**Student House**

**System Design Document**

**Class:** PCT02 group 3

**Members:**

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* Kees, SN 3972852
* Martin, SN 3780090

**Hardware components used**

* Arduino Uno boards
* Breadboard
* Wires
* Resistors
* DHT11 temperature and humidity sensor
* Buzzers
* Buttons
* Servo
* 5V fan
* MOSFET transistor board
* (RGB) LED's
* Motion detector
* LDR light sensor
* RFID tag reader chip

**Wiring diagrams**

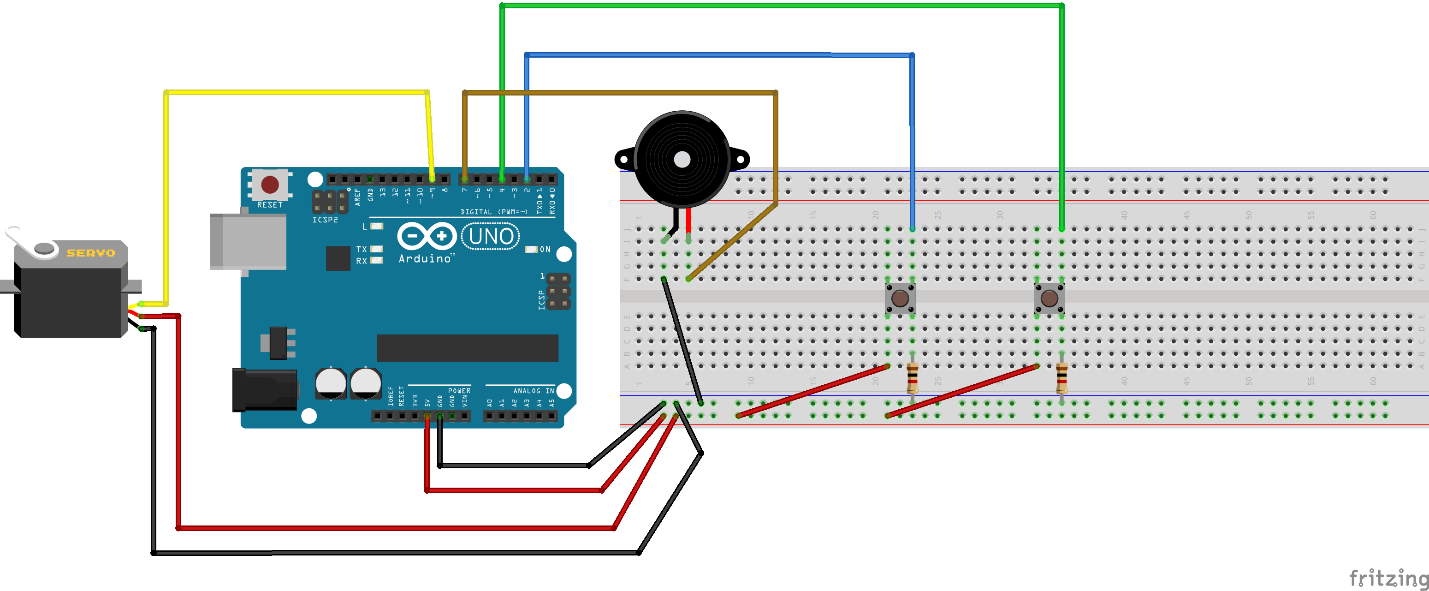


Figure 1 - RFID & door lock mechanism wiring diagram

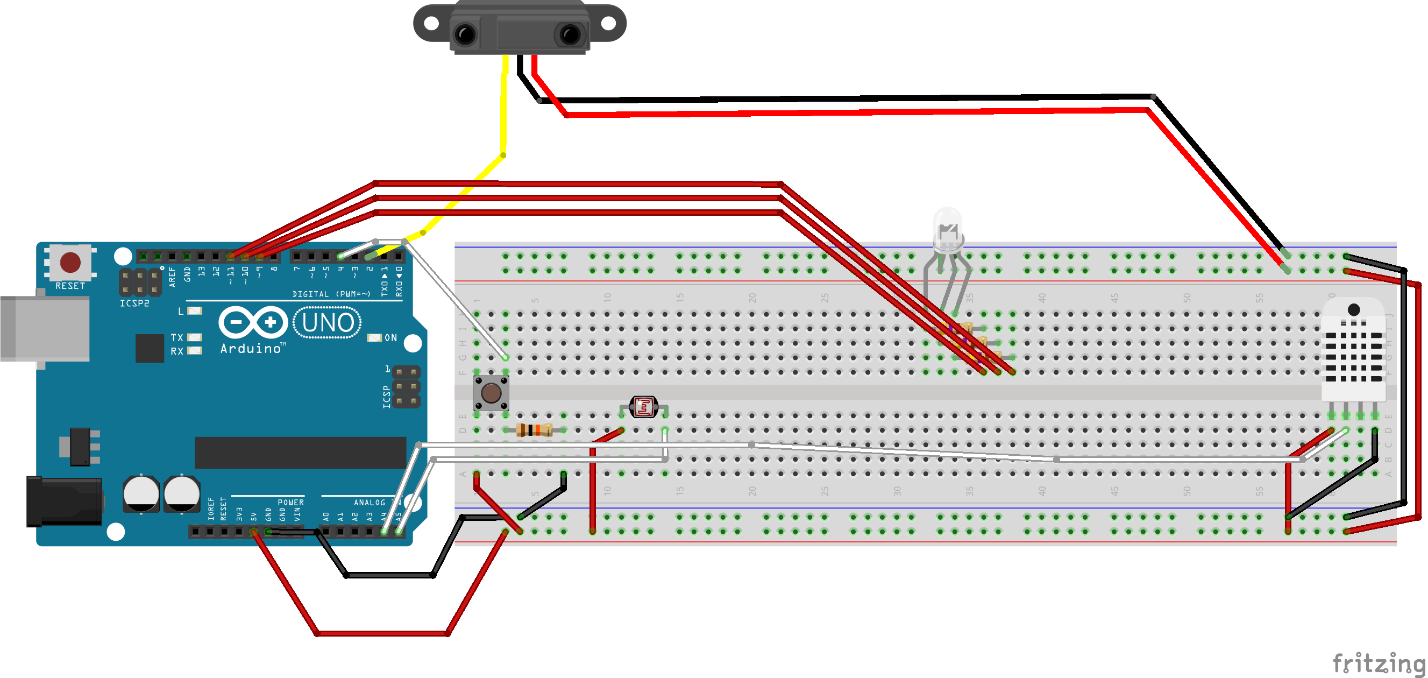


