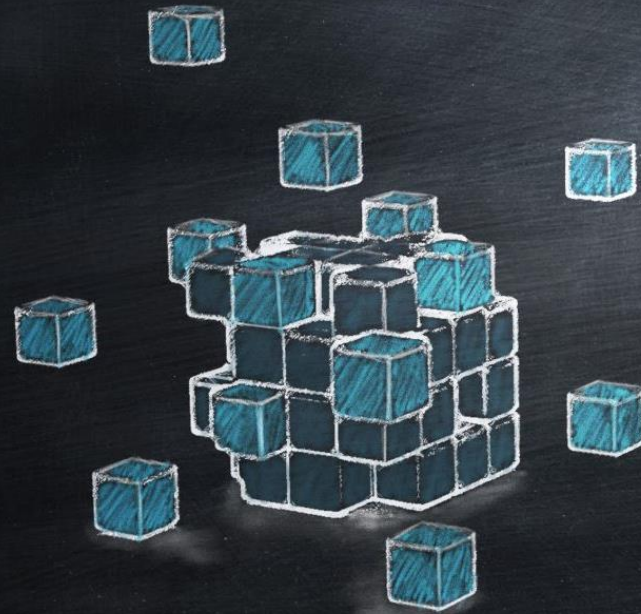
# Pedestrian Interrupt Traffic Light

Embedded Systems Project

John H. Leseur

