

LOCK BOX

Samuel Hoff, Yuanxiao Gao

TA: Mo Wu

OVERVIEW

- Make a lockable box
- Unlock it like a combination lock
- Allow the user to change the combination
- Use Arduino & Hall effect sensors to read the input



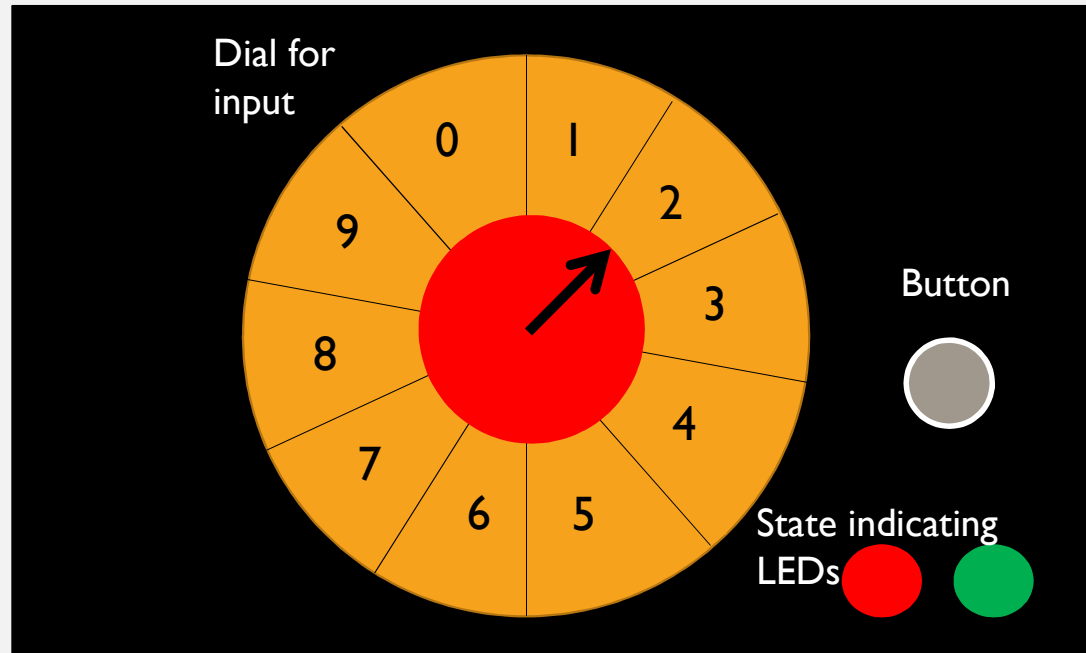
OBJECTIVES

- 1. Design a dial and housing that allows the dial's position to an Arduino.
- 2. Build the interface that allows the user to specify which code he will be entering.
- 3. Write C++ code on Arduino IDE that allows the user to control the box.
- 4. Design the locking mechanism and the bottom part of the box.
- 5. Assemble and test.

CHALLENGES

- Accurately reading a number based on the position of the dial.
- Writing code to perform all of the functionality desired.
- Finding a proper power supply.

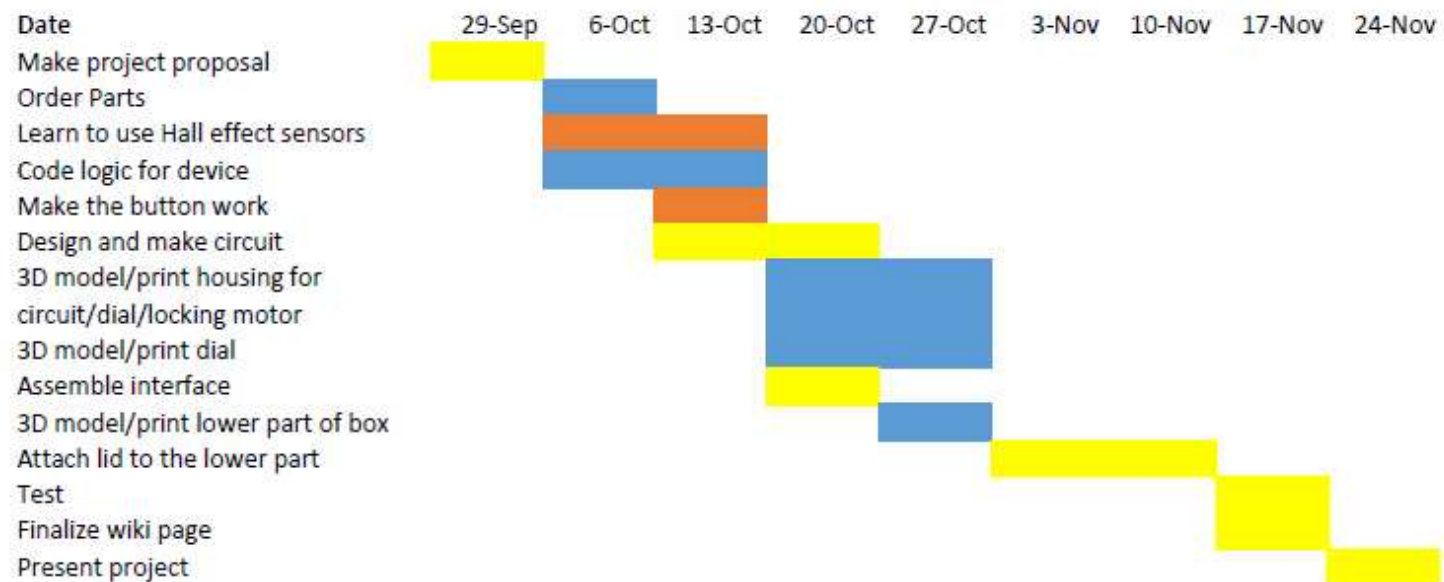
GRAPH



BUDGET

- LEDs
- 3-D printing
- Locking replay motor (4.95\$)
- magnets X 50 (\$2.99 for all of them)
- Hall Effect sensors X 13(2.38\$ for each)
- Buttons (.35\$)
- Arduino UNO
- Total: 39.23\$ + (Shipping and Handling)

GANTT CHART



THANK YOU!

The End.