Workshop: Introduction to Programmable Hardware I

Lab Setup Instructions

Notes:

- Copy the PSoC_Workshop directory from the USB Thumbdrive to C:\
  (best to keep the path name short to avoid any problems with long paths...)
- Check the “Host Bootloader” project name, it doesn't change automatically.
- Check your baud rate, it should be 115200, No Parity, 8 bits, 1 stop bit

- https://github.com/PatternAgents/WorkShops/tree/master/PSoC_Workshop

LAB ONE Instructions:

1. Start > PSoC Creator
2. File > Open > Project/Workspace
   c:\PSoC_Workshop\projects\LAB_ONE\LAB_ONE.cywrk
3. Build > Build LAB_ONE
4. Tools > Bootloader Host
5. File > Open
   c:\PSoC_Workshop\projects\LAB_ONE\LAB_ONE.cydsn\ARM_GCC_484\Debug\
   LAB_ONE.cyacd
6. Check your baud rate, it should be 115200, No Parity, 8 bits, 1 stop bit
7. Remember to hold the User Button down while plugging in the CY8CKIT-049
   in order to get the bootloader program running on the device.
8. Actions > Program
9. Test by pressing and holding the User Button for <2 seconds and >2 seconds.

LAB TWO Instructions:

10. File > Close Workspace
11. File > Open > Project/Workspace
    c:\PSoC_Workshop\projects\LAB_TWO\LAB_TWO.cywrk
12. Build > Build LAB_TWO
13. Tools > Bootloader Host
14. File > Open
    c:\PSoC_Workshop\projects\LAB_TWO\LAB_TWO.cydsn\ARM_GCC_484\Debug\
    LAB_TWO.cyacd
15. Actions > Program
16. Test/Observe that the Blue LED is “breathing” in intensity.

LAB THREE Instructions:

17. File > Close Workspace
18. File > Open > Project/Workspace
    c:\PSoC_Workshop\projects\LAB_THREE\LAB_THREE .cywrk
19. Build > Build LAB_ THREE
20. Tools > Bootloader Host
21. File > Open
    c:\PSoC_Workshop\projects\LAB_THREE\LAB_THREE
    .cydsn\ARM_GCC_484\Debug\
    LAB_THREE .cyacd
22. Actions > Program
23. Test that Grounding/Floating pin P2_0 causes the Blue LED to change in intensity.
24. File > Exit (The Bootloader and the Terminal use the same COM:/serial port)
25. Start TeraTerm (or your own terminal program – like “screen /dev/ttyUSB0”)
26. Check your baud rate, it should be 9600, No Parity, 8 bits, 1 stop bit
    TeraTerm: Setup > Serial Port > Baud Rate
27. Test/Observe that the PSoC is transmitting Temperature and Voltage to the PC

LAB FOUR Instructions:
(Note: LAB FOUR supports the SparkFun MIDI Shield)

28. File > Close Workspace
29. File > Open > Project/Workspace
    c:\PSoC_Workshop\projects\LAB_FOUR\LAB_ FOUR .cywrk
30. Build > Build LAB_ FOUR
31. Tools > Bootloader Host
32. File > Open
    c:\PSoC_Workshop\projects\LAB_FOUR\LAB_ FOUR .cydsn\ARM_GCC_484\Debug\
    LAB_ FOUR .cyacd
33. Actions > Program
34. File > Exit (The Bootloader and the Terminal use the same COM:/serial port)
35. Start TeraTerm (or your own terminal program – like “screen /dev/ttyUSB0”)
36. Check your baud rate, it should be 115200, No Parity, 8 bits, 1 stop bit
    TeraTerm: Setup > Serial Port > Baud Rate
37. Test/Observe that the PSoC is transmitting switch and potentiometer settings to PC