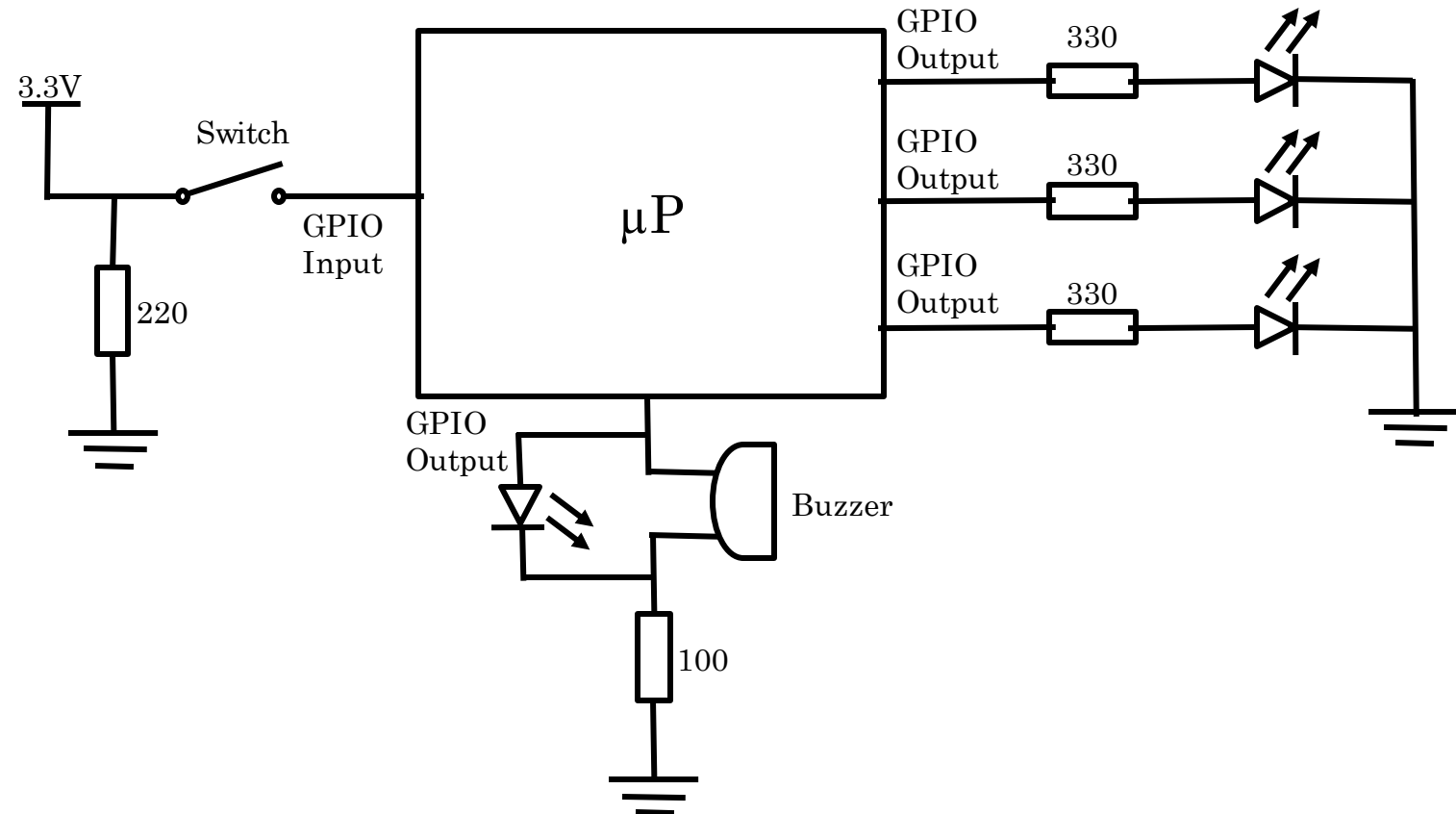


# System Design

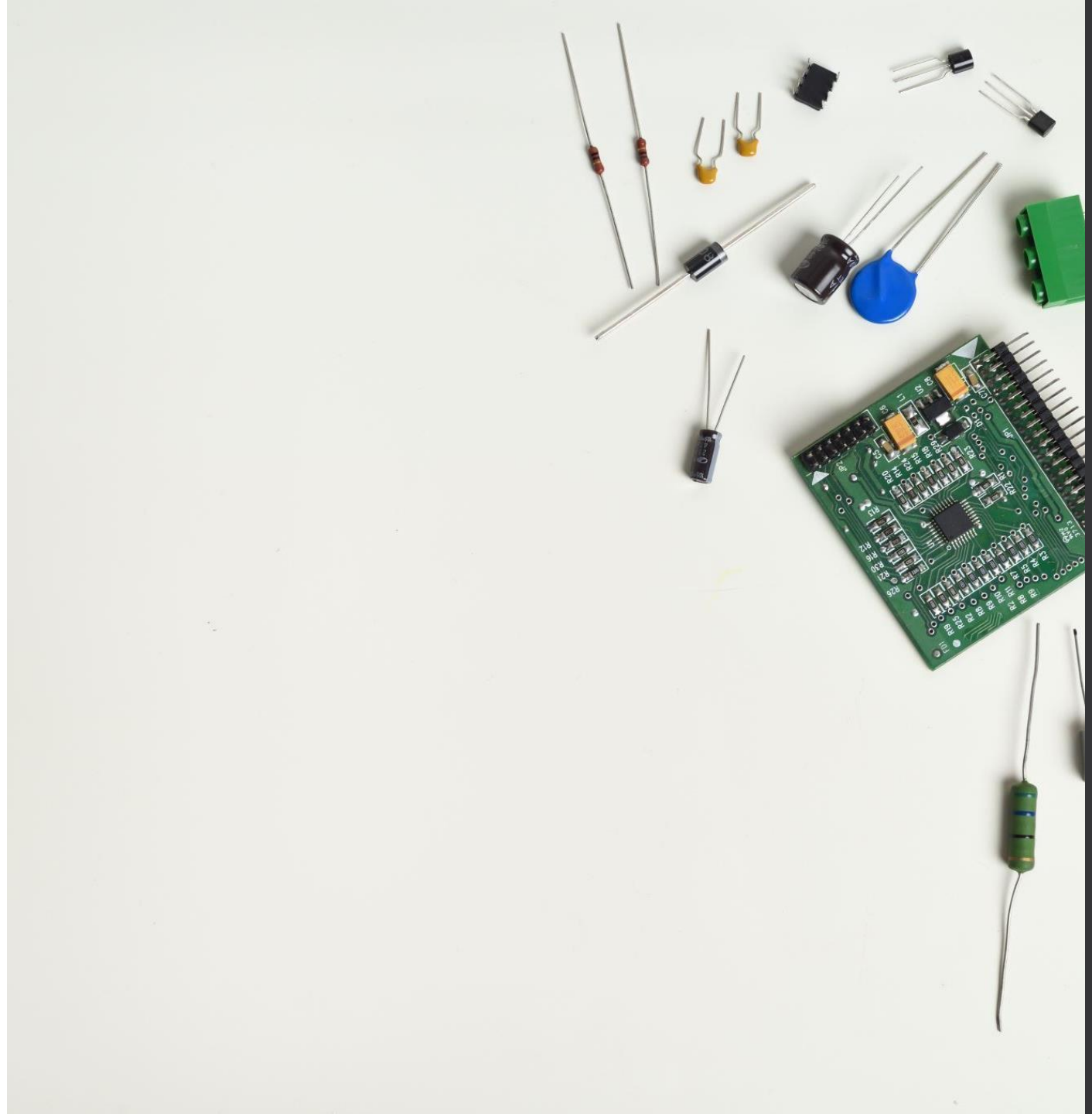


Items to Incorporate:

