

LET YOUR KEYS FREE

BACKGROUND

Home automation requires high installation fee

1. price of additional tools
2. technician fee
3. server using fee

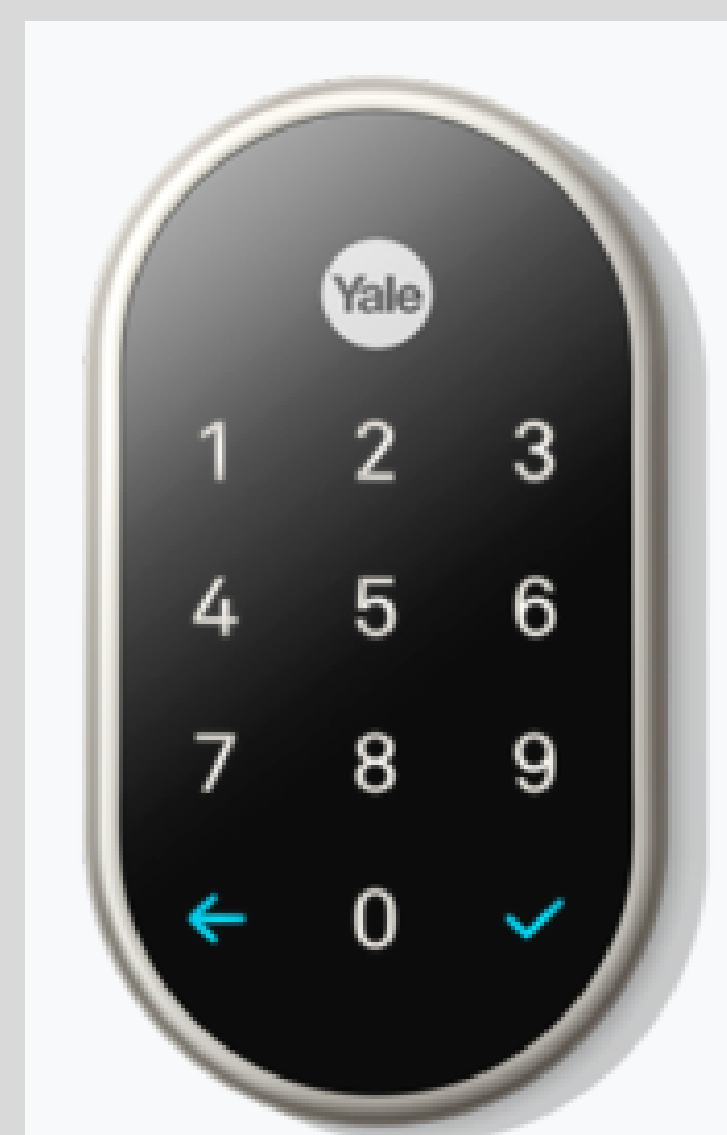
SAFETY:

Misplacing standard keys risks giving strangers access to your home

CONVENIENCE:

Making key sharing easier via mobile application
being able to revoke guest access remotely without taking back spare keys