Figure 2 - Smart lighting system wiring diagram

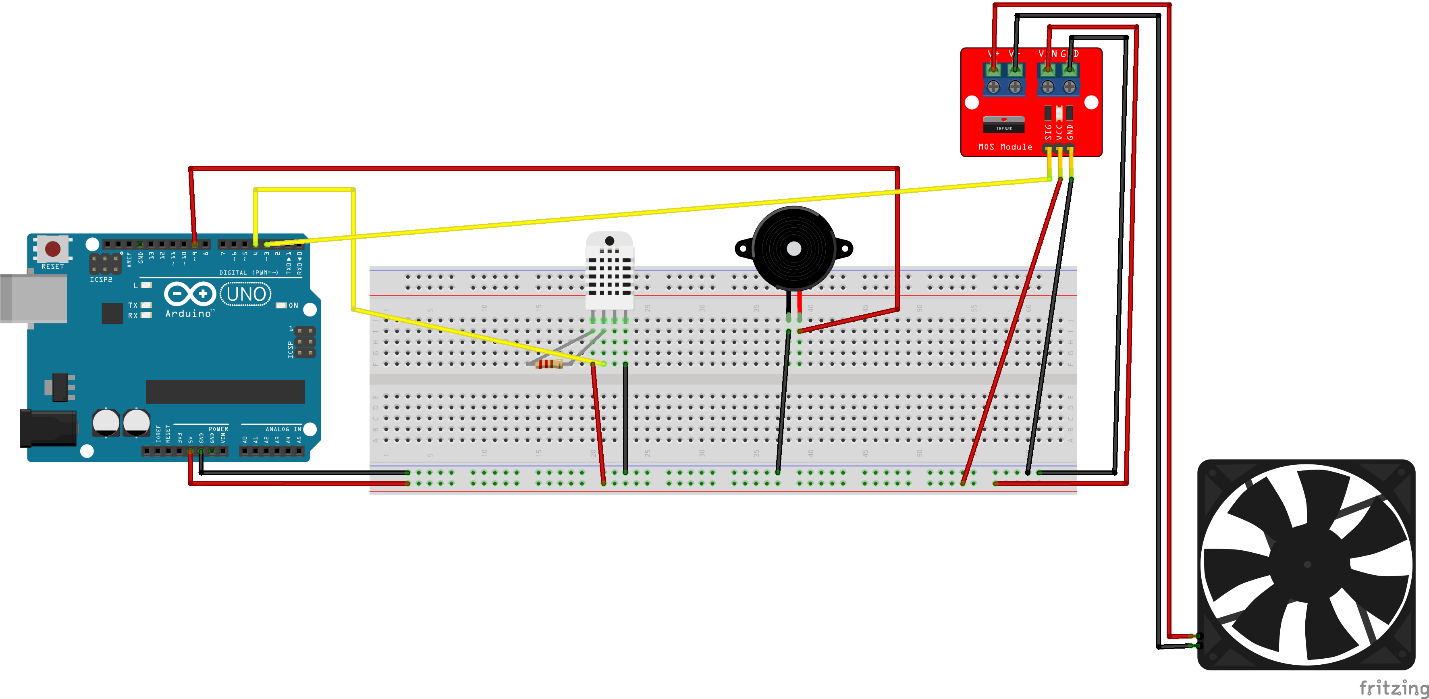


Figure 3 - Fan & alarm system wiring diagram

**State diagrams**

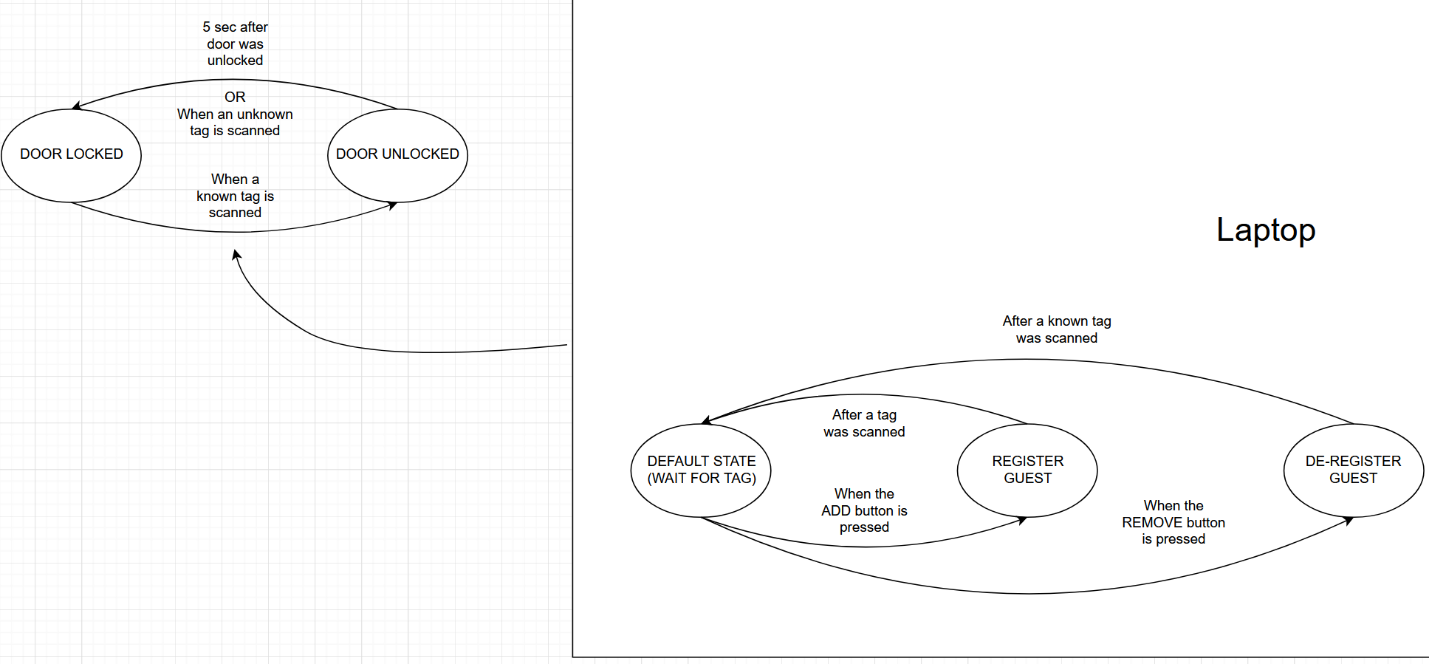
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Figure 4 - RFID & door lock mechanism state diagram