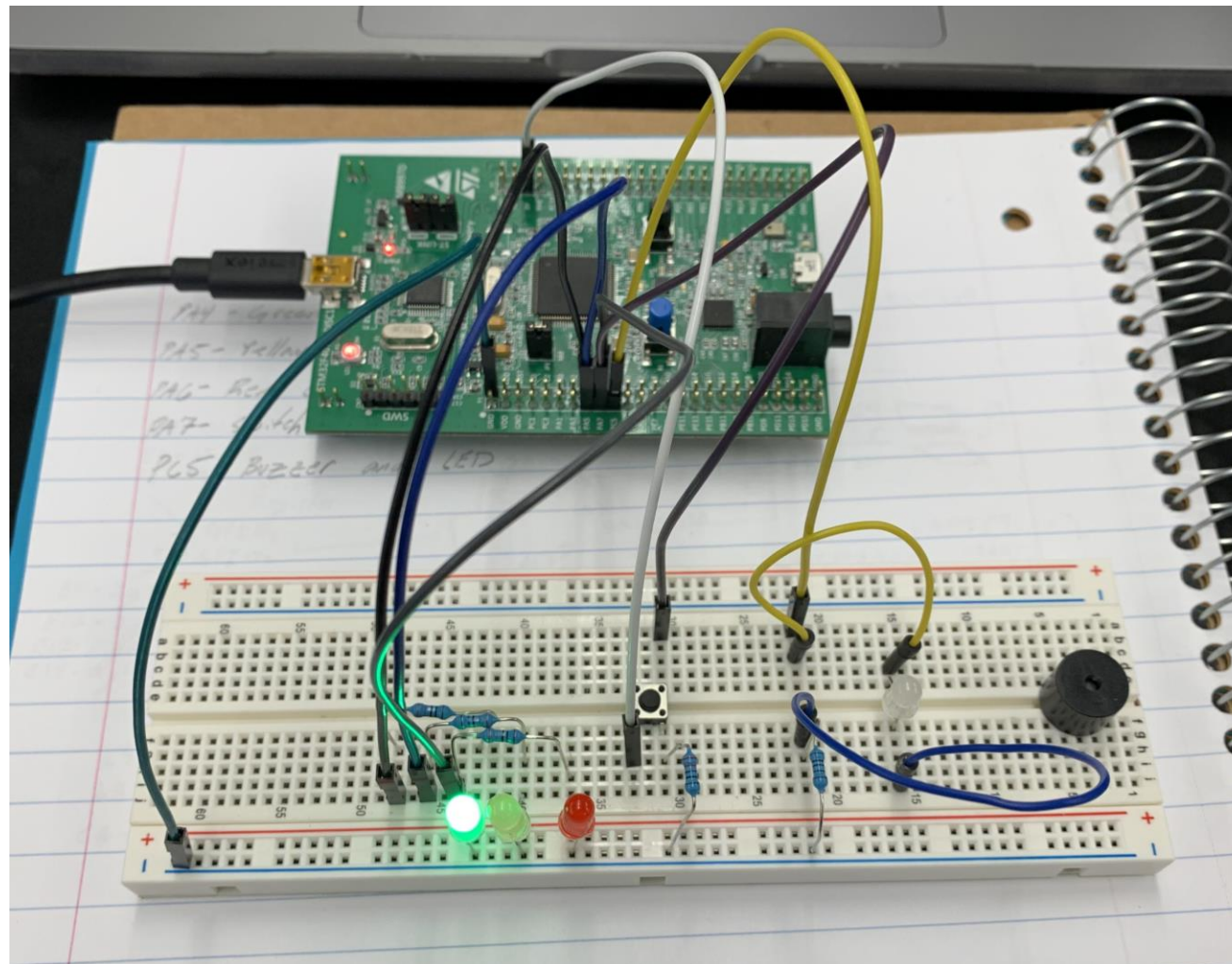
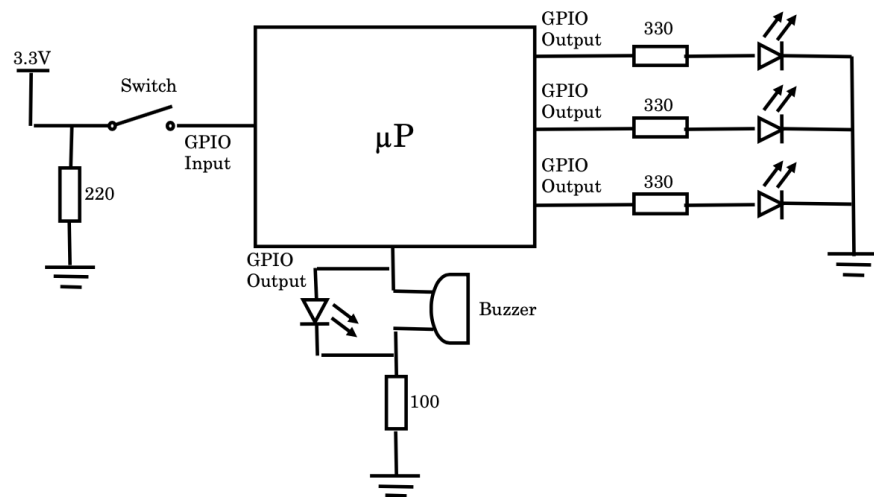
- Green LED
- Yellow LED
- Red LED
- A Switch for pedestrian input
- A Buzzer and LED for crosswalk indication



