

JEHHEJ DIGITAL CLOCK

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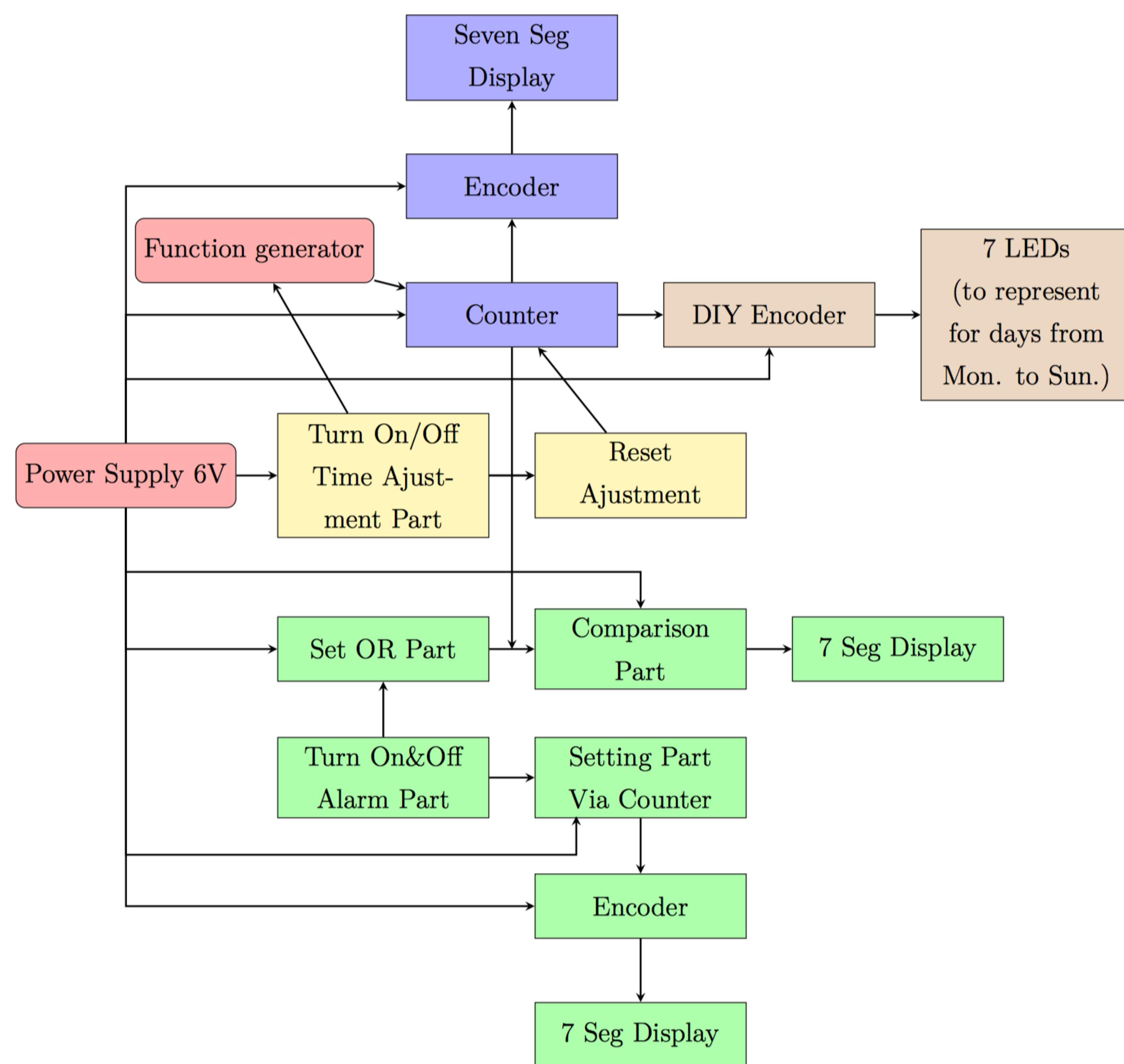
EE111 Electric Circuits | Final Project

INTRODUCTION

Firstly, we drew up a plan to decide how many functions we would like to achieve. And we use a flow chart to help us to think and make things clear.



