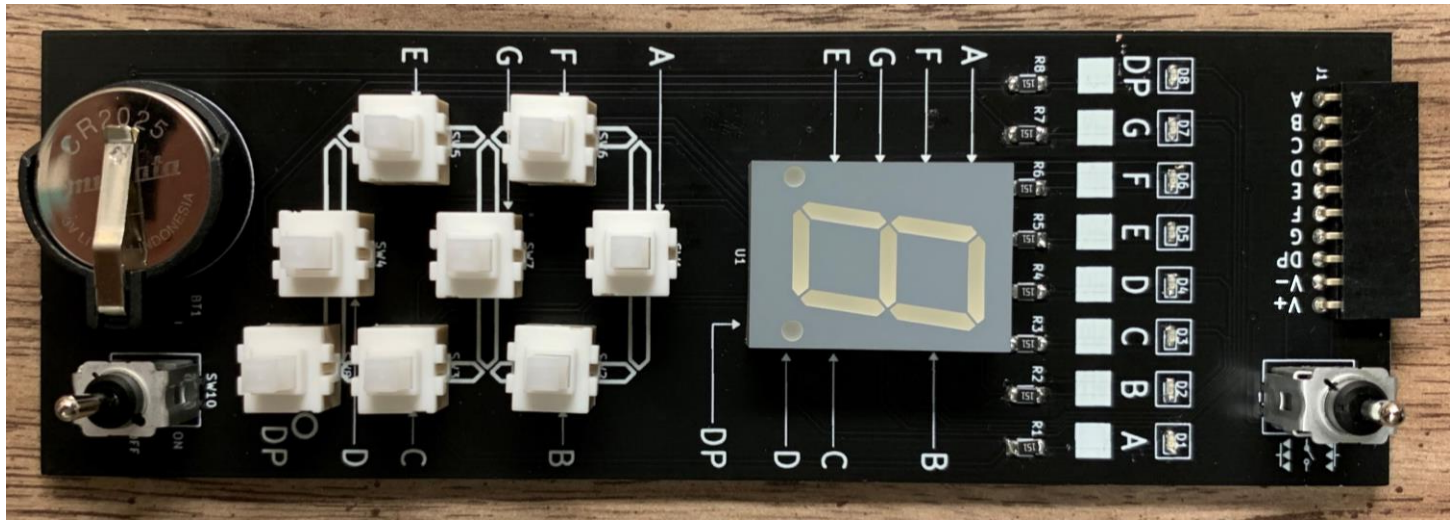
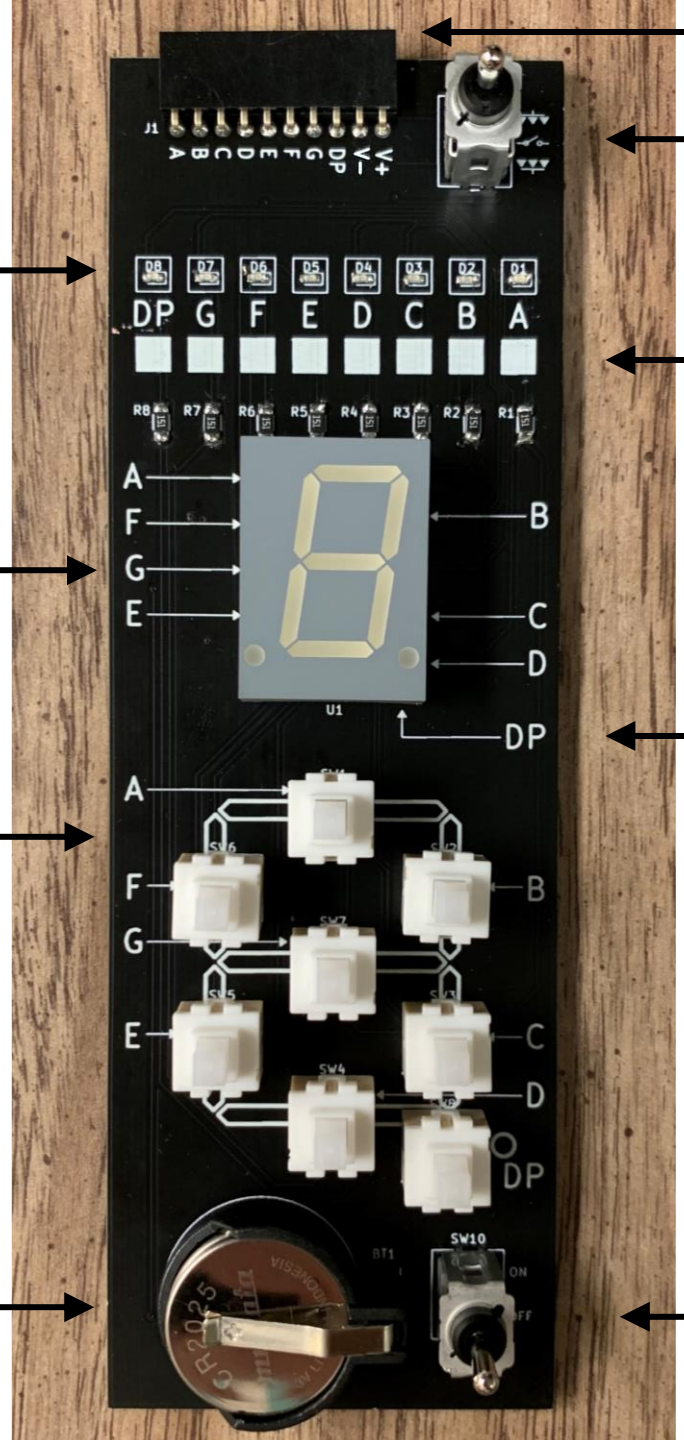
# 8-Segment Display Design Tool




