# Documentation of Failures

I was able to finish everything :)

I am not aware of any bugs

I did not use any banned STL components

# Testing\*

\*All italicized tests are ones I did based off of a custom movies.txt and users.txt file. They are shown at the end of the doc

TreeMultimap

* I used cerr statements to see that each key was being inserted into the tree
* Further tested through all the UserDatabase, MovieDatabase, and Recommender test
  + For those to work properly, TreeMultimap must work properly

User

* Ensuring the rest of the database works proves that the user class works

Movie

* *get\_director() - searching for a director of dsavannah alanis and DsAvAnNaH aLaNiS return the same (correct) movies*
* *get\_actors() - searching for actor of KiTt AlAnIs and kitt alanis return the same (correct) movies*
* *get\_movies\_with\_genre() - searching for genre of horror and horroR return the same (correct) movies*

UserDatabase

* *searching for Suhdas@gmail.com doesn't yield a user, as the user's email is sudhas@gmail.com*

MovieDatabase

* *get\_movie\_from\_id() - searching for id iD10783 and ID10783 returns the same (correct) movies*
* *get\_movies\_with\_director() - searching for director dsavannah alanis and DSavannah Alanis returns the same (correct) movies*
* *get\_movies\_with\_actor() - searching for kenneth avaricio and Kenneth Avaricio returns the same (correct) movies*
* *get\_movies\_with\_genre() - searching for animation and aNiMaTiOn returns the same (correct) movies*

Recommender

* *Searching for a user who watched all movies from one director should result in not recommending any movies from that director*
  + *sudhas@gmail watched all of dSavannah Alanis's movies, thus none of dSavannah Alanis's movies are recommended*
* *Recommending 9 movies to sudhas@gmail results in the movie with id10789 making the list but the movie with id10790 doesn't since the first has a higher ranking*
* *Recommending 10 movies to sudhas@gmail results in Quadruplet1, Quadruplet2, and Quadruplet3 (they had the same compatibility score, so they were ranked on the name)*
* *Searching for a user with no movies should return nothing*
  + *tayla@gmail.com returned no movies*
* *Searching for email 2 resulted in the correct recommendations of*
  + *Quad2, Quad3, Quad3 ( = 81)*
  + *C++ PAINNNN ( = 21 due to director + genre)*
  + *Mac n Cheese, Binary, Love ( = 1 due to genre)*
* *Recommending 11 movies for user carley@gmail.com results in the correct* 
  + Quadruplet 2 (162 = 40 for director, 120 for actors, 2 for genres)
  + Quadruplet 3 (ID10788) (162 = 40 for director, 120 for actors, 2 for genres)
  + Among Us (= 110 due to 20 for director, 90 for actors, 1 for genre)
  + Cat (= 80 due to 20 for director, 60 for actors)
  + C++ PAINNNN (102 = due to 40 for director, 60 for actors, 2 for genre)
  + Love (= 62 due to 60 for actors, 2 for genre)
  + ITGS (= 60 due to 60 for actors)
  + Binary (= 52 due to 20 for director, 30 for actors, 2 for genre)
  + Bee Movie - Remake (= 51 due to 20 for director, 30 for actors, 1 for genre)
  + Mac n Cheese (=2 due to 2 for genre)
  + Liv Laugh Love (=1 due to 1 for genre)

# Custom users.txt

JudyAnne Alanis

2

1

ID10787

Alex Alanis

alex@gmail.com

1

ID10793

Sudha

sudhas@gmail.com

5

ID10781

ID10782

ID10783

ID10784

ID10785

Carley Lewitz

carley@gmail.com

3

ID10782

ID10787

ID10789

Tayla

tayla@gmail.com

0

# Custom movies.txt

ID10781

Cat

2001

DSavannah Alanis

Savannah Alanis,Kenneth Avaricio,Kitt Alanis,Haaset Owens

Action,Comedy,Romance

5

ID10782

Avocado Toast

2002

DSavannah Alanis

Savannah Alanis,Kenneth Avaricio,Vera Peker,Alyssa Kurt

Horror,Animation

5

ID10783

Among Us

2003

DSavannah Alanis

Savannah Alanis,Vera Peker,Alyssa Kurt,Alexa Jennings

Action,Comedy,Animation

5

ID10784

Bee Movie - Remake

2004

DSavannah Alanis

Sakshi,Meghan Mason,Vera Peker

Animation,Comedy

5

ID10785

Binary

2005

DSavannah Alanis

Savannah Alanis,Kitt Alanis

Documentary

5

ID10786

Love

2005

DKenneth Avaricio

Kenneth Avaricio,Savannah Alanis,Kitt Alanis

Documentary

5

ID10787

Quadruplet1

2005

DAlex Mac

Emily Sun,Benson Liu

Documentary

5

ID10788

Quadruplet2

2005

DAlex Mac

Emily Sun,Benson Liu

Documentary

5

ID10789

Quadruplet3

2005

DAlex Mac

Emily Sun,Benson Liu

Documentary

5

ID10790

Quadruplet3

2005

DAlex Mac

Emily Sun,Benson Liu

Documentary

4.5

ID10791

CS32

2005

DSEAS

Carey Nachenberg,David Smallberg

Fantasy

5

ID10792

C++ PAINNNN

2005

DAlex Mac

Savannah Alanis,Sakshi,Vera Peker

Documentary

5

ID10793

High School Reunion

2005

DAyla Adjari

Nada Hawarneh,Kaylee Bame,Haaset Owens

Comedy,Drama

5

ID10794

Mac n Cheese

2005

DLiv,DJustus Chernow

Haaset Owens,Justus Chernow

Documentary

5

ID10795

ITGS

2005

DJustus Chernow

Savannah Alanis,Kenneth Avaricio,Haaset Owens,Justus Chernow

Comedy,Romance

5

ID10796

Liv Laugh Love

2005

DLiv

Liv

Animation

5