



# SMART WATCH

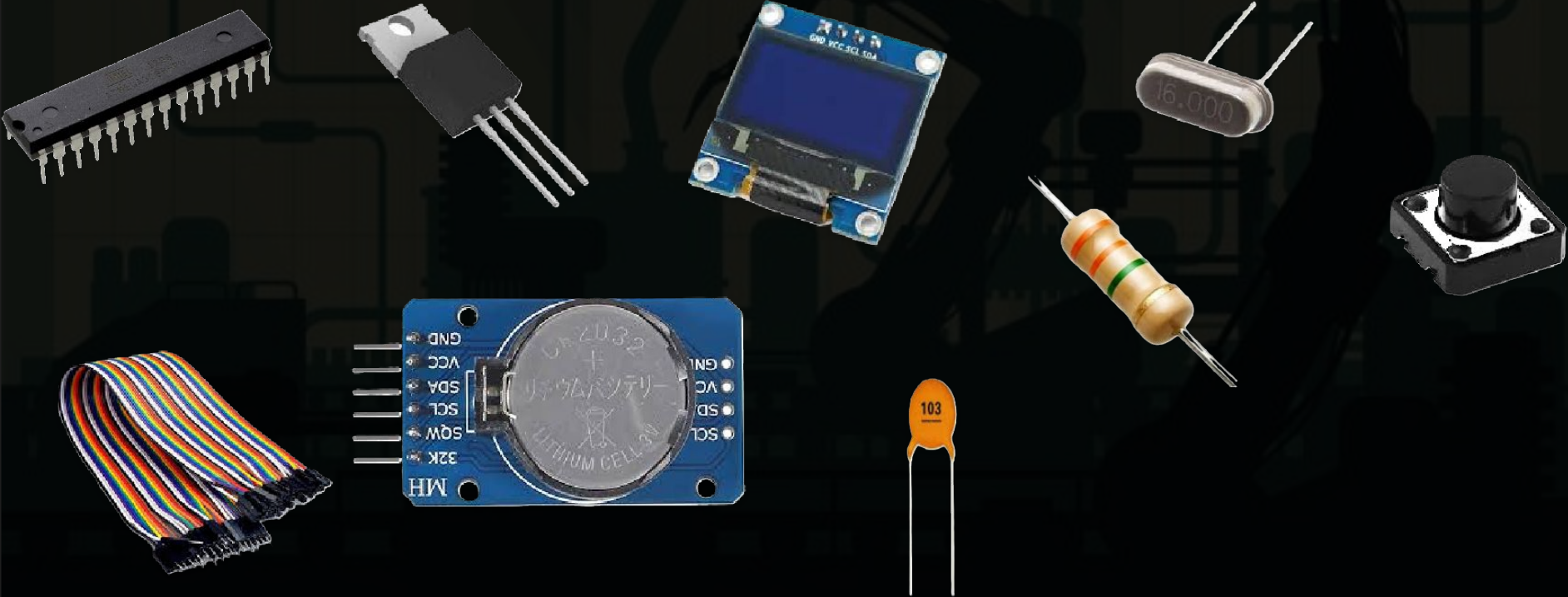
By -

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# Components and Tools

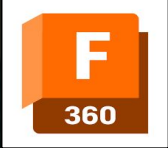


ATMega328p	This is the microcontroller for our circuit, which is also used in Arduino Uno
RTC	Real Time Clock
OLED	The Screen of our watch (pixel size)
LM7805	5 Volt - Voltage Regulator
Push Buttons	3 push buttons are used as controls
Jumper Wires	Jumper wires are used to connect the PCBs
Crystal Oscillator	16MHz crystal oscillator for the RTC
Battery	3.7 V Lithium ion rechargeable battery