facilitate design of **8-segment illumination pattern**

(Or just a click-toy to kill time with)

# Features:




**Display:**

- *LED* x8
- *8-segment display* x1

**Display Control:**

- *Toggle push switch (DPST)* x8
- Switches are arranged to mirror 7-segment display pattern

(*or 8-segment if you count the decimal)

**Power:**

- *3V Coin Cell* x2 = 6V

**Connection:**

- *10-pos female pin header* connects to external circuit
- *SPDT flip switch* *changes external electrical connection*

**Markings:**

- *writable square pads*
- *Large silkscreen texts*

For ease of use

**Power Switch**

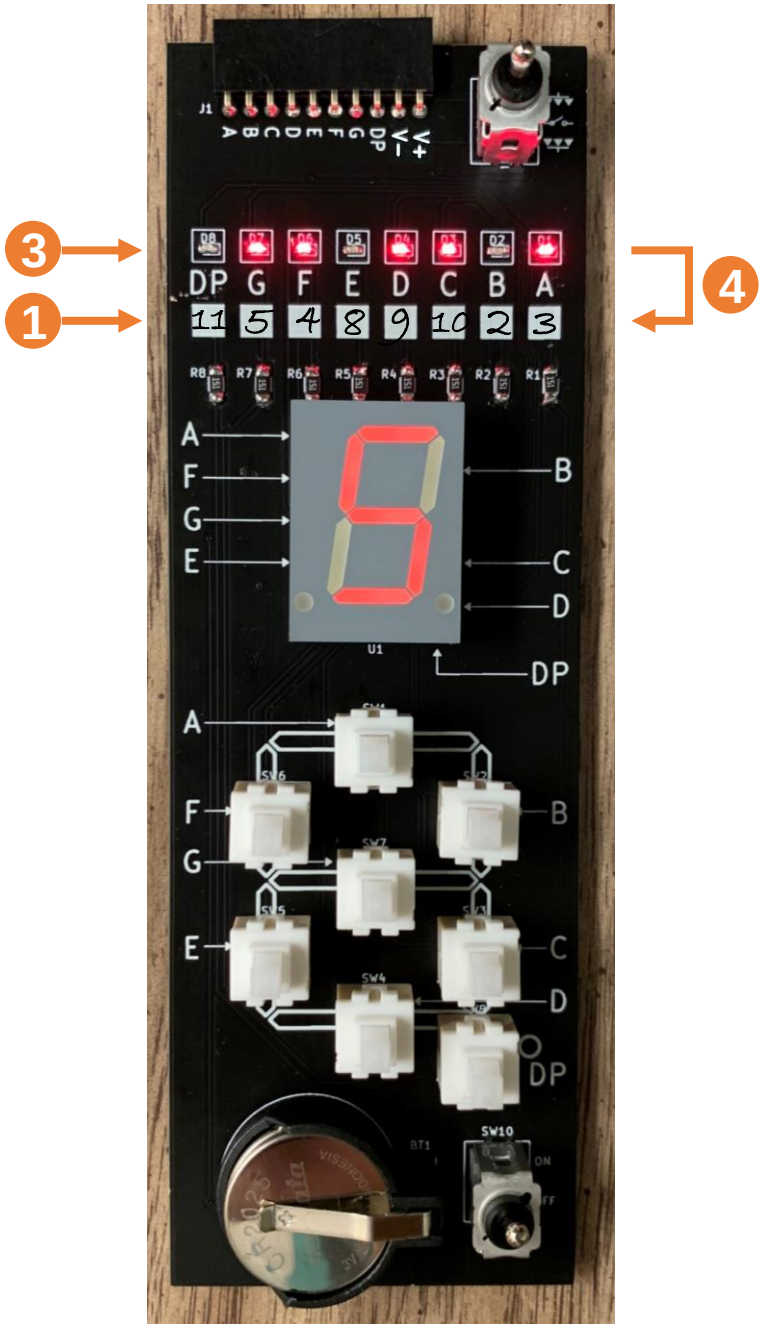
# Function 1: Map Segment to Pin

1. On the white squares, (using a marker,) write down the pinout of each segment of the display that is specific to your project

