Name: _____

Class Day / Time: _____

Due Date: _____

Lab Exercise – Doubly Linked Lists

We need to create a doubly linked-list that will store movie titles, genre and release year. The doubly linked-list will store the movies in an alphabetical order based on the movie title.

1. Define a struct called MovieRec, that contains the movie title, genre, release year, and all necessary pointer(s) to create a doubly linked-list. Use the appropriate variable type for each element of the struct.

2. Write a function that allow us to add **one** new movie in the doubly linked-list and ensure that the new movie is added in the correct alphabetical order. The movie information will be read from a file that is already open. The sample of the input file is shown below. Make sure the function includes all necessary argument types and returns the appropriate type; and all the names are appropriate. Assume all necessary pre-processor directives, namespace, the MovieRec struct and header information is contained in the header file MyHeader.h. No need to include comments.

FORMAT for input file

Man in Black
Action
1997
Jurassic Park
Action
1993
Cinderella Man
Drama
2005
…

3. Write a function that allow us to remove **one** movie from the doubly linked-list and ensure that the remaining list is kept in the correct alphabetical order. The movie title will be used as the search element to find the movie to be removed. Make sure the function includes all necessary argument types and returns the appropriate type; and all the names are appropriate. Assume all necessary pre-processor directives, namespace, the MovieRec struct and header information is contained in the header file MyHeader.h. No need to include comments.

4. Write a function that allow us output to the console the entire list of movies stored in the doubly linked-list and ensure that the list is displayed in the correct order. The movie title, genre and release year for each movie have to be displayed in a single line. Make sure the function includes all necessary argument types and returns the appropriate type; and all the names are appropriate. Assume all necessary pre-processor directives, namespace, the MovieRec struct and header information is contained in the header file MyHeader.h. No need to include comments.

Create a small main program that call all functions above and use it as testing for your functions. Please include at least 5 records in the input file. There is no need for documenting your code in this exercise.

TURN IN (on-line)

1- Turn in your output from eclipse
2- Turn in your code from eclipse