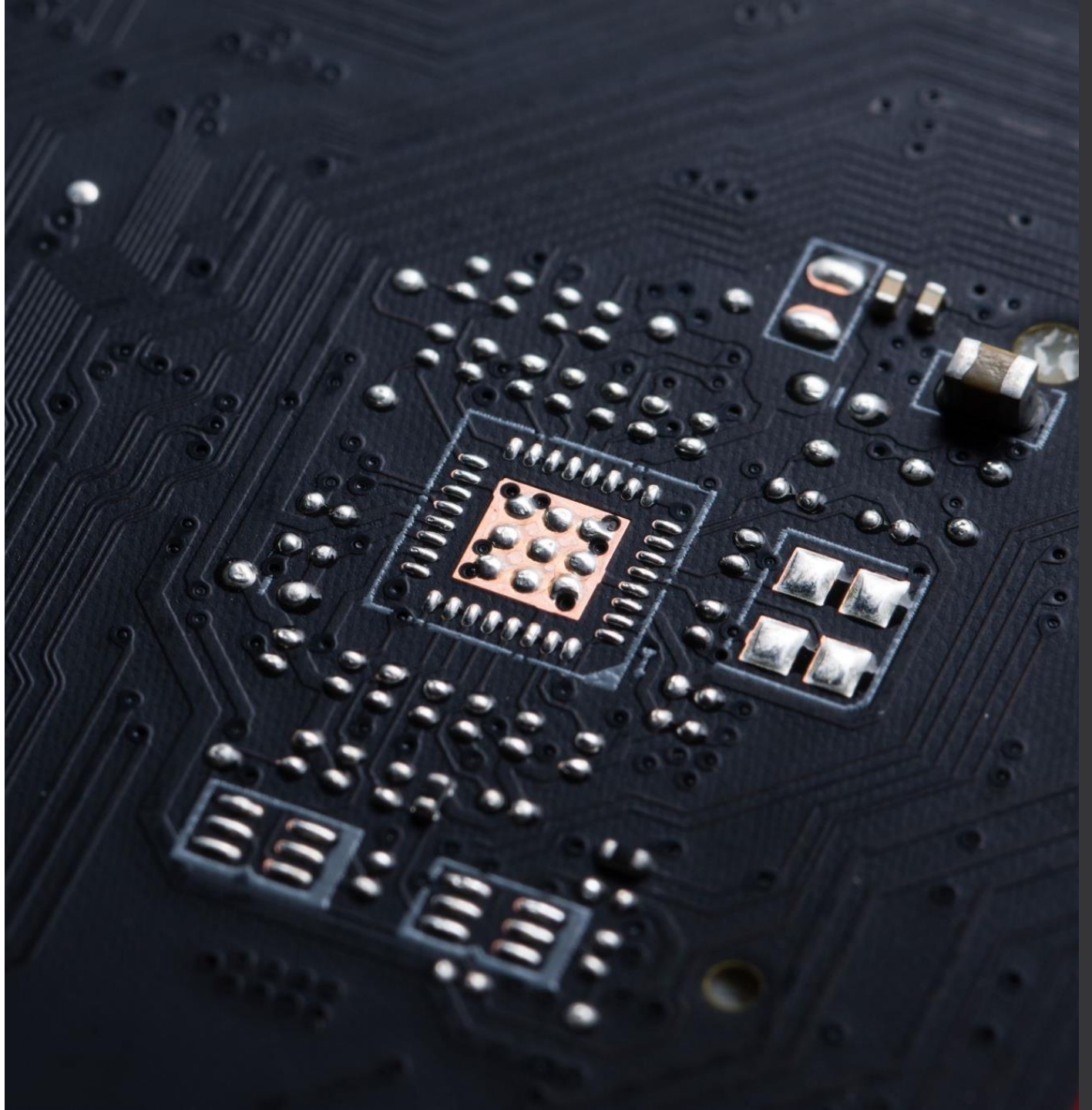
# Prototyping



