```
#include <LiquidCrystal.h>
Const int rs = 12, en = 11, d4 = 5, d5 = 4, d6 = 3, d7 = 2;
LiquidCrystal lcd(rs, en, d4, d5, d6, d7);
Const int PIR = 8;
Const int bulb = 7;
Const int tempPin = A1;
Const int fan = 10;
Int temp;
Int tempMin = 30;
Int tempMax = 60;
Int fanSpeed;
Int fanLCD;
Int PIRState = 0;

Void setup() {
  pinMode(PIR, INPUT);
  pinMode(bulb, OUTPUT);
  pinMode(fan, OUTPUT);
  pinMode(tempPin, INPUT);
  lcd.begin(16, 2);
}

Void loop() {
  PIRState = digitalRead(PIR);
  If (PIRState == HIGH)
  {
    digitalWrite(bulb, HIGH);
  }
```

```
 If (PIRState == LOW)
 {
  digitalWrite(bulb, LOW);
 }

 If
 (temp = readTemp());

 If (temp < tempMin)
 {
  fanSpeed = 0;
  analogWrite(fan, fanSpeed);
  fanLCD = 0;
  digitalWrite(fan, LOW);
 }
 If ((temp >= tempMin) && (temp <= tempMax))
 {
  fanSpeed = temp;
  fanSpeed = 1.5 * fanSpeed;
  fanLCD = map(temp, tempMin, tempMax, 0, 100);
  analogWrite(fan, fanSpeed);
 }

 Lcd.print("TEMP: ");
 Lcd.print(temp);
 Lcd.print("C ");
 Lcd.setCursor(0, 0);
 Delay(200);
}
```

```
Int readTemp() {
  Temp = analogRead(tempPin);
  Return temp * 0.48828125;
}
```