PROLOGUE

FOR ALL ASSIGNMENTS

- **Attach a *prologue* for all assignments.**
- **Use sample *prologue* sheet in the course material, customize it for every assignment.**
- ***Prologue* makes it easy to separate assignments for grading purpose.**

EXERCISE 16

PROBLEM

- **Solve the problem below with QUEUES implementation. You may use the algorithm discussed in the chapters.**
- **Take a set of 13 cards of any color (any one set), shuffle them in any way. The top card (1st) from shuffled set should go to the bottom of the set and the next top card (2nd) should be opened. The following top card (3rd) should go to the bottom of the set and next top card (4th) from the set should be opened and so on. When only one card is left, open the card for display with the previously opened cards. The opened cards should display the given sequence (Like: A, 2, 3, 4, 5, 6, 7, 8, 9, 10, J, Q, and K).**

- **Write the functions to read the cards and print the cards at each step.**
- **You should write the code to shuffle the cards and open the shuffled cards as suggested above to show the required sequence.**
- **Read the required sequence from an input file and write the result to an output file. Print the shuffled sequence of cards and opened sequence of cards.**
- **Try first with the required sequence as:**
- **A, 2, 3, 4, 5, 6, 7, 8, 9, 10, J, Q, and K**
- **Next try the following sequence:**
- **Q, 2, 3, A, 5, 6, J, 8, 9, 4, 7, K, and 10**

DELIVERABLES

Write the prolog and fill up all information for this exercise as given in the sample. Submit the source code, input and the output files. The program is expected to be well commented. Place your program as soft copy on assigned shared drive for students of this course.

DUE DATES

Assignments are due on the following week after completing the chapter discussion.