# Components and Tools





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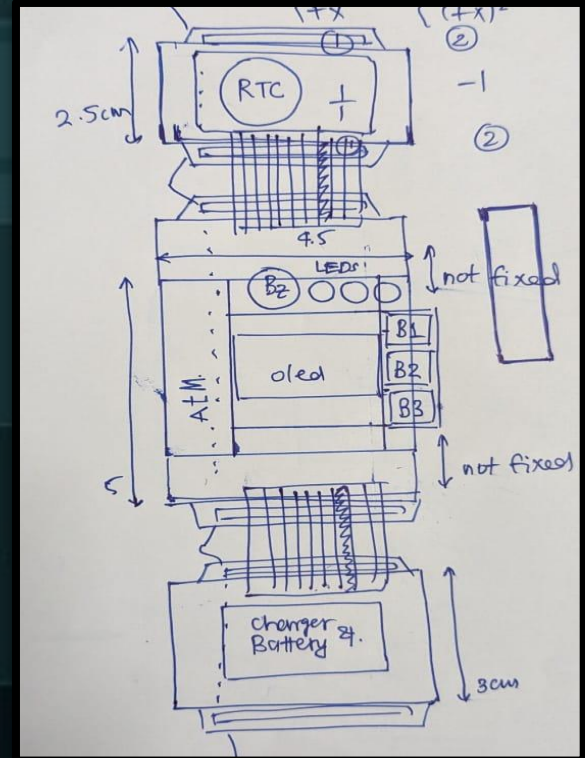
Resistors and Capacitors		Resistors and Capacitor are used to regulate the current and voltage
Fusion 360		The case for the PCB is made by the fusion 360 software , and 3D printed with ABC plastic
KiCad		The PCB schematic and routing is made with the help of KiCad software
Wokwi		The simulation of the circuit is done with the help of Wokwi
DC-DC Boost Step Up Converter		To convert our 3.7 V battery to 12 V

# Initial Design

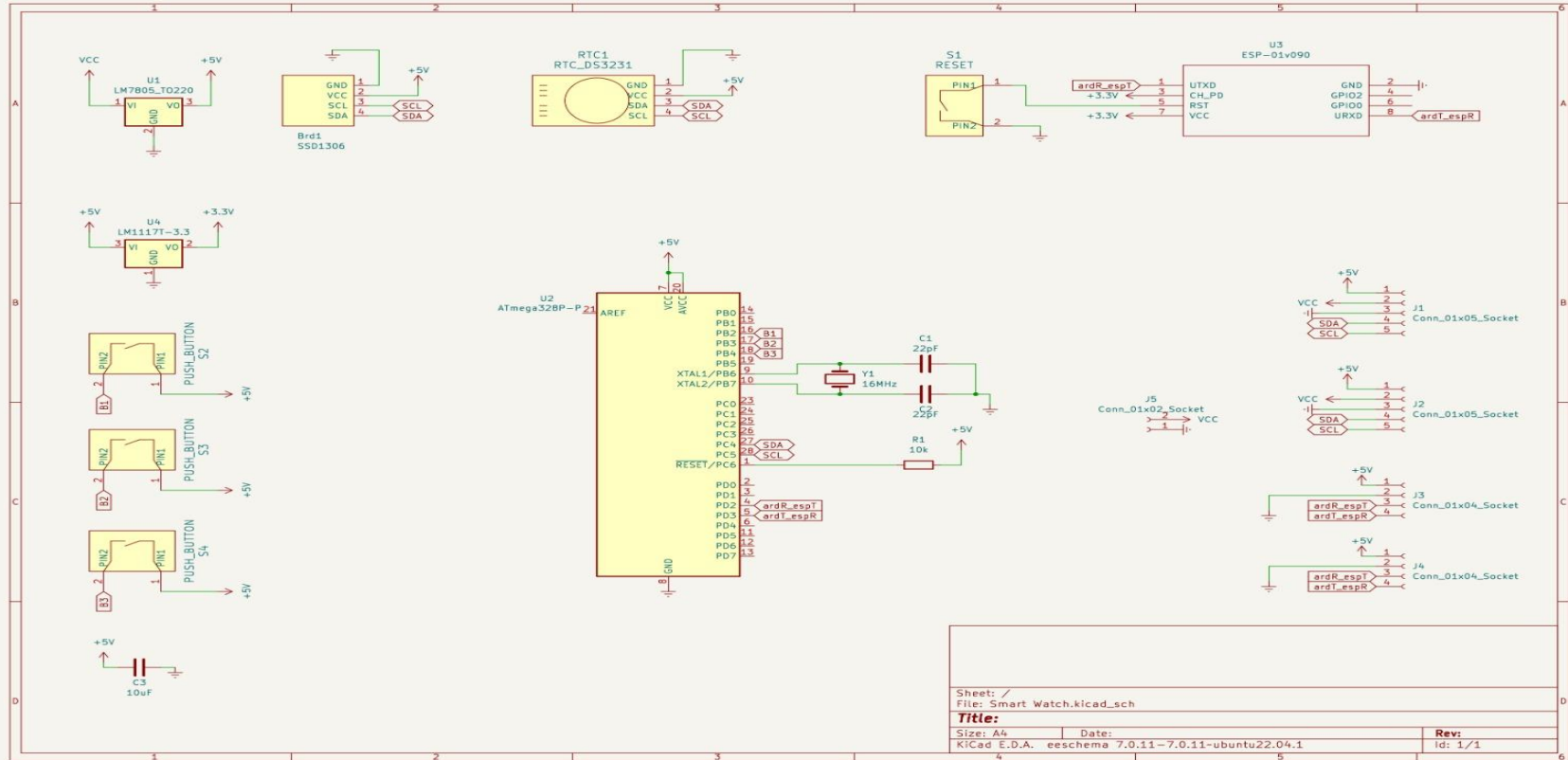
The initial design consist of all the above mentioned components. We splitted them to 3 PCBs

