LAB 3

Outline: From this lab, you will start to begin to program the ZigBee node in C language. During this lab, we assume the students have been familiar with the C language and related logical programming logic.

There are two sections in this lab.

1. Learn the ZigBee source code structure, especially the “Coordinator.c” file. You are also encouraged to learn the “Router.c” and “RFD.c”.
2. Learn how to use the USART IO functions and to modify the PuTTy console in the source code.

Section 1: ZigBee stack source code

In the previous lab, you have already begun to work on the source code changing the routing mode. In this lab, you will look further into the source code of the ZigBee stack. The objectives in this section are for you to generally understand how the firmware code is constructed and, as a small operating system, how the task from each layer of ZigBee network protocol is coordinated. Please follow “**Lab3Guide**”. Through this section, you will have a general understanding of the source code structure and know where to add your own application code in the “Coordinator.c”, “Router.c” and “Rfd.c”file.

Section 2: USART and PuTTy console

In this section, you will see how the PuTTy, which you have been using in the first two labs, is built in the source code. The USART hardware related issues are skipped. You can find the details in “**PIC24FJ128 data sheet**”. You will begin form using the USART IO functions along with the source code. Please follow the “**Lab3Guide**”. In the end of this section, you will be able to write your own PuTTy console. Have fun!