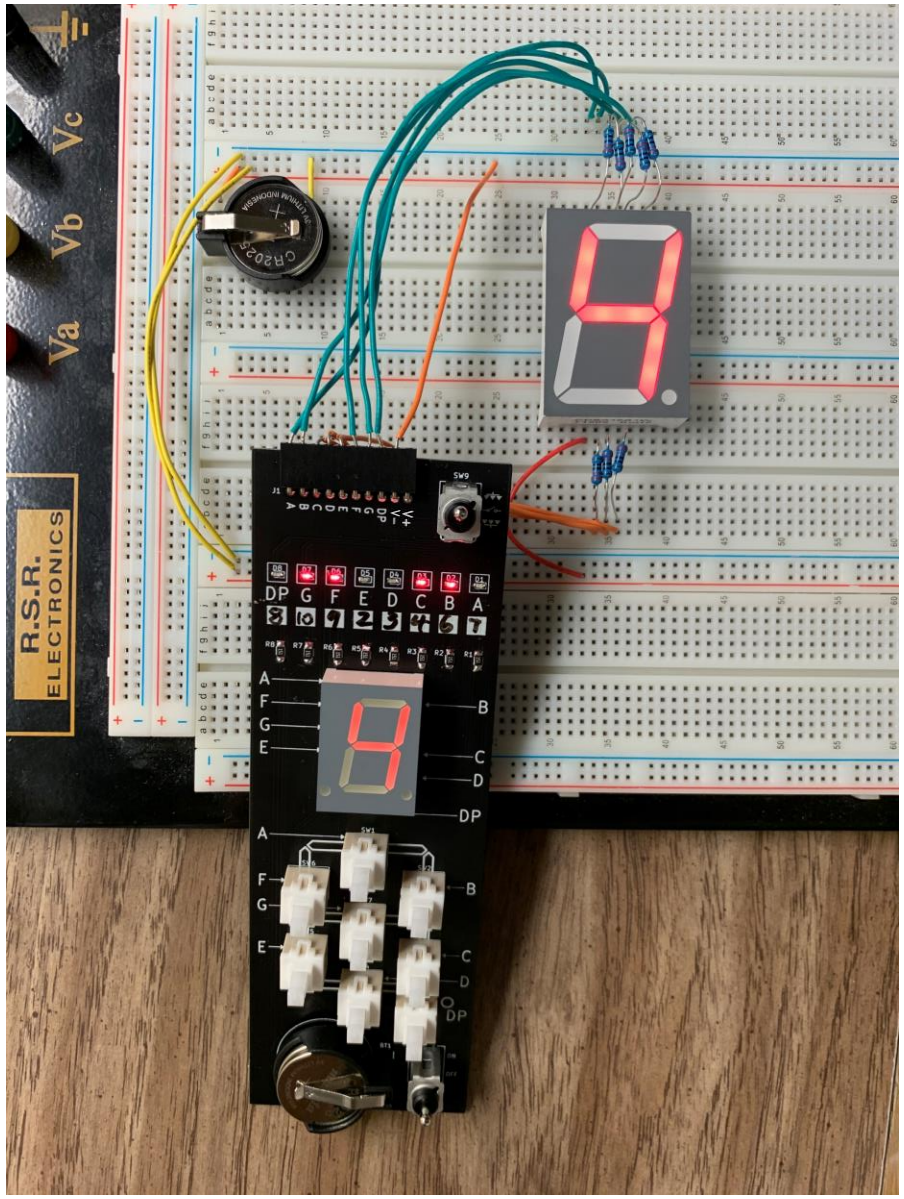
2. Press to toggle the push switches such that you see your desired pattern on the 8-segment display

3. Check the row of LED to have a quick view of which segments are illuminated. NOTE that the segment designators are sequenced from RIGHT TO LEFT

4. Find the pinout of the illuminated segments by referring to your notes on the white squares and program your project code accordingly. Depending