```arduino
//by shubin Yuna
//HomeSLock, read data from phone Lock App open or close the door.
// read sensor send it to phone

#define LOCK LED_BUILTIN // pin 13 as output pin for lock
#define senRIP 2 // pin 2 as input pin for sensor

int senRIP_state = 0; // track sensor state
int senRIP_stored = 0;  // stored if bluetooth not connected but sensor detected

unsigned long previousTime; //previous deteted time
unsigned long timeNow; // current time
unsigned long DelayTime = 3000; // delay time
char dataTransmit = 0b00000000;// data send


//----------------------------------------------------------------------------
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void setup() {
  pinMode(LOCK, OUTPUT); // lock output pin
  pinMode(senRIP, INPUT); // senRIP input pin
  Serial.begin(9600); //serial begin 9600
}

//----------------------------------------------------------------------------
------
//@return
//1, can keep read input from sensor
//0 stop read input from sensor
int sensorDelay(){
  if(senRIP_state == 1){
    if(timeNow - previousTime > DelayTime){
      return 1;
    }else{
      return 0;
    }
  }else{
    return 1;
  }
}
//----------------------------------------------------------------------------
------
//read sensor input
void readSensorInput(){
```

```cpp
  //check can i read
  int delayChecker = sensorDelay();

  //if I can read
  if (delayChecker == 1){

    //read sensor input
    int current_senRIP_state = digitalRead(senRIP);
    if(current_senRIP_state == HIGH){
      //if detceted
      if(senRIP_state == 0){
        //change state
        senRIP_state = 1;
        //stored data for transmision, use binary or
        dataTransmit = dataTransmit | 0b00000010;
        senRIP_stored = 1;
      }
      //previous time = current time
      previousTime = millis();
      //if noty
    }else{
      if(senRIP_state == 1){
        senRIP_state = 0;
        //stored the data use binary and
        dataTransmit = dataTransmit & 0b11111101;
      }

    }
  }
}

//----------------------------------------------------------------------------
------
//read input from user
void readUserInput(){
    if(Serial.available()>0)
    {
        char data= Serial.read();
        switch(data)
        {
          //read 1
          case '1':
          {
          digitalWrite(LOCK, HIGH);
          dataTransmit = dataTransmit | 0b00000001;
```

```
        break;
      }
      //read 2
      case '2':
      {
      digitalWrite(LOCK, LOW);
      dataTransmit = dataTransmit & 0b11111110;
      break;
      }
      //read 3
      case '3':
      {
        senRIP_state == 0;
      }
      //read 4
      case '4':
      {
        Serial.println(dataTransmit, HEX);
      }
      default : break;
    }
  }
}
//-----------------------------------------------------------------------
//program start:
void loop() {
  //current read
  timeNow = millis();
  //read user
  readUserInput();
  //read sensor
  readSensorInput();
  }
```