Smart Light

Group 4 - gPBL 2018

SIT & HCMUT

Members

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Agenda

- Overview of project
- Materials
- Demo
- How to implement
- Development
- Summary

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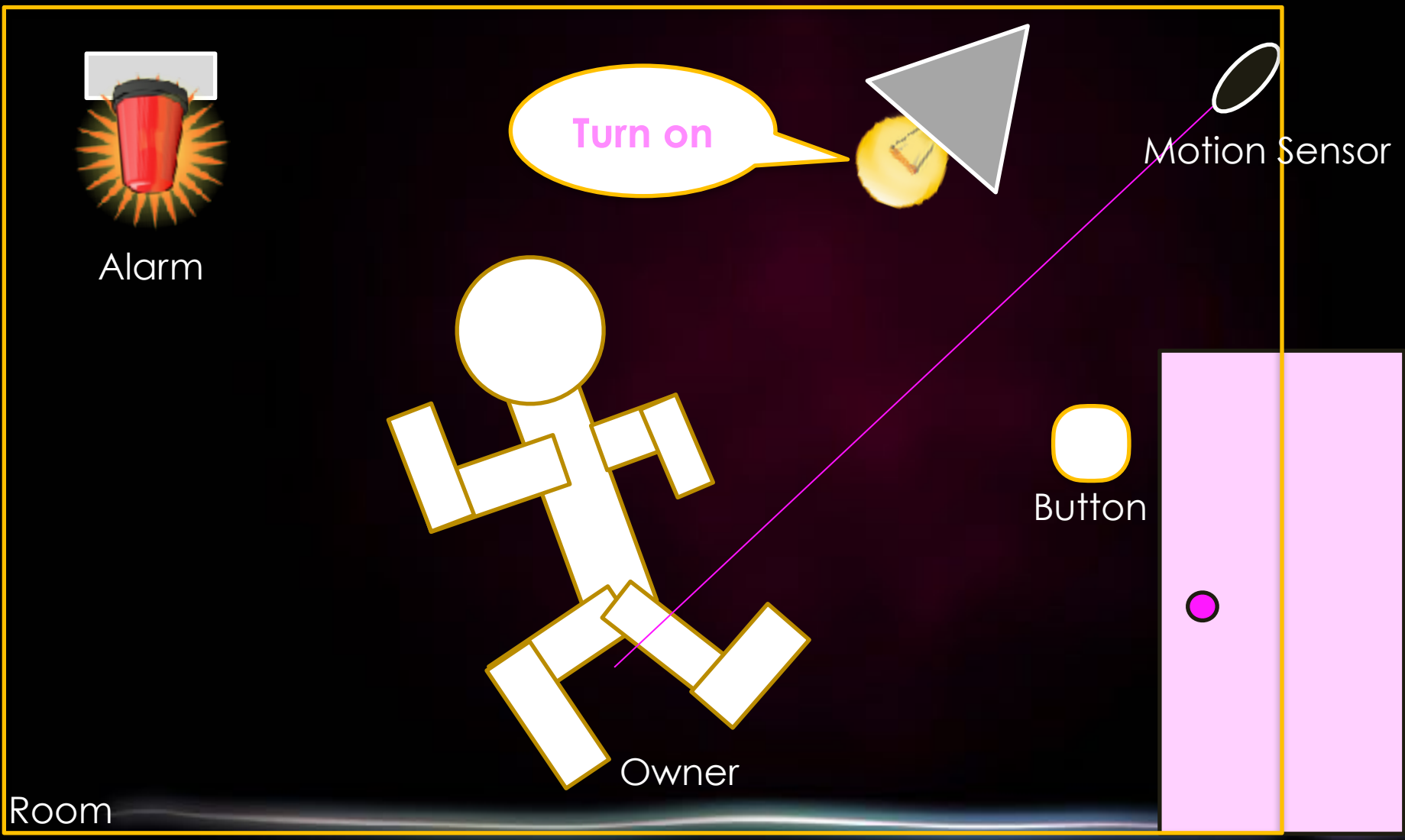
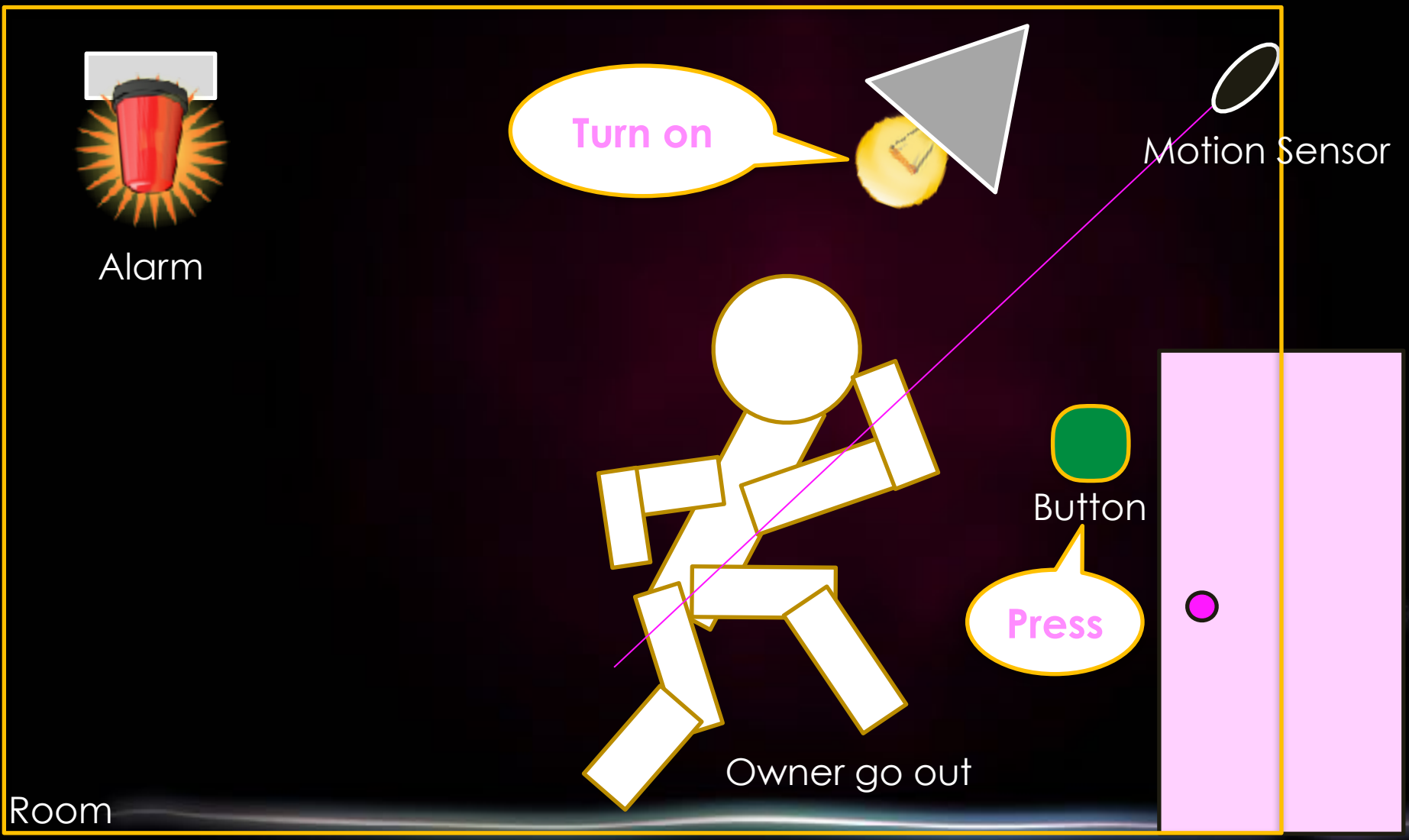
Overview

