**Project Summary**

My project is an expansion on assignment 7. The basic idea is that you can rent movies like in assignment seven by entering a document containing a list of movies, but it also makes you sign in by giving your username and password, contained on a separate file which holds the user info for all users, and gives you an option to return a movie. When you return a movie, the user gets an option to review it. If they liked it, the program will offer movies from the list which it believes the user will also like, based on ratings from other users, which is read in from the user info doc. If they didn’t like their movie, the program will try and find a movie the user will like, based off suggestions from others who disliked that movie. If the user has already reviewed a movie, the user will not be asked to review it again. When a review is made, the document listing the users and their reviews is edited to reflect the user’s opinion. There are also a few manager accounts which have options to delete and add movies, which are also added or deleted from the file containing all the movies and the users’ info and list of reviews. It runs with everything already included in the VM.

**How to Run**

When you compile the program, use the c++11 in the VM and compile FinalProject.cpp with MovieTree.cpp. When you type in ./a.out, include both the movie file and the user file, like so:

./a.out [movie file].txt [user info file].txt

From there the program will ask you to log in. Check the user file and pick a username and password combination you like. From there, type in the number for whichever menu option you want and follow the simple instructions. I like to think it’s easy to figure out from there.

**Dependencies**

Nothing, this will run on everything already included in the VM.

**System Requirements**

If you can run a VM, you should be able to run this program. Let me know if something goes horribly wrong, however.

**Group Members**

Just me on this one.

**Contributers**

I checked a few websites for help, they are credited in MovieTree.cpp where I needed their assistance.

**Open Issues/Bugs**

I think I ironed out most of the kinks, but I’m confident in your ability to prove me wrong. There is one major bug I know about, but it is easily avoidable: **DO NOT USE COMMAS IN THE TITLES OF ANY MOVIES, USERS, OR PASSWORDS YOU ADD.** The program relies on commas to know when to split up information about the movies and users, so including a comma in the movie title or somewhere in the user information will most likely mess up the program. Also, when you add a movie, make sure you edit the AntiManager’s ratings to be the opposite of the Manager’s rating. That account’s opinions are the opposite of the manager’s on purpose, because having both a negative review and a positive review for each film helps people find a movie they’d like whether or not they enjoyed the new film. The only open enhancement things I can really think of are adding a way for a manager to add a user and fixing the comma bug.