Project 4 Report

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I was able to finish all parts of the project and fix all bugs. I didn’t use any banned STL components, although I used many of the allowed STL components throughout different files.

The first file that I created was the treemm.h because I knew that all of the other cpp files relied on this header file in order to function. Since this file was templated I decided to include this file in my main.cpp file and create an instance of TreeMultimap with int keys and string values. I inserted values like (2, “Bob), (3, “John), and (3, “Jeff) and printed these out in order to see if my multimap was functioning as intended. This meant that I could access a vector associated with the 2 key containing “Bob”, and a vector associated with the 3 key containing “John” and “Jeff" through binary search. After this worked, I then finished the UserDatabase and MovieDatabase classes and tried testing the load and get functions in main.cpp.

Once I finished the recommend class, I tested it with the sample output in the spec to make sure the values were right. However, I still needed to check edge cases and how my program would handle different errors. For instance, I created my own custom test cases to check for case insensitivity. I also used std::cout statements to check whether my recommended movies had been watched by the user. The last case I checked was to make sure my program wouldn’t recommend any movies with 0 compatibilities. To do this, I set the number of recommendations to 100,000 which was more than the number of movies with a compatibility of at least 1. Since the last movie recommended had a compatibility of 2, this passed the test case.