Electronics Projects with the ESP8266 and ESP32

Updates

Chapter 8 Updating a web page

Cayenne (developers.mydevices.com) announced that Cayenne MQTT broker will be discontinued in September 2023 (community.mydevices.com/t/end-of-life-announcement-for-cayenne/18926). Chapter 8 *Updating a web page* has been updated with the Blynk MQTT broker services. The updated Chapter and accompanying sketches are included in the **Chapter 8_NEW** folder on GitHub (github.com/Apress/ ESP8266-and-ESP32).

Listing 1-3 Radio station URLs constantly change. URLs at October 2023 are:

```
"1940sradio1.co.uk:8100/stream/1/",                    // 1940s music
"irmedia.streamabc.net/irm-bbrberlinclub-mp3-128-4574783",   // Berlin
"media-ice.musicradio.com/ClassicFM",                  // Classic FM
"stream.oneplay.no/oslo128",                           // Oslo
"radio.virginradio.co.uk/stream"                       // Virgin
```

Listing 4-4. With ESP8266 Version 3.0.2, the combination of *phonering* and *playtone* functions produces a clicking, rather than a phone-ringing sound. Delete the *playtone* function and in the *phonering* function, replace the `playTone(300, 40)` instruction with

```
tone(piezoPin, 300)
delay(40)
```

and similarly for the `playTone(350, 40)` instruction, then add the `noTone(piezoPin)` instruction.

Listing 4-5. Delete the instructions:

```
#include <ESP8266WebServer.h>
ESP8266WebServer server
```

Listing 5-3 is based on version 2.8.0 of the *IRremote* library for the ESP32 microcontroller.

Listing 5-3_NEW is based on version 3.0.2 of the *IRremote* library.

Library version 3.0.2 instruction `IrReceiver.begin(IRpin)` replaces library 2.8.0 instructions `IRrecv irrecv(IRpin)`, `decode_results reading` and `irrecv.enableIRIn()`. The library version 3.0.2 instruction `if(IrReceiver.decode())` replaces the instruction `if(irrecv.decode(&reading))`.

Received data is accessed in library version 3.0.2 from `IrReceiver.decodedIRData` (`protocol`, `command` and `numberOfBits`), rather than from `reading` (`decode_type`, `value` and `bits`) in library version 2.8.0.

Listings 14-6 and 14-7. With ESP8266 Version 3.0.2, include the *ESP8266WiFi* library and the `WiFi.mode(WIFI_STA)` instruction in the *void setup()* function.

Listing 14-8 With ESP8266 Version 3.0.2, include the `WiFi.mode(WIFI_STA)` instruction in the *void setup()* function.

ESP32 analog input (pages 632-633) The GPIO pins 0, 2, 4, 12, 13, 14, 15, 25, 26 and 27 are also available for analog input, but not when Wi-Fi is in use.

When the voltage on an ADC pin is required, the `analogReadMilliVolts(pin)` instruction is recommended, rather than the `analogRead(pin)*3300/4095.0` instruction.

Listing 21-5 The `analogAttenuation(attenuation)` instruction, which sets the attenuation of all analog input pins, replaces the `analogSetPinAttenuation(ADCpin, attenuation)` instruction.

Corrections

Despite repeatedly checking the page proofs, some typos persevered.

If you find other typos, then please either email *esp32ndc@gmail.com* or use *GitHub Issues* to log the typo or other issues.

Page 28 Figure 2-1	change TX to RX and change RX to TX
Page 96 text first line	change 13, 14 and 15 to S0, S1 and S2
Page 96 text line 4	change 14 and 15 to S1 and S2

Page 165 lines 1 and 2	change the order of the two lines to:
	`WiFi.softAPConfig(local_ip, gateway, subnet);`
	`WiFi.softAP(ssidAP, passwordAP);`

Page 172 text line 7	change `R"(===` and `===)"` to `R"===(` and `)==="`
Page 174 lines 1 and 3	change Listing 7-2 to Listing 7-3
Page 175 line 1	change `variable` to `variab`
Page 207 text line 1	delete "or app"
Page 233 line 11	change `servoFb.write(N)` to `servoFB.write(N)`
Page 234 Listing 9-3	ESP8266 GPIO pin numbers in the sketch differ from those in Table 9-1 (Page 231) and Figure 9-4 (page 232). In the sketch, change GPIO pin numbers for *FBpin, laserPin, trigPin* and *echoPin* to *D5, D6, D8* and *D7*.
Page 380 Table 14-1, left column, row 3	replace CONTROLER with CONTROLLER
Page 505 last line	change resistor R1 is R2× to resistor R2 is R1×
Page 530 Figure 18-13	Connection from ESP8266 3.3V to OLED VCC not to OLED SCL
Page 588 listing line 3	in the comment, change Wi-FI to Wi-Fi
Page 599 text line 3	change Listing 20-2 to Listing20-3
Page 644 line 13	Spaces between words have disappeared !!
Page 656 (last-7) line	change 0x2A63 to 0x2A6E

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