- Battery module
- RTC Module
- OLED Module

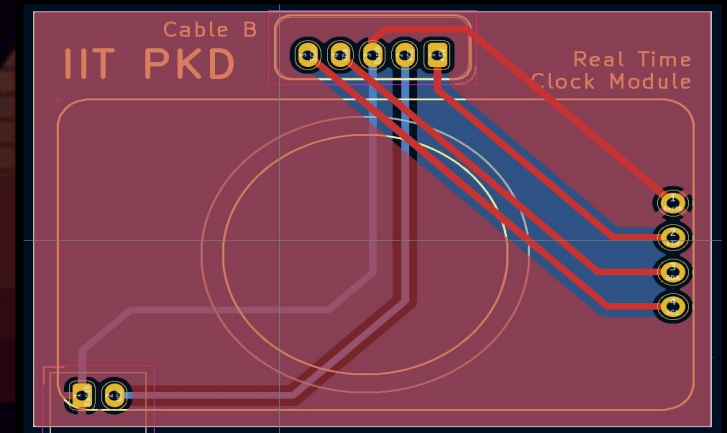
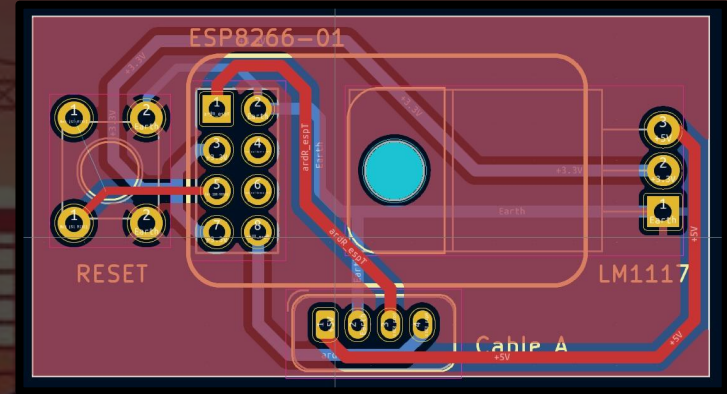
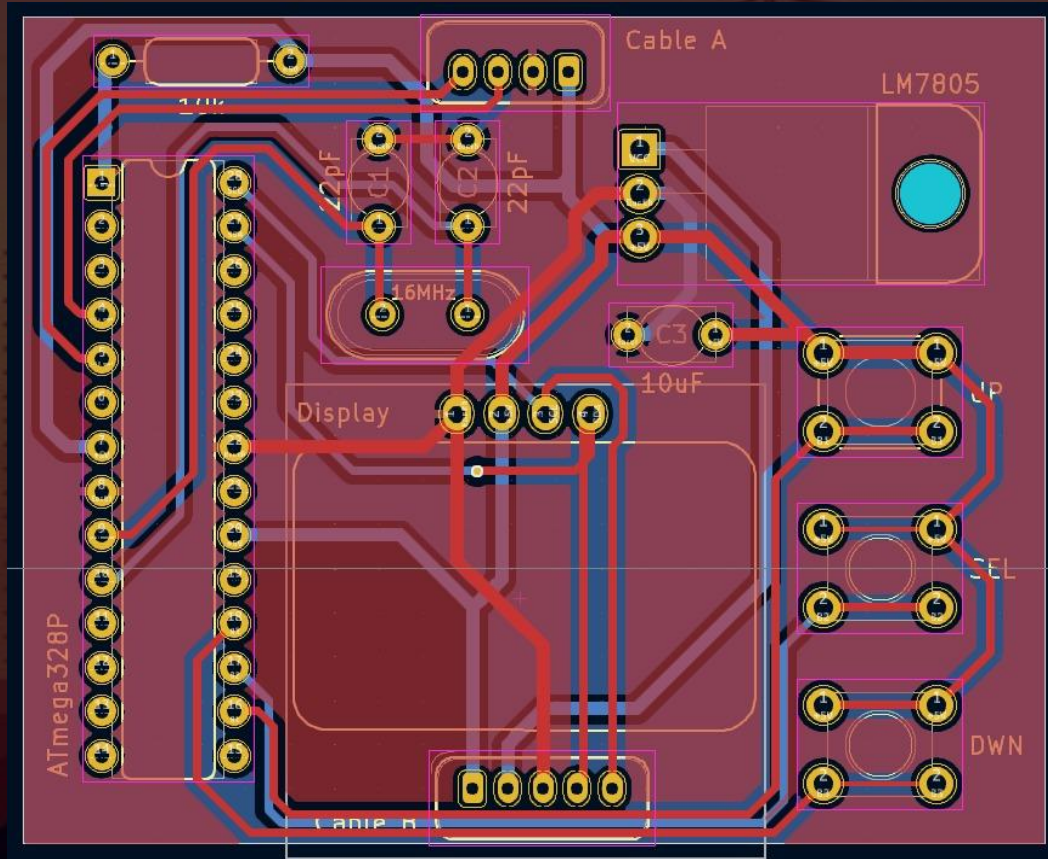
These PCBs will connected between each others with some wires.