BLOCK SCHEMATIC



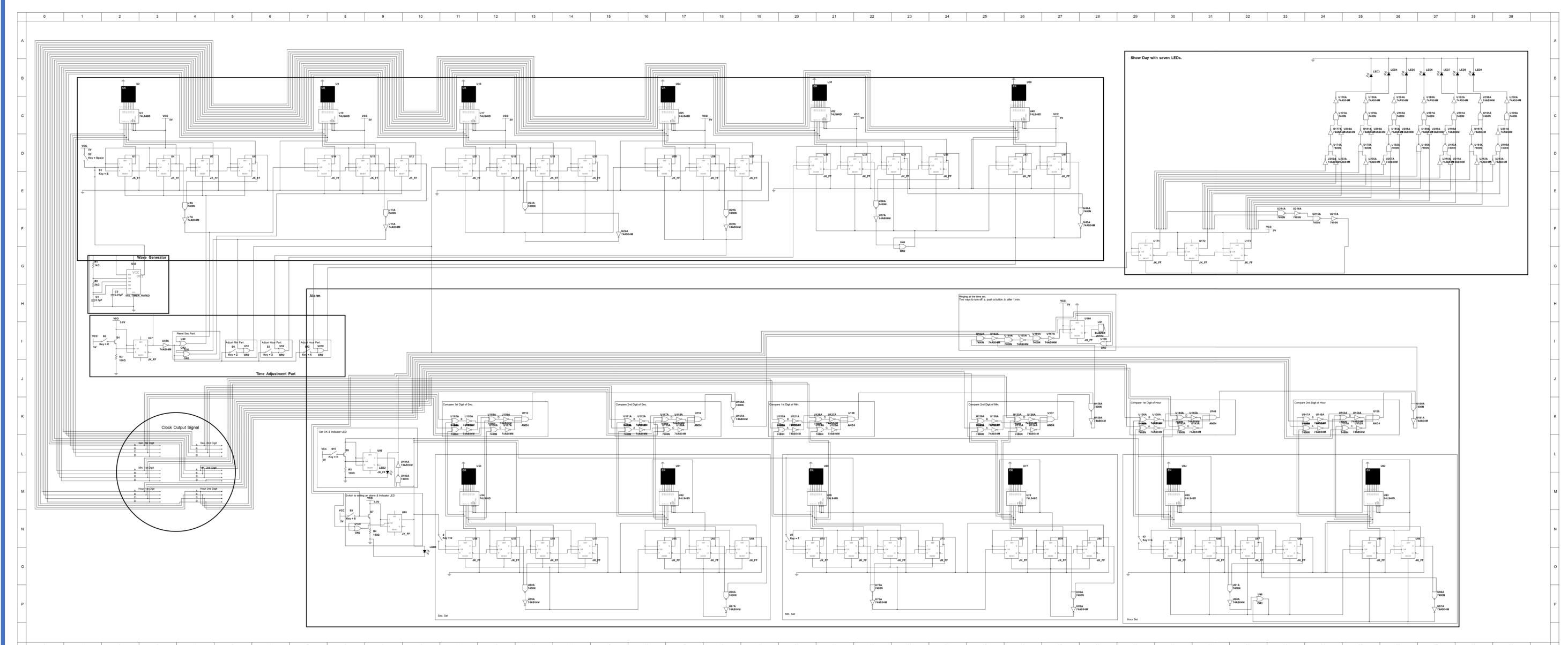
FRAME 1: COLOR BLOCK

- Red Block: Input
- Purple Block: Basic Digital Clock
- Yellow Block: Time Adjust Part
- Brown Block: Show-Day Part
- Green Block: Alarm Part

COMPONENTS

Name	Type	Quantity	Name	Type	Quantity
Battery Box		1	Seven Seg Encoder	74LS48D	12
Timer555		1	Switch		10
Capacitor	0.01μF	1	NOT Gate	74AS04M	20
	0.1μF	1	NAND Gate	7400N	20
Resistor	1kΩ	1	XOR Gate	7486N	10
	2kΩ	1	OR Gate	7432N	5
	100Ω	3	Piezo Buzzer		1
JK Flip Flop	74HC112	27	CMOS	IRF510	4
Seven Seg Display		12	LED	White	10

