# Code for Bed And Ventilation

#include <ESP8266WiFi.h>

#include <Espalexa.h>

#include <Servo.h>

Servo blindServo;

static const int servoPin = 15; // The Pin which the Servo is connected to

const int button1Pin = 5; // The Pin which Button 1 is connected to

const int button2Pin = 4; // The Pin which Button 2 is connected to

int servoPosition = 0; // This sets the initial postiion of the servo

// prototypes

boolean connectWifi();

//callback functions

void servoPositionChanged(uint8\_t servoPosition);

// \*\* CHANGE THE SSID AND PASSWORD TO MATCH YOUR OWN WIFI SETUP \*\*

const char\* ssid = "Project\_Roban";

const char\* password = "1234roban\_aj";

boolean wifiConnected = false;

Espalexa espalexa;

void setup()

{

Serial.begin(115200);

blindServo.attach(servoPin);

pinMode(button1Pin, INPUT\_PULLUP); // Set the button so that the controller reads LOW when pressed

pinMode(button2Pin, INPUT\_PULLUP); // Set the button so that the controller reads LOW when pressed

// Initialise wifi connection

wifiConnected = connectWifi();

if (wifiConnected) {

// Define your devices here. Bed show in Alexa and for blinds name it as Blind

espalexa.addDevice("Bed", servoPositionChanged, 20); //simplest definition, default state off

espalexa.begin();

} else

{

while (1) {

Serial.println("Cannot connect to WiFi. Please check data and reset the ESP.");

delay(2500);

}

}

}

void loop()

{

while (digitalRead(button1Pin) == LOW && servoPosition < 179) {

blindServo.attach(servoPin); // This activates the servo (Attaches the servo)

servoPosition++;

blindServo.write(servoPosition);

Serial.println(servoPosition);

delay(15);

blindServo.detach(); // This deactivates the servo (Detahces the servo) so there is no noise from the servo when the movement has finished

}

while (digitalRead(button2Pin) == LOW && servoPosition > 0) {

blindServo.attach(servoPin);

servoPosition--;

blindServo.write(servoPosition);

Serial.println(servoPosition);

delay(15);

blindServo.detach();

}

espalexa.loop();

delay(1);

}

//our callback functions

void servoPositionChanged(uint8\_t servoPosition) {

Serial.print("Servo Position changed to ");

if (servoPosition < 180) {

blindServo.attach(servoPin);

Serial.print("Servo Position ");

Serial.println(servoPosition);

blindServo.write(servoPosition);

servoPosition = servoPosition;

delay(1000);

blindServo.detach();

}

else {

Serial.print("Servo Out of Range ");

Serial.println(servoPosition);

}

}

// connect to wifi – returns true if successful or false if not

boolean connectWifi() {

boolean state = true;

int i = 0;

WiFi.mode(WIFI\_STA);

WiFi.begin(ssid, password);

Serial.println("");

Serial.println("Connecting to WiFi");

// Wait for connection

Serial.print("Connecting...");

while (WiFi.status() != WL\_CONNECTED) {

delay(500);

Serial.print(".");

if (i > 20) {

state = false; break;

}

i++;

}

Serial.println("");

if (state) {

Serial.print("Connected to ");

Serial.println(ssid);

Serial.print("IP address: ");

Serial.println(WiFi.localIP());

}

else {

Serial.println("Connection failed.");

}

return state;

}