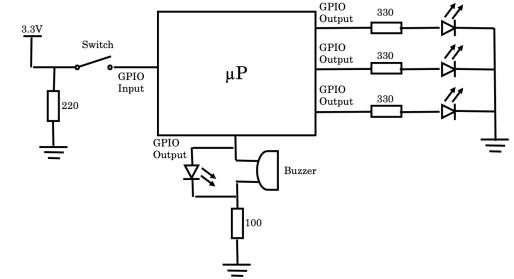
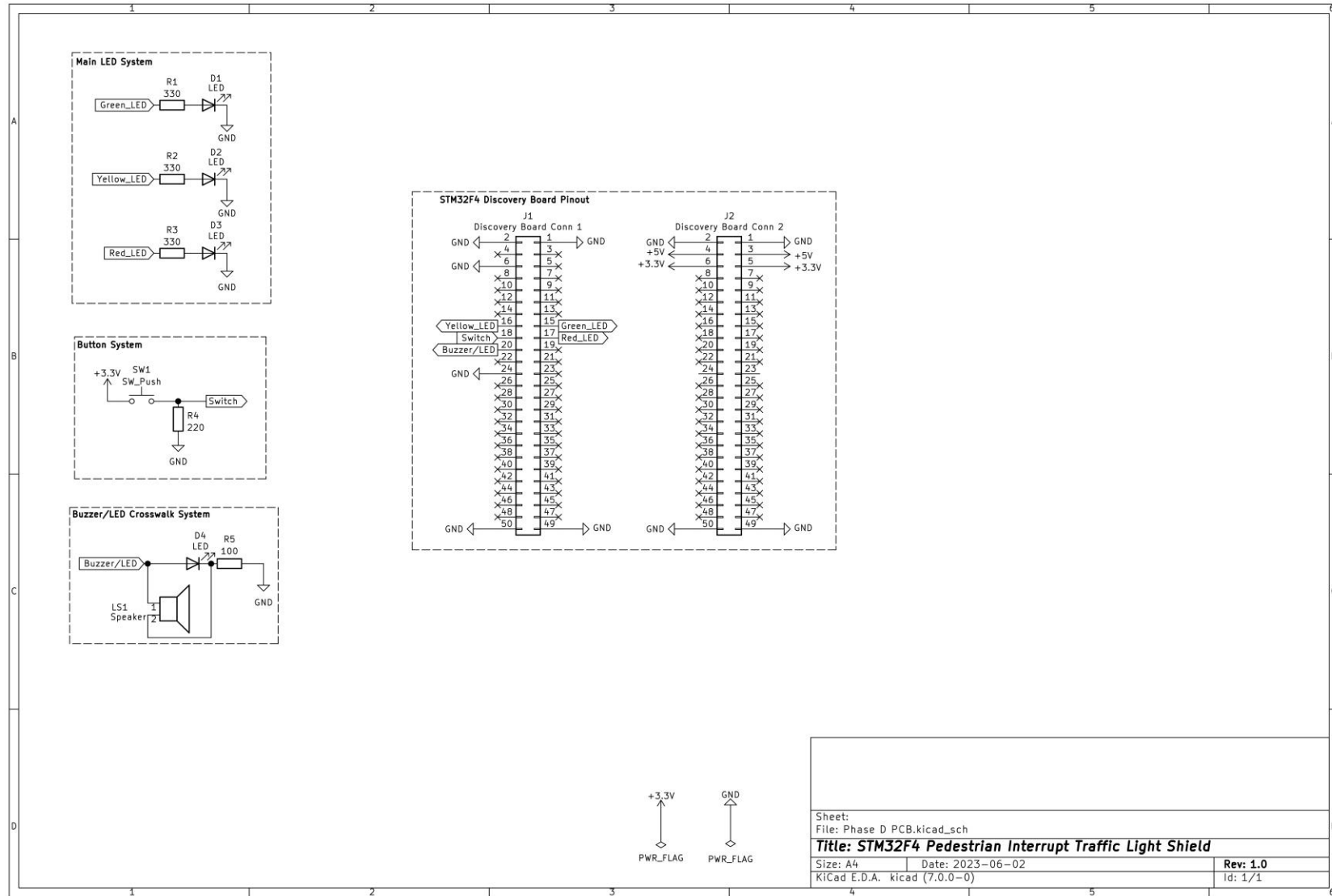