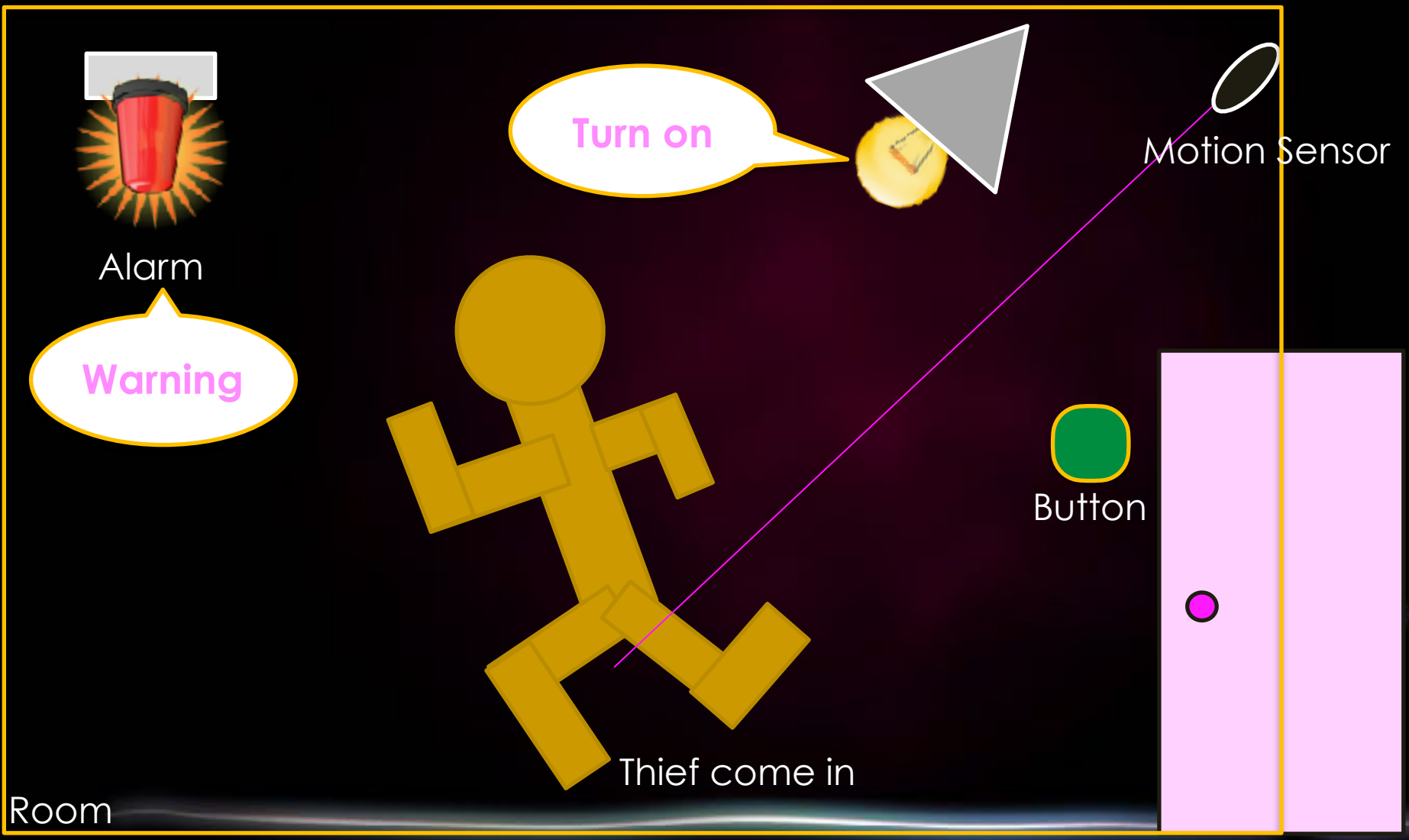
Overview



Overview



Overview


Alarm
Warning
Turn on
Motion Sensor
Button
Thief come in
Room

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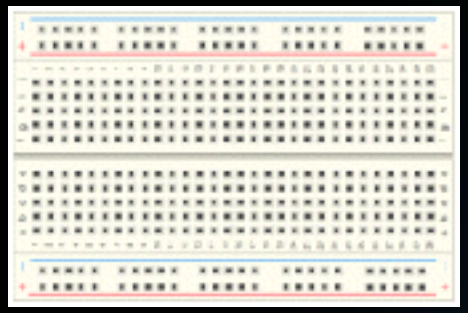
Materials



