# Signatures

You will be experimenting with various aspects of WICED Bluetooth 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 (Tour) | 1.1 | Basic | Create a forum account |
|  |  | 1.2 | Basic | Open the WICED documentation |
|  | 02 (Peripherals) | 2.1 | Basic | Install kit + shield platform files |
|  |  | 2.2 | Basic | Blink an LED |
|  |  | 2.3 | Basic | Add Debug Printing to the LED Blink Project |
|  |  | 2.4 | Basic | Read the State of a Mechanical Button |
|  |  | 2.5 | Basic | Use an Interrupt to Toggle the State of an LED |
|  |  | 2.6 | Basic | Toggle 4 I2C Controlled LEDs |
|  |  | 2.7 | Basic | Read PSoC CapSense Button Values using I2C |
|  |  | 2.8 | Advanced | Read PSoC Sensor Values using I2C |
|  |  | 2.9 | Advanced | LED brightness |
|  |  | 2.10 | Advanced | LED toggling at specific frequency and duty cycle |
|  |  | 2.11 | Advanced | Measure Ambient Light Sensor |
|  |  | 2.12 | Advanced | Send a value using the standard UART functions |
|  |  | 2.13 | Advanced | Get a value using the standard UART functions |
|  |  | 2.14 | Advanced | Display Data on the OLED Display |
|  | 03 (RTOS) | 3.1 | Basic | Semaphore |
|  |  | 3.2 | Advanced | MUTEX |
|  |  | 3.3 | Advanced | Queues |
|  |  | 3.4 | Advanced | Timers |
|  | 04A (BLE Part 1) | 4A.1 | Basic | Create a BLE Advertiser |
|  |  | 4A.2 | Basic | Connect using BLE |
|  | 04B (BLE Part 2) | 4B.1 | Basic | BLE Notificatio |
|  |  | 4B.2 | Basic | BLE Pairing and Security |
|  |  | 4B.3 | Basic | Save BLE Pairing Information (i.e. Bonding) |
|  |  | 4B.4 | Basic | Add a Pairing Passkey |
|  | 05A (BR/EDR Part 1) |  |  |  |
|  |  |  |  |  |
|  | 05B (BR/EDR Part 2) |  |  |  |
|  |  |  |  |  |
|  | 06 (Debugging) | 6.1 | Basic | Run BTSpy |
|  |  | 6.2 | Advanced | Run the Debugger |