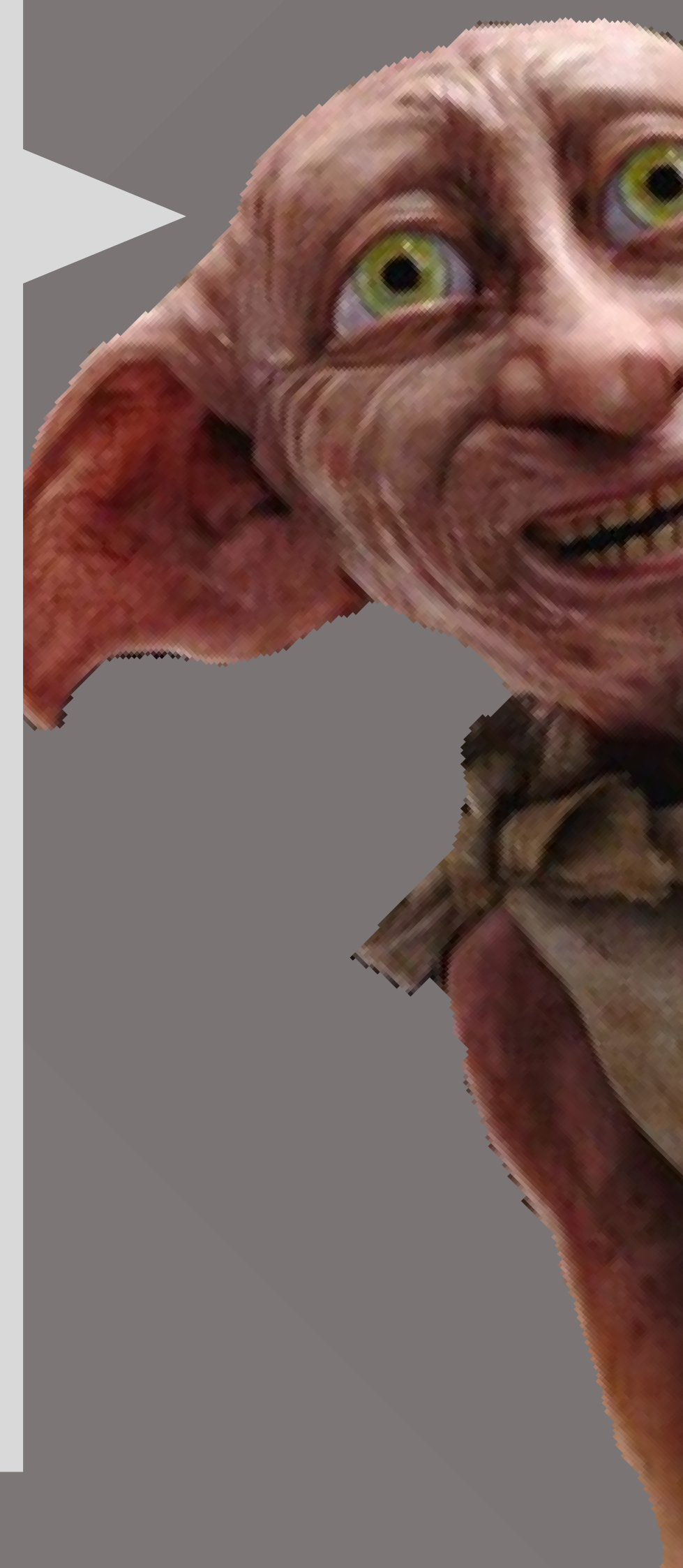
WHAT EXISTS



Google x Yale

Although there exists plenty number of smart locks, none of the solution is using the pre-installed locks. The price varies from \$200 ~ \$600, excluding the setup technician fee.

Another problem is when your apartment is rented. Nothing can be changed when you rent the house.



- This project is to design and build a smart lock 'IoT' device that can be attached onto any conventional door lock, and grant guests access to the home using mobile application
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PHYSICAL FEATURE

Grip & Rotation

Main feature of lock/unlocking the door is rotating.. Installation can be a single action. When it is attached, it just need to rotate.

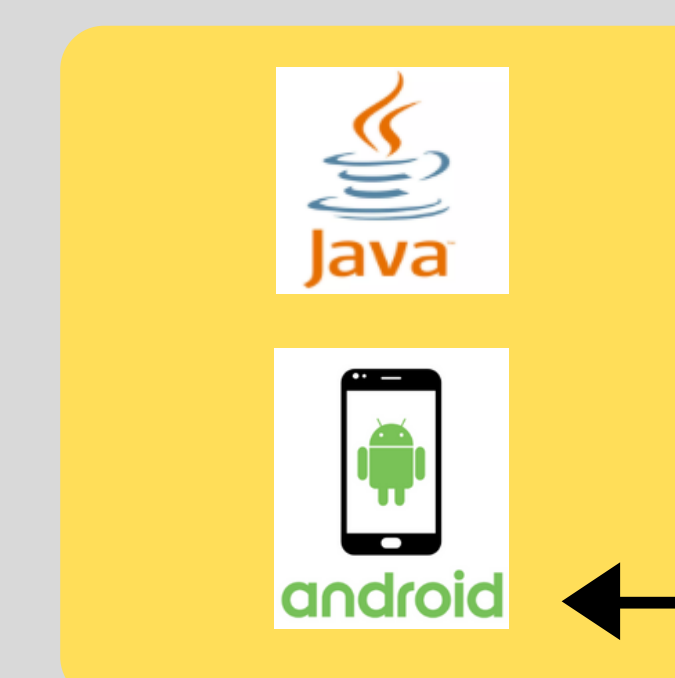
Attachability

The whole device has to be attached to the existing door in order to work.



