Exercise Checklist

You will be experimenting with various aspects of WICED Wi-Fi® by completing the exercises below. Labs are marked as “Basic” and “Advanced”. You should make sure you complete the basic exercises first and then work on the advanced exercises as time allows.

✓	Chapter	Exercise	Category	Description
	01 (Survey)	01	Basic	Create a forum account
		02	Basic	Open the WICED documentation
	02 (Peripherals)	01	Basic	Install BCM943907AEVAL1F_WW101 platform files
		02	Basic	Blink an LED
		03	Basic	Add debug printing
		04	Basic	Read an input pin
		05	Basic	Use a pin interrupt
		06	Basic	Toggle I2C controlled LEDs
		07	Basic	Read analog co-processor sensor values over I2C
		08	Advanced	Probe the I2C bus for any attached devices
		09	Advanced	Adjust LED brightness
		10	Advanced	Write data using the standard UART functions
		11	Advanced	Read a value using the standard UART functions
	03 (RTOS)	01	Basic	Create an LED blink thread
		02	Basic	Use a semaphore
		03	Advanced	Use a MUTEX
		04	Advanced	Use a Queue
		05	Advanced	Use a Timer
		06	Advanced	Setup and Run the Debugger
	04 (Library)	01	Basic	Browse the library
		02	Basic	Review graphics library documentation and run examples
		03	Basic	Parse JSON using cJSON
		04	Advanced	Display sensor information on the OLED display
		05	Advanced	Parse JSON using JSON_Parser
	05 (Wi-Fi)	01	Basic	Attach to WPA2 PSK network
		02	Basic	Attach to an open network
		03	Basic	Print network information to a terminal
		04	Advanced	Switch between 2 networks within the application
	06A (Sockets)	01	Basic	Implement a client to write data to the server using TCP streams
		02	Basic	Modify the client to inspect return code from the server
		03	Advanced	Implement a server for a single non-secure TCP connection
	06B (TLS)	01	Basic	Modify the client to use secure TLS sockets
		02	Advanced	Implement a server using secure TLS sockets
		03	Advanced	Implement a client that uses both non-secure and secure sockets
		04	Advanced	Implement a server that listens to both non-secure and secure sockets
	07B (HTTP)	01	Basic	Use CURL to connect to http://httpbin.org
		02	Basic	Use CURL to connect to https://httpbin.org using TLS
		03	Basic	Use WICED to get data from httpbin.org
		04	Basic	Use WICED to get data from httpbin.org using TLS
		05	Basic	Use WICED to post data to httpbin.org
		06	Basic	Use WICED to post data to httpbin.org using TLS
		07	Basic	Use a WEB API for Temperature Conversion
		08	Advanced	Control a Virtual LED on Initial State using APIARY and CURL
		09	Advanced	Control a Virtual LED on Initial State using a button on the board
		10	Advanced	Send Temperature and Humidity to Initial State
		11	Advanced	Graph Temperature on Initial State
		12	Advanced	Send request to example.com using text strings
	7C (MQTT and AWS)	01	Basic	Rim the AWS Tutorial
		02	Basic	Provision a new *thing* in the AWS IOT cloud
		03	Basic	Use the Test terminal on the AWS website
		04	Basic	Build and run the publisher demo

✓	Chapter	Exercise	Category	Description
		05	Basic	Explain the publisher demo firmware flow
		06	Basic	Build and run the subscriber demo
		07	Advanced	Implement the publisher and subscriber in 2 different kits and test
		08	Advanced	Build and test the shadow demo
		09	Advanced	Get the shadow of your *thing* from AWS using HTTPS