Smart Door Looking System

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#include <Servo.h>
#include <LiquidCrystal_I2C.h>
#include <SPI.h>
#include <MFRC522.h>
#define SS_PIN 10
#define RST_PIN 9
String UID = "8F B0 F7 1F";
byte lock = 0;
Servo servo;
LiquidCrystal_I2C lcd(0x27, 16, 2);
MFRC522 rfid(SS_PIN, RST_PIN);
void setup() {
Serial.begin(9600);
servo.write(70);
lcd.init();
lcd.backlight();
servo.attach(3);
SPI.begin();
rfid.PCD_Init();
}
void loop() {
lcd.setCursor(4, 0);
lcd.print("Welcome!");
lcd.setCursor(1, 1);
lcd.print("Put your card");
if ( ! rfid.PICC_IsNewCardPresent())
return;
if ( ! rfid.PICC_ReadCardSerial())
return;
lcd.clear();
lcd.setCursor(0, 0);
lcd.print("Scanning");
```

```
Serial.print("NUID tag is :");
String ID = "";
for (byte i = 0; i < rfid.uid.size; i++) {
lcd.print(".");
ID.concat(String(rfid.uid.uidByte[i] < 0x10 ? " 0" : " "));
ID.concat(String(rfid.uid.uidByte[i], HEX));
delay(300);
}
ID.toUpperCase();
if (ID.substring(1) == UID && lock == 0 ) {
servo.write(70);
lcd.clear();
lcd.setCursor(0, 0);
lcd.print("Door is locked");
delay(1500);
lcd.clear();
lock = 1;
} else if (ID.substring(1) == UID && lock == 1 ) {
servo.write(160);
lcd.clear();
lcd.setCursor(0, 0);
lcd.print("Door is open");
 delay(1500);
 lcd.clear();
 lock = 0;
 } else {
 lcd.clear();
 lcd.setCursor(0, 0);
 lcd.print("Wrong card!");
 delay(1500);
 lcd.clear();
 } }
```