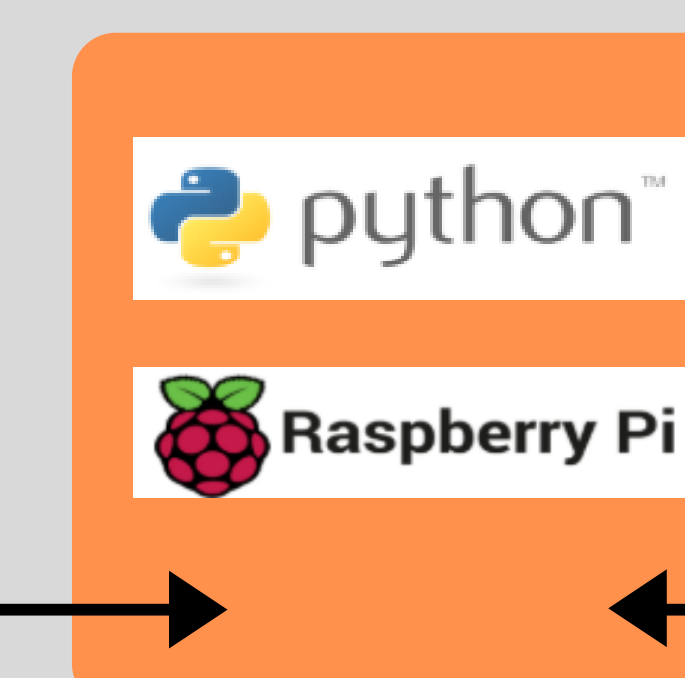
SOFTWARE

Mobile Application



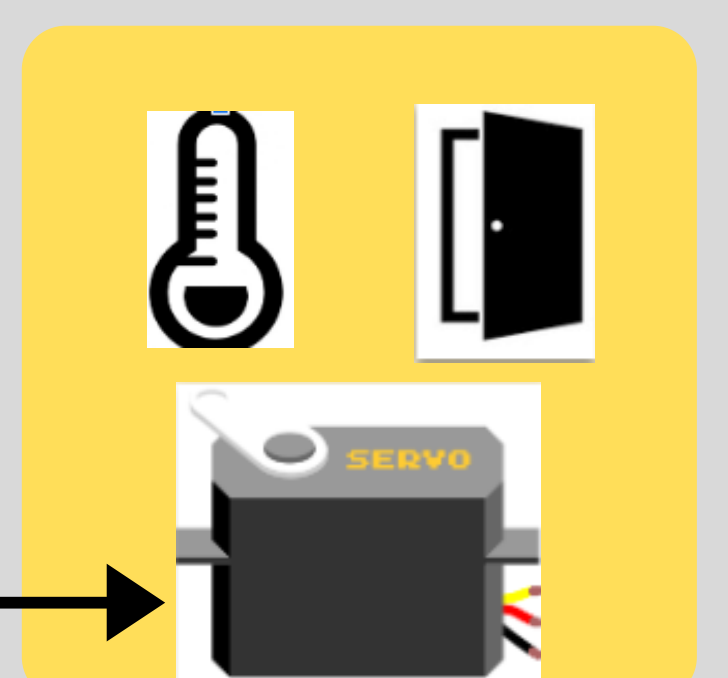
- Android
- Java

HUB



- Python
- Raspberrty Pi
- GSM module
- WIFI modle

IoT Device



- Sensor
- Actuator

FUNCTIONS

- User login/register
- open/close the lock
- view current status
- can be manually unlock
- user permission for a lock and share keys