ECE353 In-Class Exercise

Introduction to C – Linked List

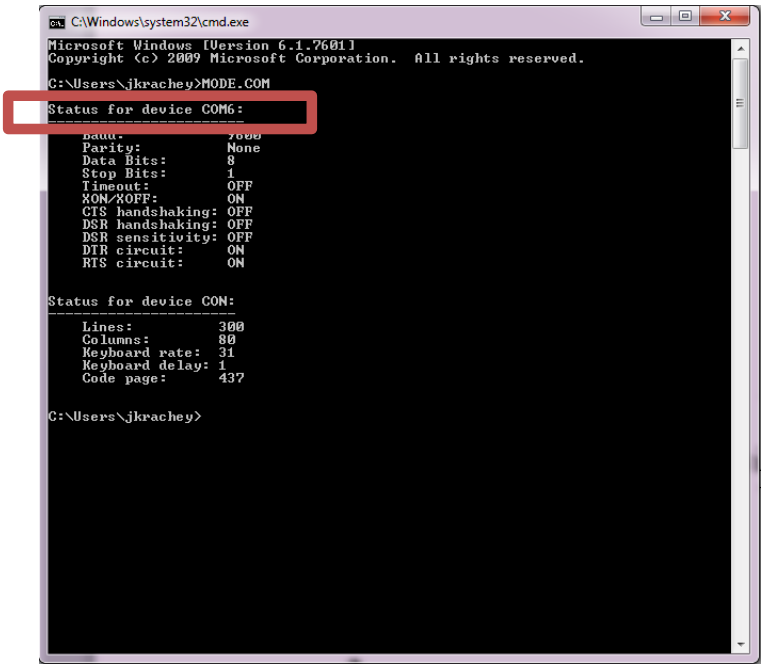
Problem A

This exercise is intended to get you familiar with the C programming language, pointers, structs, and dynamic memory allocation. During this week of class, you will implement a basic linked list. You have been provided two compiled libraries that will help you to implement the linked list and debug your code.

Setting Up Serial Debug Port

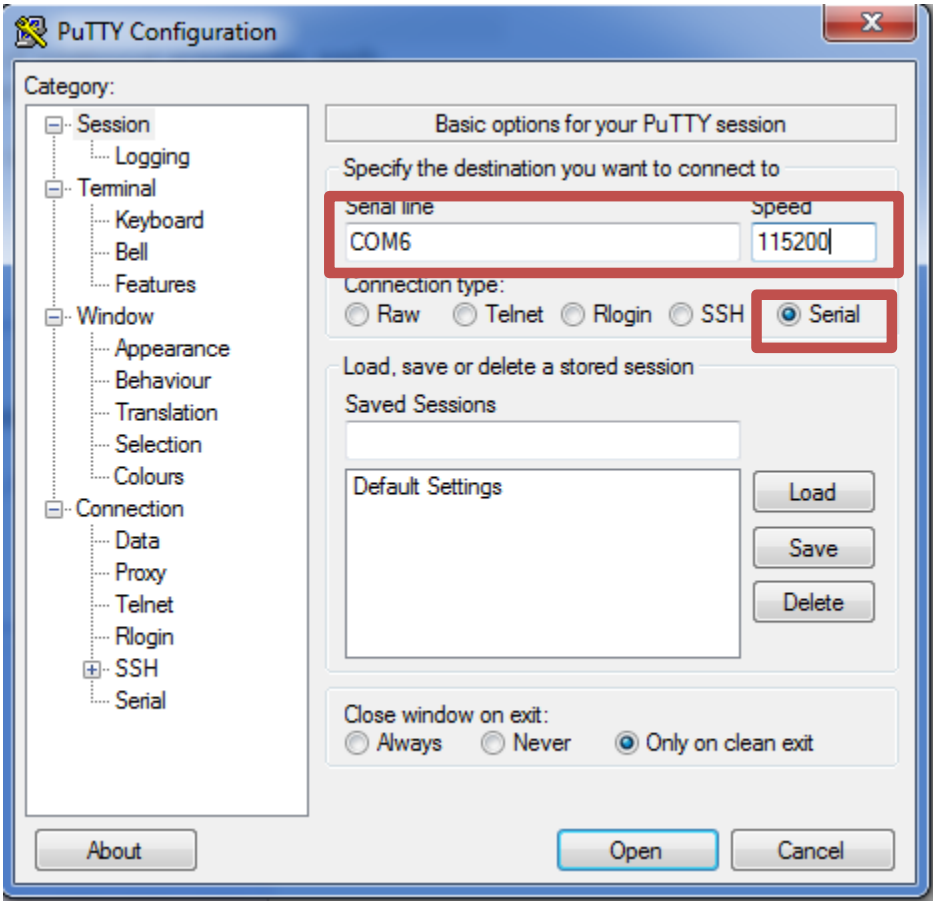
We will use the serial debug port on the Tiva Launchpad so that you can use printf statements to display information to the user. In order to use the serial debug port, you will need to determine which COM port your Tiva Launchpad has been assigned by Windows.

Open a windows command prompt issue the command **MODE.COM.** In the example below, we see that the Launchpad is connected to COM6. Your Launchpad will show up as a COM port greater than 3.



Now that you have determined your COM port, open Putty. Click the Windows Start button  , then type “putty” into the search box.

In Putty, click on the serial radio button, enter the COM port above, and set the baud rate to 115200.



Modify linkedList.h

In linked LinkedList.h, you will need to create two structures that will be used by the linked list library provided in this project. You will find a description of the structures in the two locations marked with ADD CODE.

LinkedList.h also provides the API for 5 functions that can be used to add/remove nodes to the linked list. You will use these function to complete the test bench in main.c

Modify main.c

In main.c you will complete various steps required to create a test bench for the linked list functions provided to you. You will find a description of how to modify main.c near each instance of ADD CODE.

Turn in your main.c file to the class website.