# Circuit Design ( schematic )

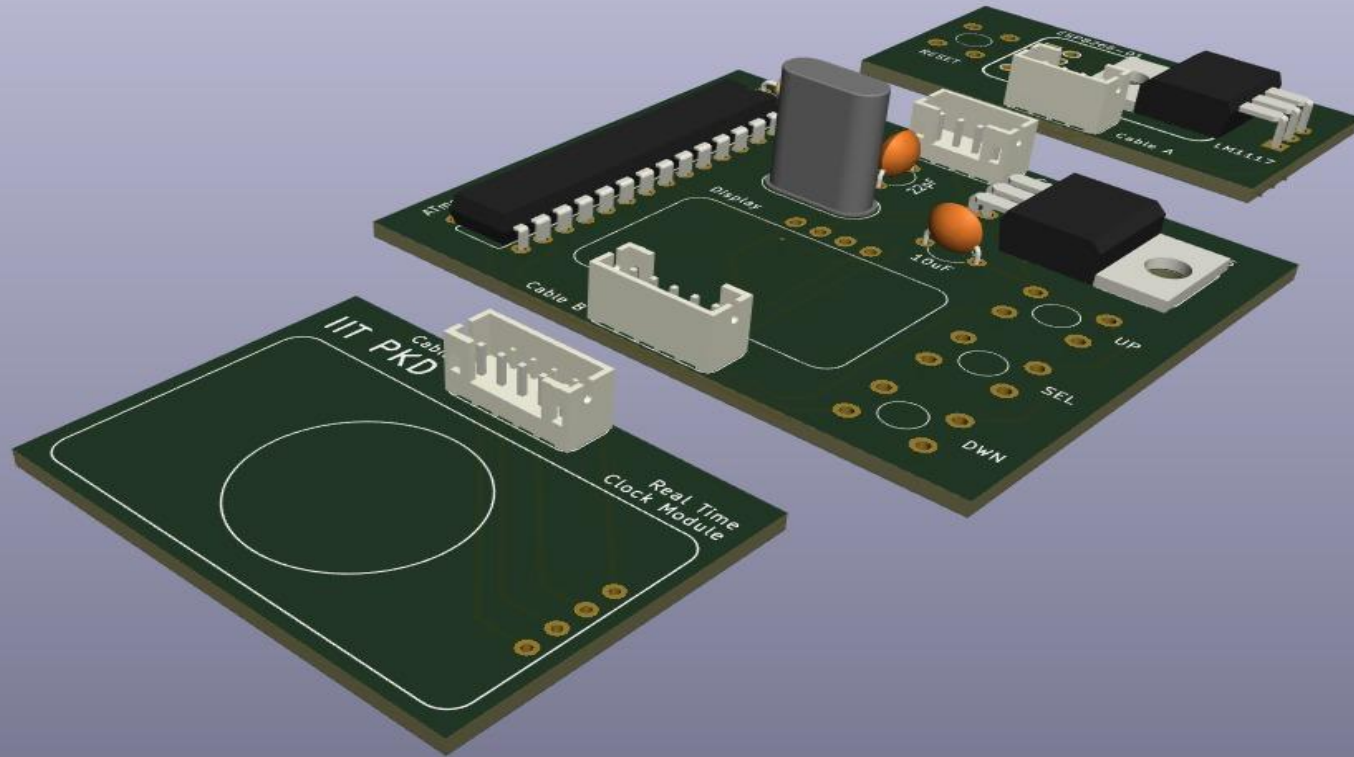


# Circuit Design