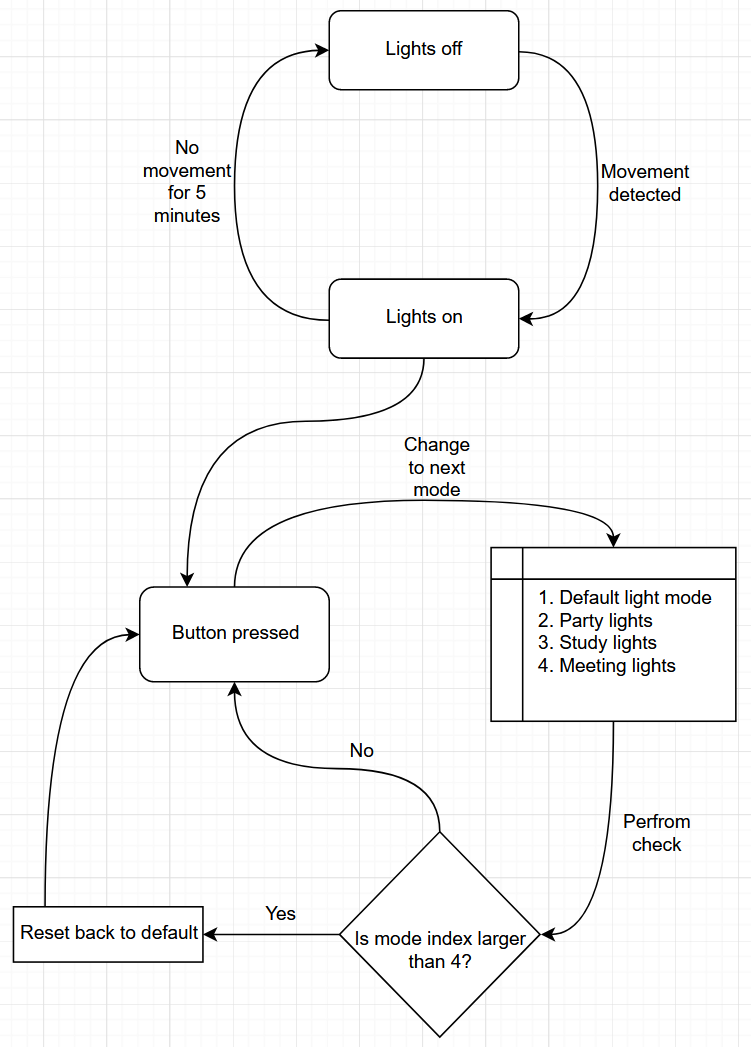
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Figure 5 - Smart lighting system state diagram

