3460:210 Assignment H

# **Assignment H: The Movie Map**

**Overview**

The purpose of this assignment is to make sure that you know how to write a program that uses containers, algorithms, iterators or binary trees.

**PROGRAM SPECIFICATION**

For this assignment, you will have collected a file of movie ratings where each movie is rated from 1 (bad) to 5 (excellent). The first line of the file is a number that identifies how many ratings are in the file. Each rating then consists of two lines: the name of the movie followed by the numeric rating from 1 to 5. Here is a sample rating file with some unique movies and the ratings:

10

Harry Potter and the Order of the Phoenix

4

Office Christmas Party

2

Harry Potter and the Order of the Phoenix

5

Rogue One: A Star Wars Story

5

The Bourne Ultimatum

3

Harry Potter and the Order of the Phoenix

4

The Bourne Ultimatum

4

Rogue One: A Star Wars Story

4

Glitter

1

Office Christmas Party

2

Write a program that reads a file in this format, calculates the average rating for each movie, and outputs the average along with the number of reviews.

Here is the desired output for the sample data:

Glitter: 1 review, average of 1 / 5

Rogue One: A Star Wars Story: 2 reviews, average of 4.5 / 5

Harry Potter and the Order of the Phoenix: 3 reviews, average of 4.3 / 5.

The Bourne Ultimatum: 2 reviews, average of 3.5 / 5

Office Christmas Party: 2 reviews, average of 2 / 5

For this assignment you will need to use a **map** to calculate the output. Your map(s) should index from a string representing each movie’s name to integers that store the number of reviews for the movie and the sum of the ratings for the movie.

Please create a driver program and make sure that your program can execute these particular test cases successfully. No credit will be given without incorporating **map/pair/iterator** into the solution.

Make sure that your programs follow good documentation standards and follow the requirements for assignments. Reference the rubric standards on Brightspace.

Submission Instructions – for programming solutions

On Brightspace, go to the matching Assignments for the ASSGN@, where @ is the character of the problem assigned (eg., A for assignment A), and submit the program (cpp) and any header (hpp) files.

*Last updated 11.8.2016 by Will Crissey.*

*Be aware that programming falls under all of the rules of plagiarism. Be careful when using any coding found in the outside world that is not your own. Any evidence of plagiarism is subject to sanctions like forfeits, suspension, and even ejection, as determined by the Department of Student Conduct and Community Standards.*