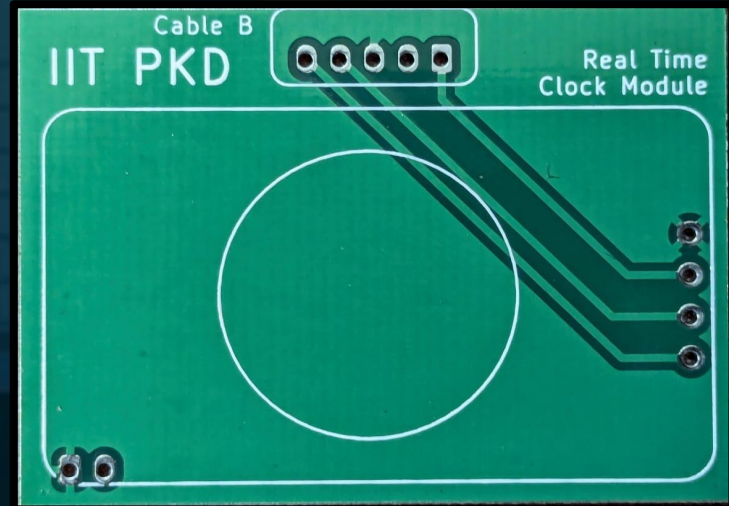
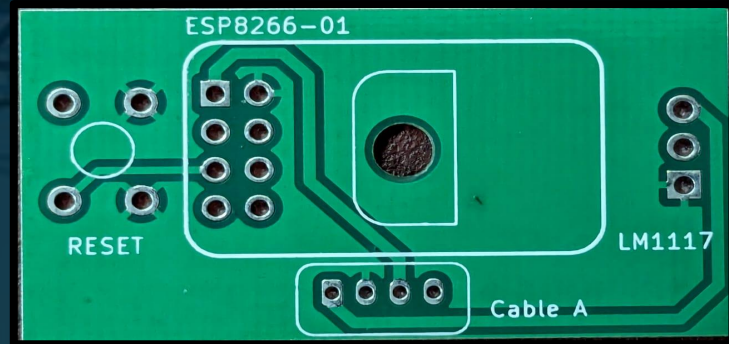
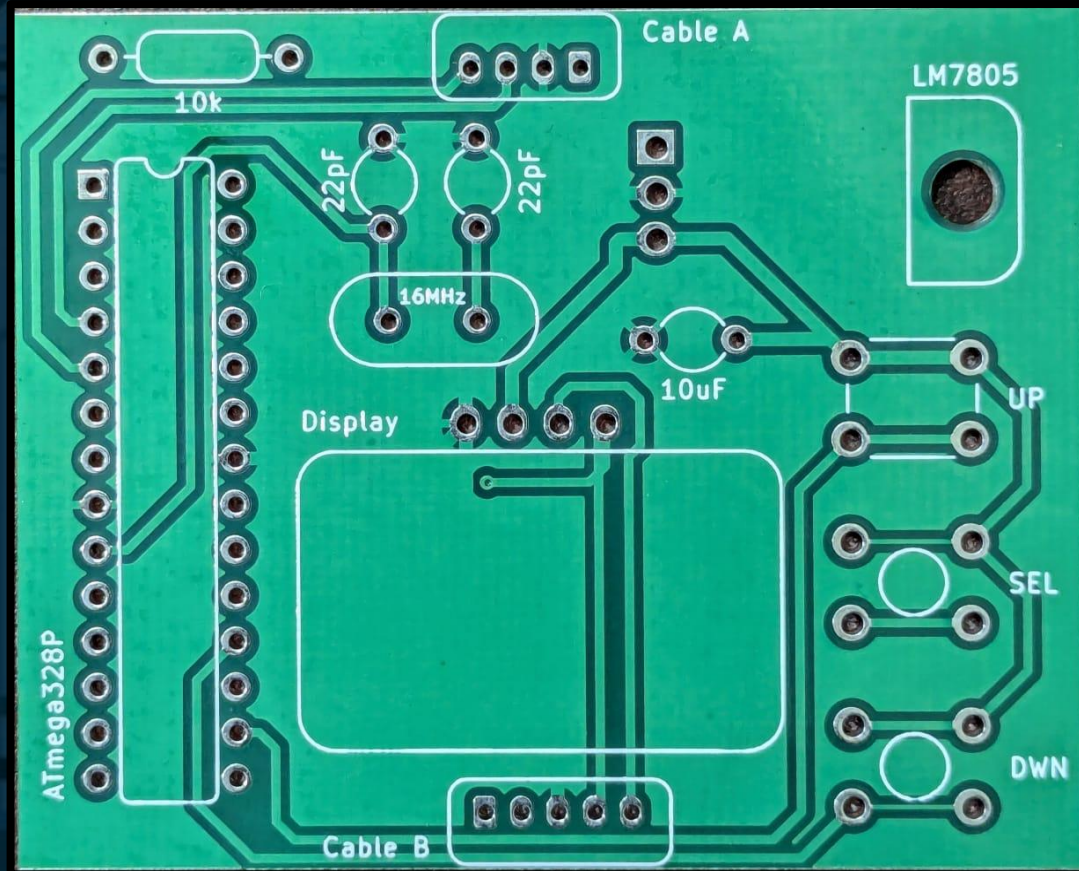