# PCB Design

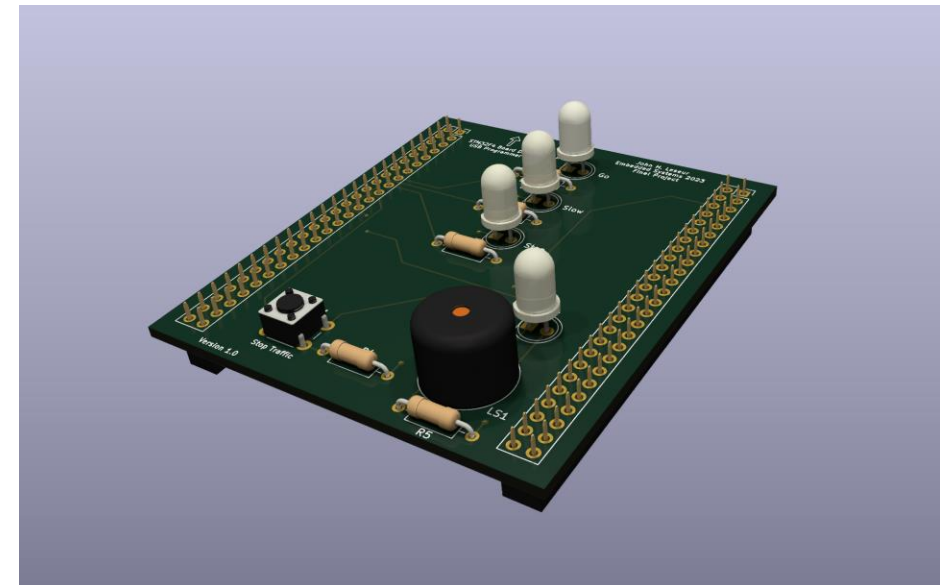
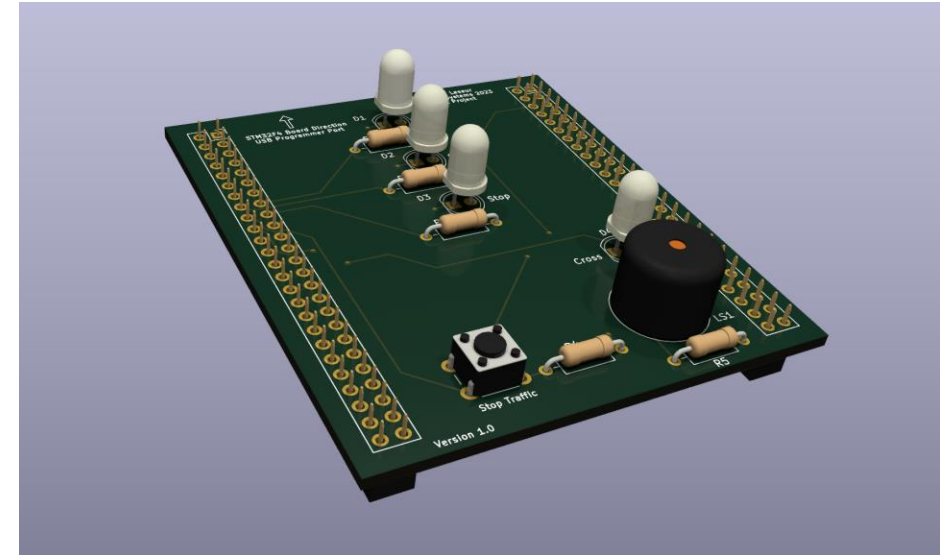
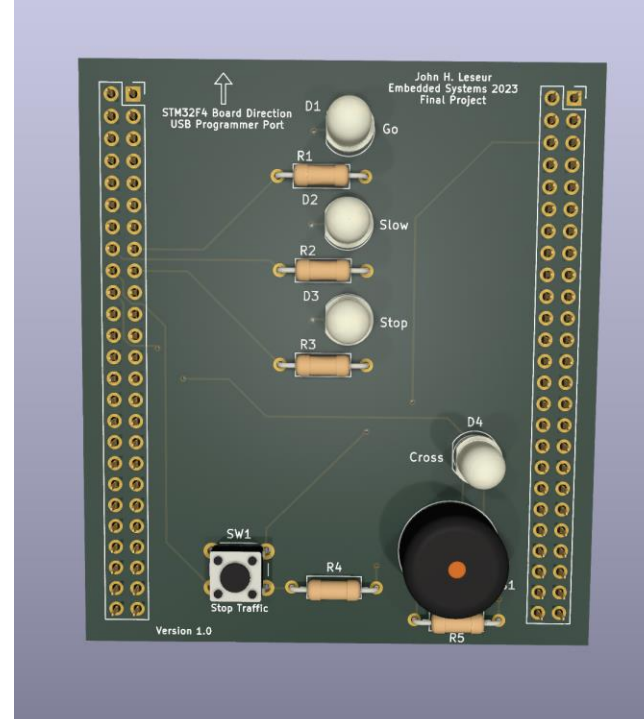
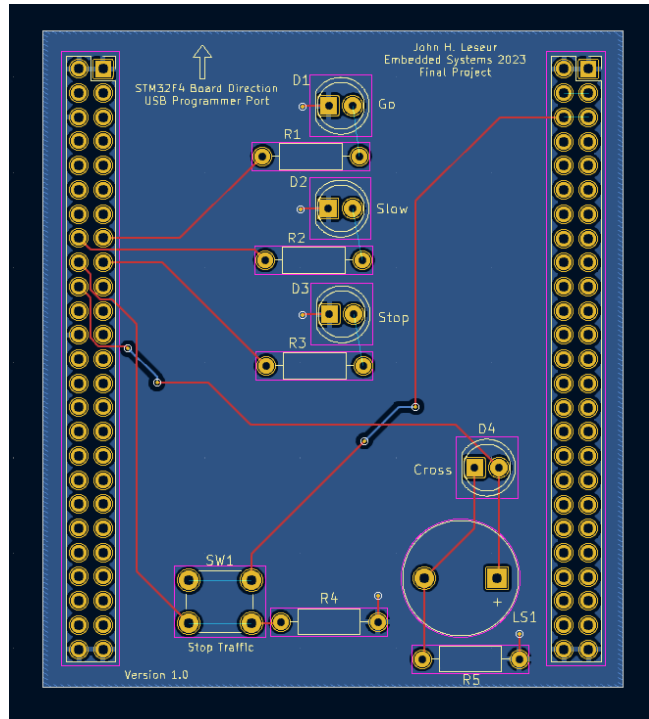


# KiCAD Schematic





# STM32 Shield/PCB





# Software Development

```
mirror_mod = modifier_ob.  
#set mirror object to mirror  
mirror_mod.mirror_object =  
    operation == "MIRROR_X":  
        mirror_mod.use_x = True  
        mirror_mod.use_y = False  
        mirror_mod.use_z = False  
    operation == "MIRROR_Y":  
        mirror_mod.use_x = False  
        mirror_mod.use_y = True  
        mirror_mod.use_z = False  
    operation == "MIRROR_Z":  
        mirror_mod.use_x = False  
        mirror_mod.use_y = False  
        mirror_mod.use_z = True  
  
#selection at the end -add  
mirror_ob.select= 1  
modifier_ob.select=1  
context.scene.objects.active  
("Selected" + str(modifier_ob.  
mirror_ob.select = 0  
= bpy.context.selected_object  
data.objects[one.name].select  
  
print("please select exactly  
  
-- OPERATOR CLASSES --  
  
types.Operator):  
X mirror to the selected  
object.mirror_mirror_x"  
mirror X"  
  
context):  
context.active_object is not
```