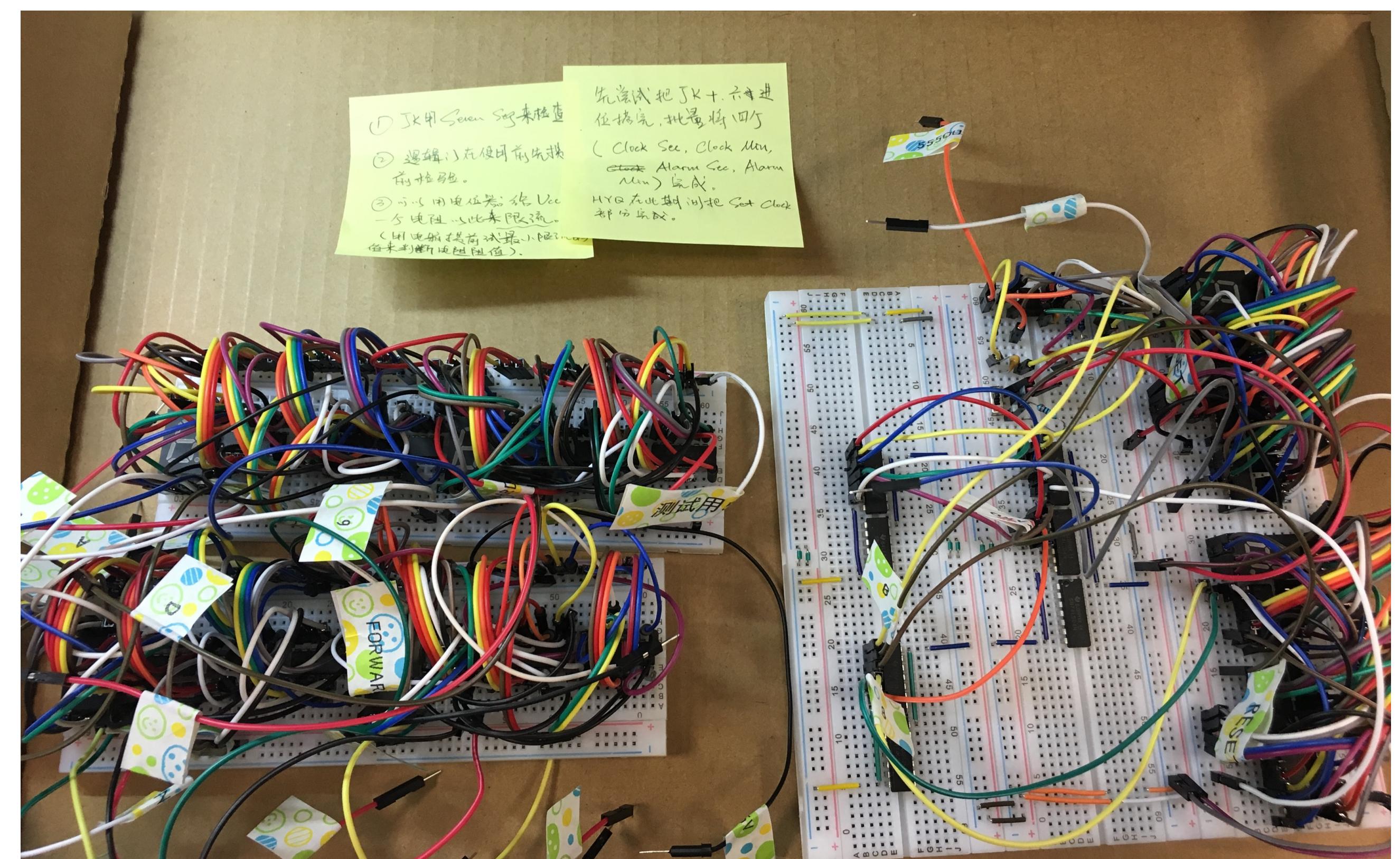
SIMULATION



* We consumed more components than we have expected, and due to our running out of them, we had no choice but to leave the alarm function behind and add an hour alarm to take the place of it.

LAP CIRCUIT EXPERIMENT

Lapping circuit was not so successful to be honest. We have achieved most of our functions last Saturday, but because we bound the maximum current inappropriately, the first model was destroyed. : (



Last things last, here is our final model. :)