# PCB Design

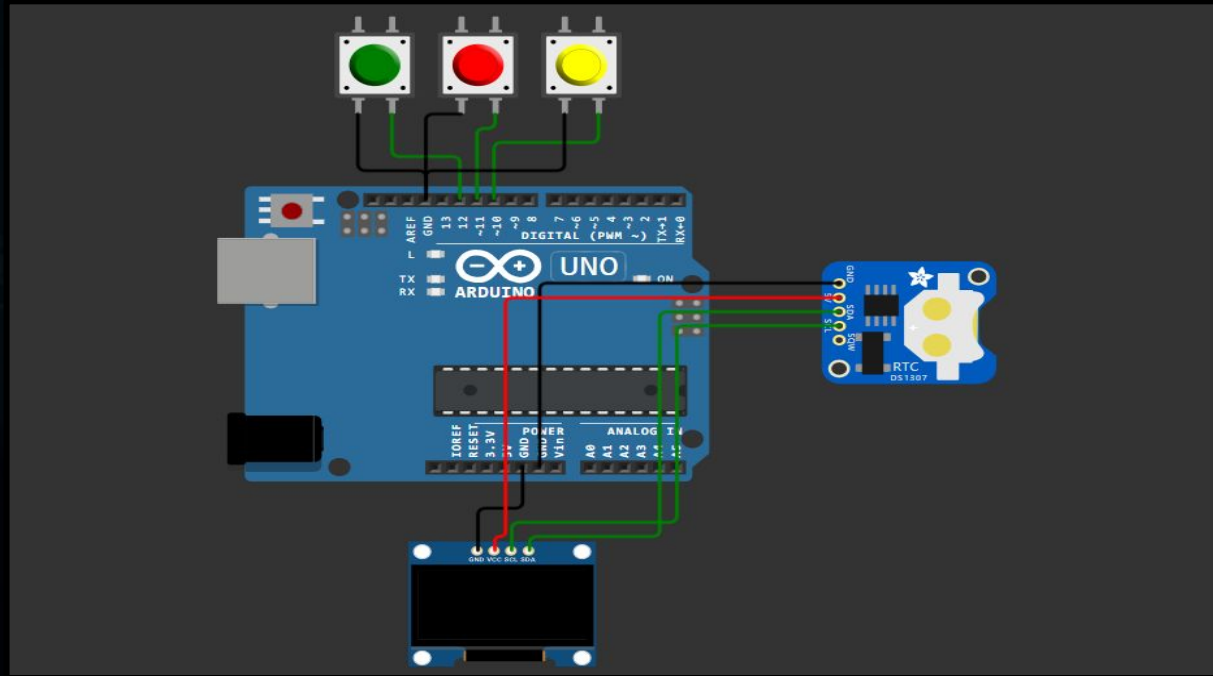




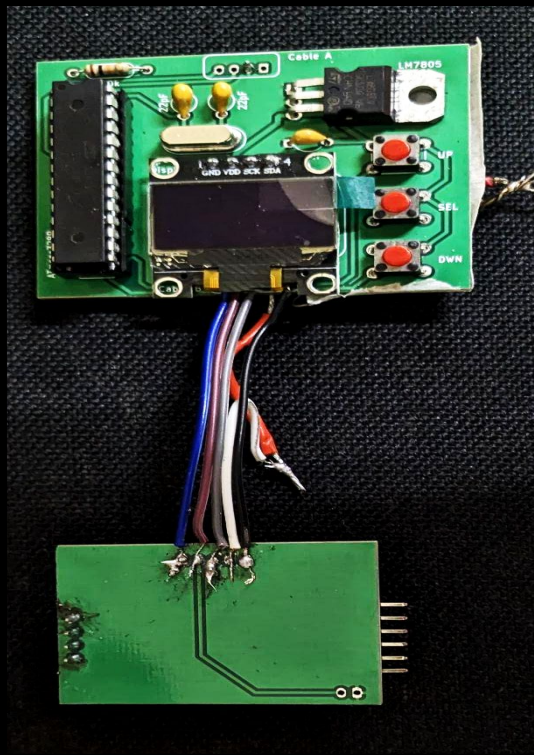
# Final PCB