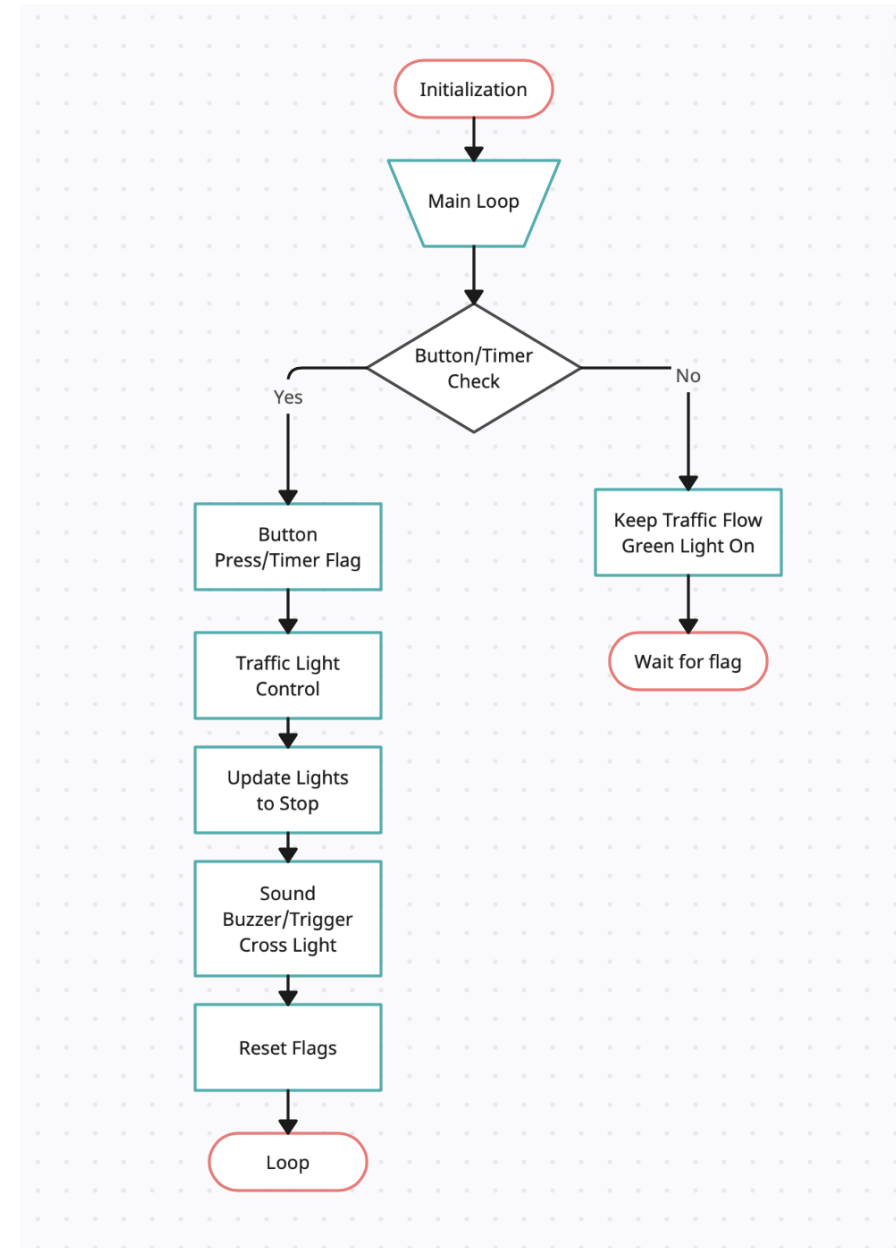
# Simple Flow Diagram

Interrupts Used:

- Button ISR\_Flag
- Timer ISR\_Flag

Crosswalk lasts for 10 seconds before is back on.

Timer Interrupts every 10 seconds



# Final Implementation

