**SmartHome\_Micro:bit**

Build a smart system control applicants in the house.

The code mainly involves using FSM to optimize the opeartion of the system.

---------------Living Room

- Equipment: LCD Adafruit, PIC sensor, Buzzer.

- Functions:

+ Initialize the 4-digit key pass for the user to unlock the lock.

+ Have the PIR sensor works as the security lock.

+ Alert the user if any danger was found(run out of time or wrong pass key).

---------------Kitchen + Garden

-Equiment: LCD Adafruit, DHT11 sensor, YL69 Soil Moisture sensor,

LightIntensity sensor, MQ2 Gas sensor, Buzzer, DC Fan,

DC Pump, Bluetooth HC05.

-Functions:

+ Measure the temperature and humidity in the kitchen.

+ Send the date to the user via a controller mobile app using bluetooth.

+ Activate/Disactivate the fan correspond to the environment.

+ Measure the soil humidity and light intensity in the garden.

+ Send the date to the user via a controller mobile app using bluetooth.

+ Activate/Disactivate light system and DC pump correspond to environment.

---------------Bedroom

-Equipment: LCD Adafruit, RealTime clock, LightIntensity sensor, Buzzer.

-Functions:

+ Automatically turn on/off light according to timeline: morning, noon, evening.

+ RealTime clock: display current date and time.

+ Alarm mode.