Texas Christian University
CoSc 30403 – Spring, 2017
Lab #1

Due Date: Tuesday, February 7, 2017 (**AT CLASS TIME - no later!!!!!)**

Language: FORTRAN

Documentation: To the extent discussed in class AND with all members of the team identified.

Problem: You are to develop a simple linked list application that will permit the user to easily maintain and manipulate employee information (employeeId#, employeeName, deptName, jobTitle, payrate). *The list should be maintained in ascending order by id#.*

Input: Input to the program will consist of multiple data records (*read from the input file provided*), each having the following format -

command b [other info] (b = a single blank) where commands are chosen from:

- **Insert a new employee into the linked list (ascending by id#)**

  IN b empID# b empLName b deptName b jobTitle b payRate

- **Update information for a given employee (if the employee exists?)**

  UN b empID# b empLName b deptName b newLName
  UT b empID# b empLName b deptName b newJobTitle
  UR b empID# b empLName b deptName b newPayRate
  UD b empID# b empLName b deptName b newDeptName

- **Delete a given employee (if present in the linked list)**

  DE b empID#

- **Print/display commands:**

  Print all information for all employees
  PA
  Print all information for a specified employee
  PI b empID#
  Print all information for employees in a specified depart
  PD b deptName

Output: Output from the program will consist of:

1. appropriate user feedback indicating successful completion (or failure) of each of the above commands
2. at eof of the input data, a complete listing of all nodes in the linked list starting with the first.

Requirements: Your solution to this problem should use -

1. FORTRAN subroutines and functions
2. Pointers

Reminder: By the lab due date (class time as indicated above), you should have zipped together the following files and submitted the zipped file using TURNIN. *Also, to facilitate grading, a hardcopy printout of these files are required.*

What to submit:

1) copy of input file
2) copy of your source code
3) copy of the answers produced by your program.