on the complexity of your code, you might not need to do this step.



# Function 2: Switching External Display




The PCB can be connected to an external display and power source to control that display (even when the PCB is powered off).

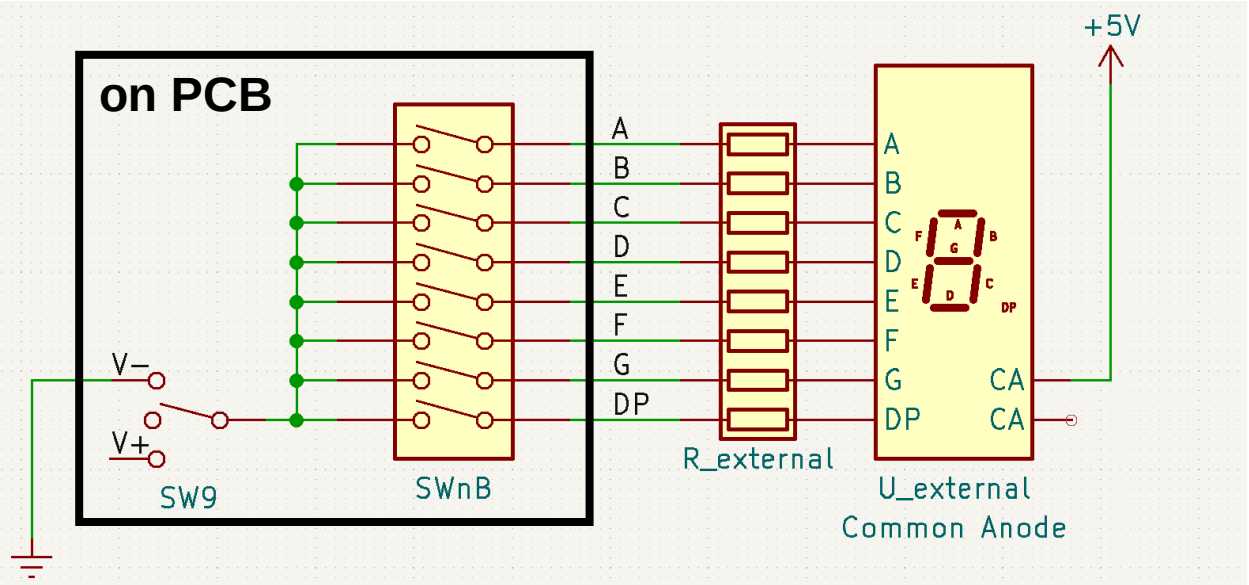
The external display is controlled the same way as the on-board display. NOTE that external resistors are required for the external display