Fabricated



# Circuit Diagram ( Wokwi)

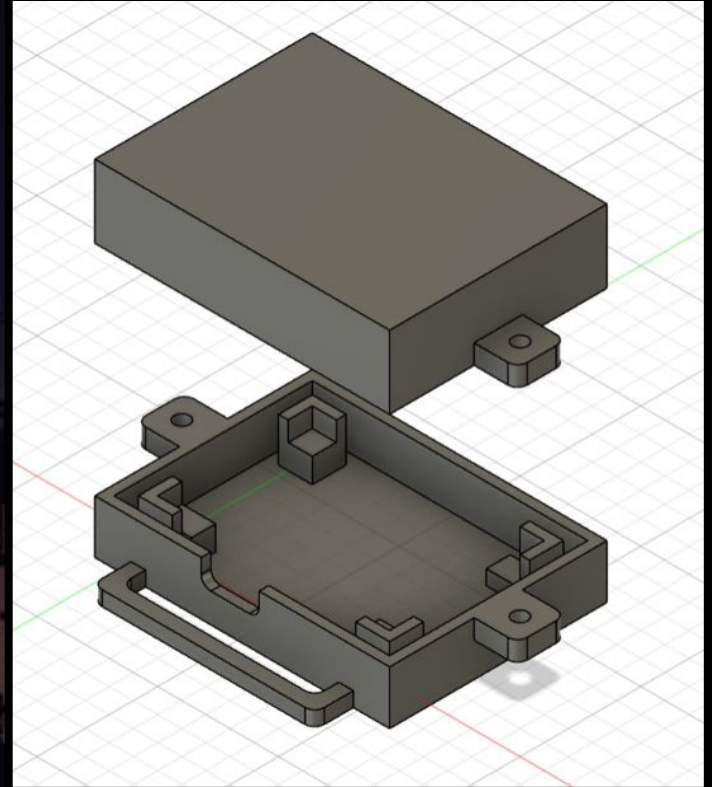
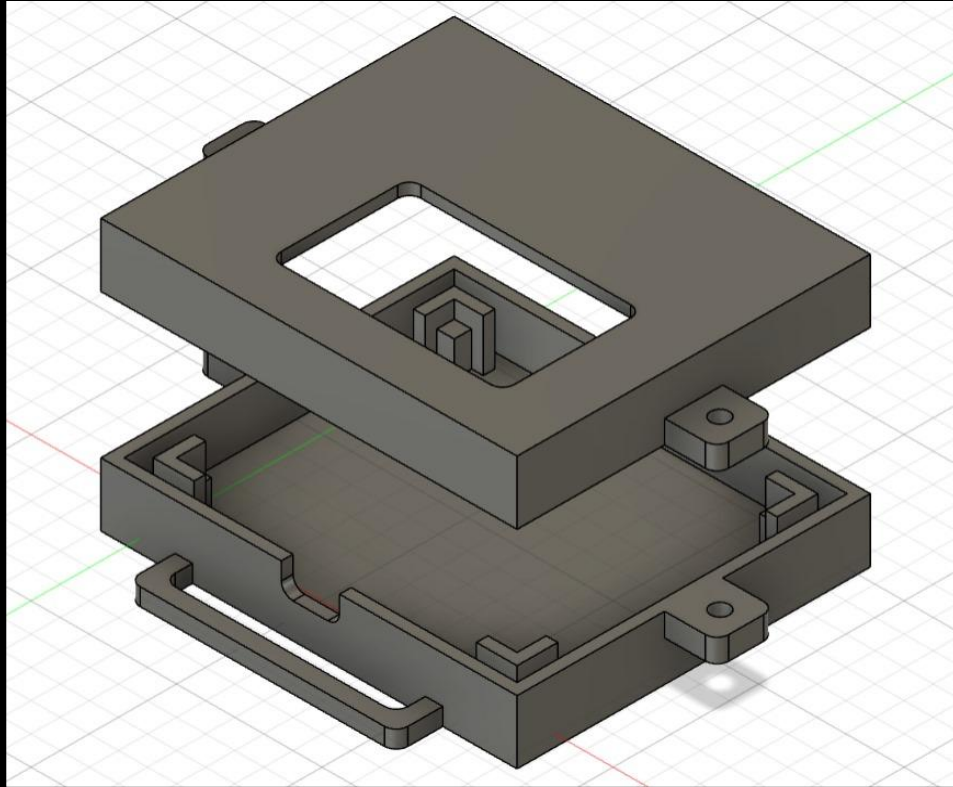