Brett board

Arduino

Button

LED

Motion sensor

Speaker

etc…

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Demo

https://www.youtube.com/watch?v=gqi_0X2tpN4

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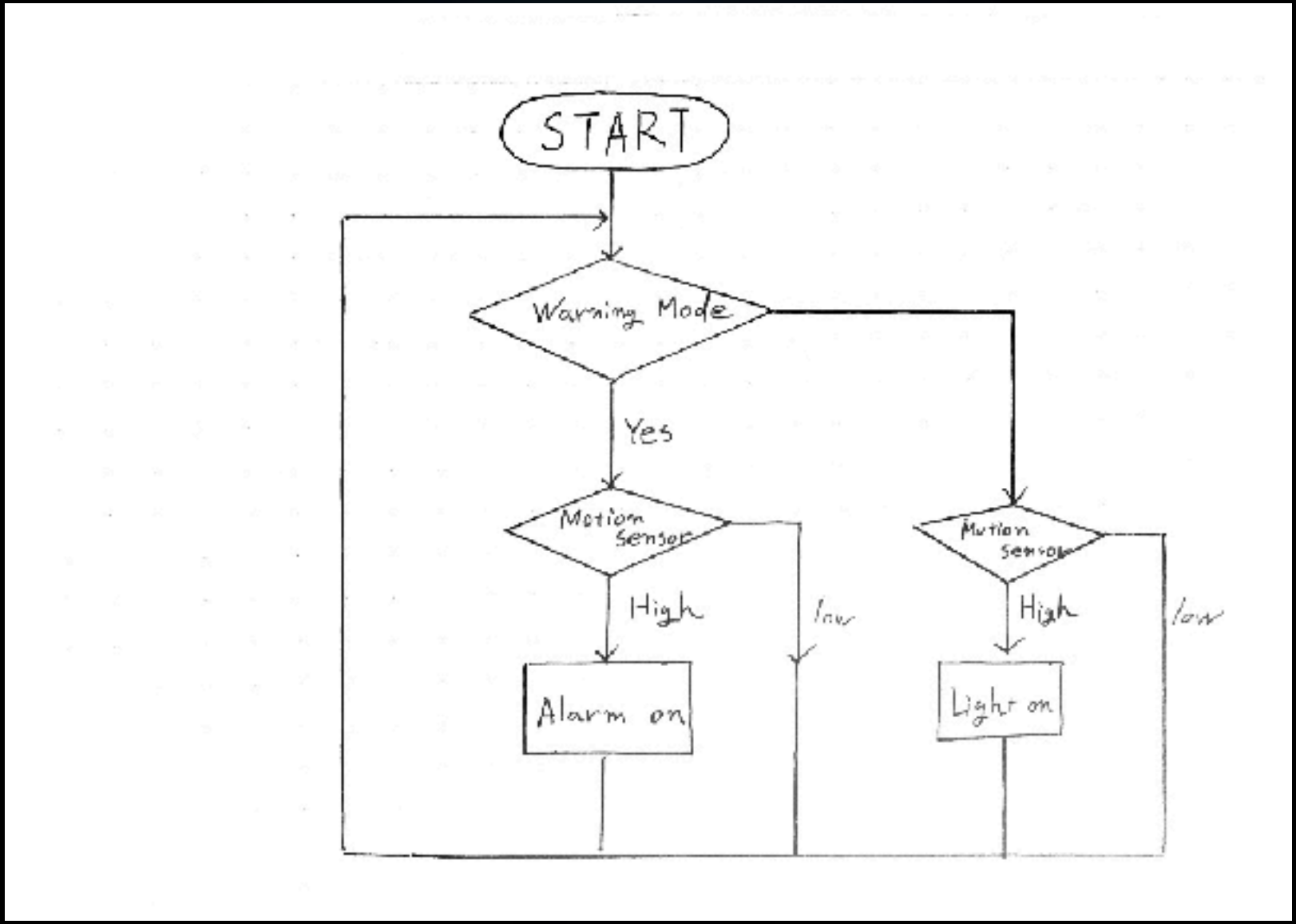
Flow Chart


START
Warning Mode
Yes
Motion Sensor
High
low
Alarm on
Motion Sensor
High
low
Light on

C code on Arduino

```
if (flag == 0){
  controlLight(val); //Initial state is controling light
}
else {
  controlAlarm(val);  //Press the button to switch to Security Mode
}
```

https://www.instructables.com/id/How-to-use-a-Push-Button-Arduino-Tutorial/
https://randomnerdtutorials.com/arduino-with-pir-motion-sensor/

Sending Email

- Communication with Python program through USB port
- ***Serial*** library
- Arduino sends signal to Python program, then Python program sends email

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Development

- If no energy (electricity) ?

Development

- If no energy (electricity) ?
  → Supplying separated power

Development

- If no energy (electricity) ?
  → Supplying separated power
- If having a small motion when sleeping ?

Development

- If no energy (electricity) ?
  → Supplying separated power
- If having a small motion when sleeping ?
  → Counting number of detecting motion

Development

- If no energy (electricity) ?
  → Supplying separated power
- If having a small motion when sleeping ?
  → Counting number of detecting motion
- Using application to control ?

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Summary

- Finished project: Smart Light
- Experiences:
  - Team work
  - IoT knowledge
  - Cultural exchange

THANK YOU

Any question?