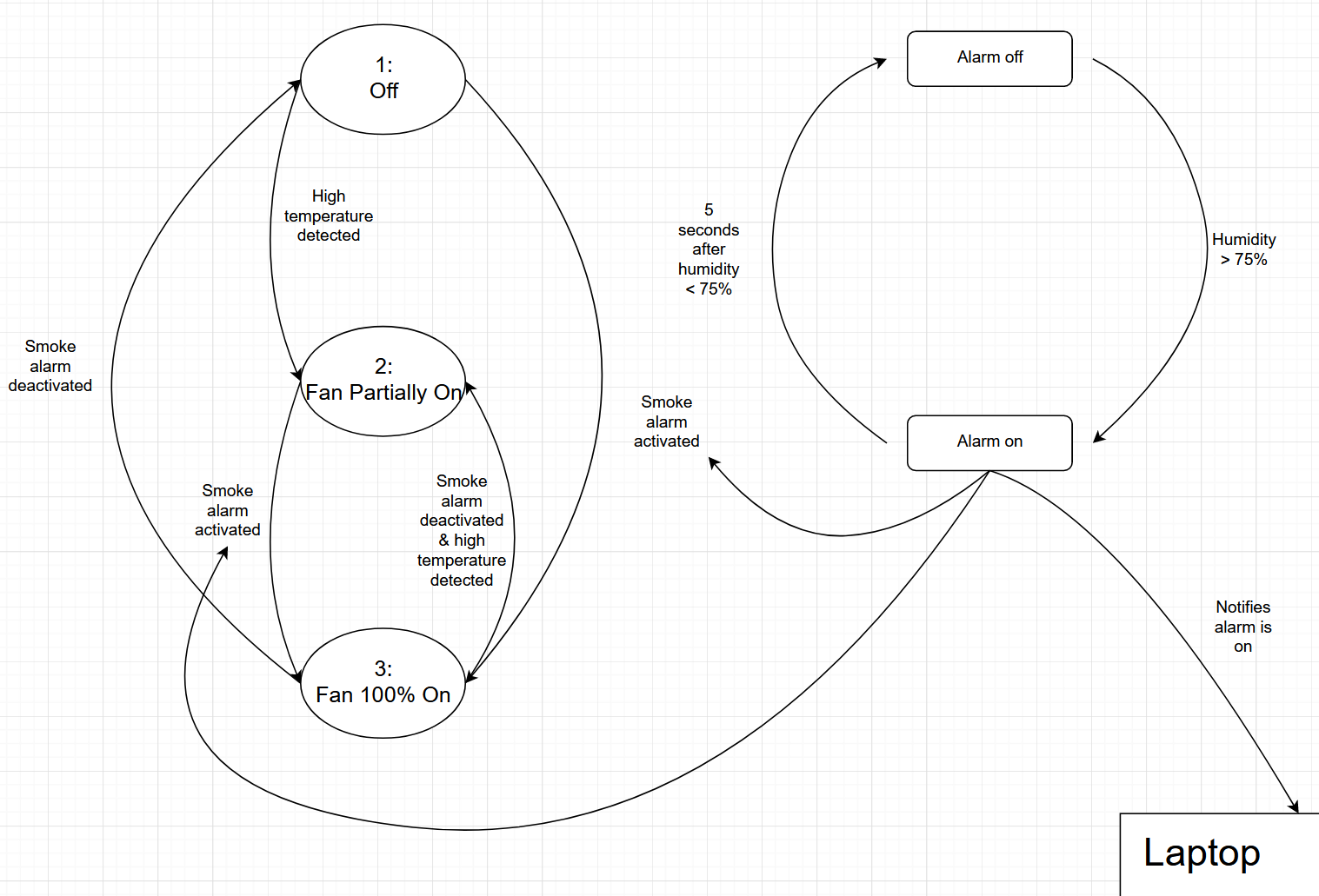
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Figure 6 - Fan & alarm system state diagram