On J1, connect the pins to their corresponding segments (A~G and DP) on the external display.

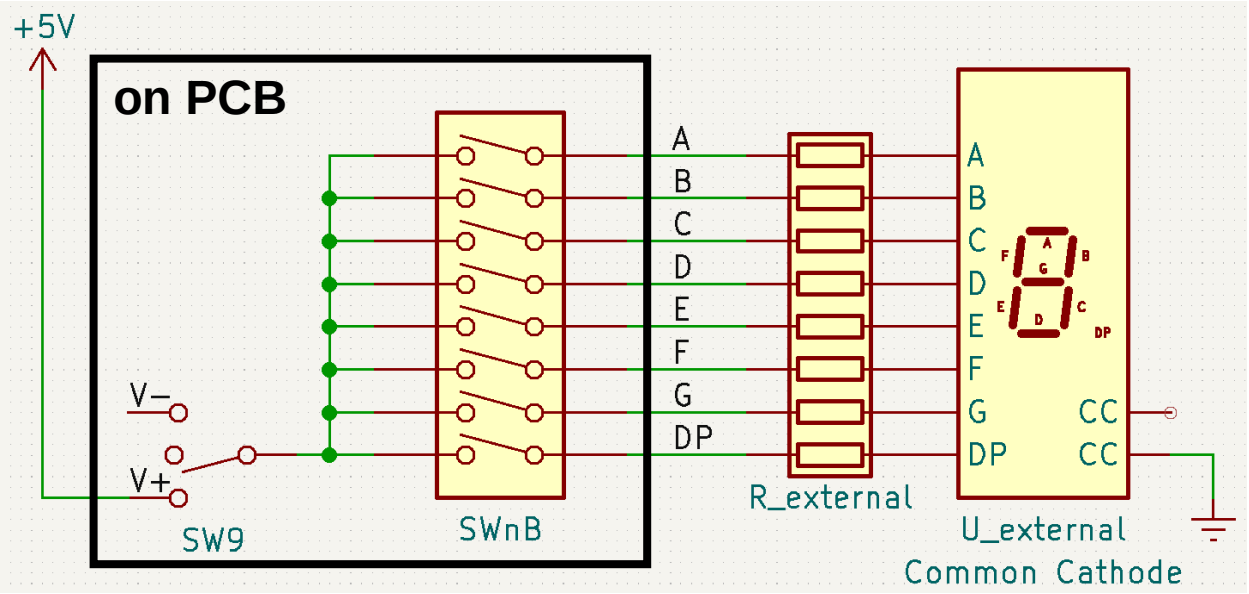
Depending on the type of external display, the external power supply need to be connected to the PCB in different ways.

# Function 2: Switching External Display (cont.)

***For Common Anode:***
Connect external ground to V− and switch SW9 to the up position:


***For Common Cathode:***
Connect external positive supply to V+ and switch SW9 to the down position:


Switch SW9 to the middle position to disconnect external connection