# Final Complete Circuit



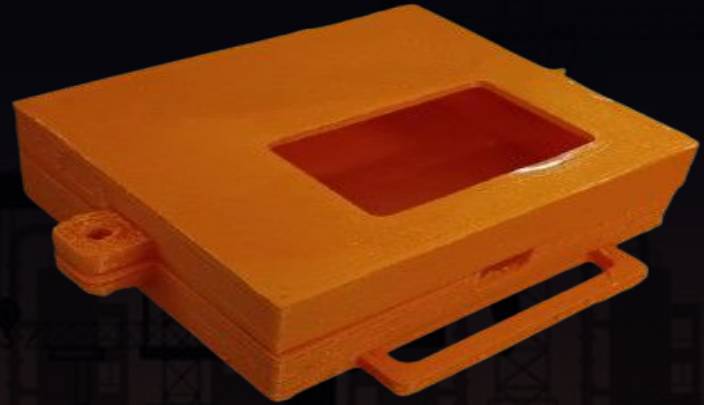


# Case 3D Model

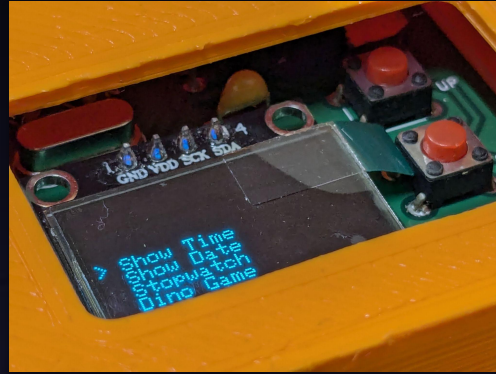
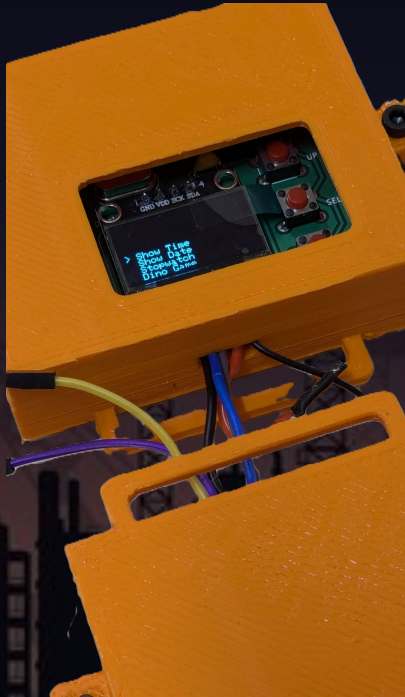




# Case 3D Printed



# Final Product



A stylized illustration of a black cat with a white patch on its back, sitting on a wooden windowsill and looking out at a city skyline at night. The city is filled with lit-up buildings, and a large full moon hangs in the dark sky filled with stars. On the windowsill, there is a lit candle in a holder, a small bowl of water, and several potted plants. The word "END" is written in large, white, bold letters across the center of the image.

**END**