I was able to finish the project using the allowed STL containers and am unaware of any bugs in my program.

I created separate files for testUserDatabase.cpp, testMovieDatabase.cpp, and testRecommenderDatabase.cpp

For testUserDatabase.cpp, I loaded the file, input a string for the user’s email. Used the database’s get\_user\_from\_email method to get a pointer to the user. Then I called each of user’s methods to output the user’s full name and watch history. I looked at the output to ensure it displayed what I expected.

For testMovieDatabase.cpp, I used a similar approach as above. I input a string for movie ID called the database to get a pointer for the movie. Then I called Movie’s methods to output its id, title, release year, directors, actors, and rating. Then I checked the output to see that it displayed what I expected. I repeated that whole process, but inputting director name, actor name, and genre (calling their respective functions in the MovieDatabase class.

For testRecommender.cpp, I used the chrono library and outputted the time it took to load each database and to call the findMatches function. I then ran the function with the example in the spec (pages 16-18) and ensured the output was the exact same.

Finally I ran them all on g32 to ensure they work properly and there’s no memory leaks