1. (a) Tabulate the weights obtained for each movie.

Movie Weight _____ 03276 0.117848147906 06004 0.126459795051 14199 0.117771001943 17113 0.117810937409 06315 0.117731208043 01292 0.126506952176 11977 0.117819513515 15267 0.12656614447 08191 0.117822373672 16944 0.117745403957 07242 0.117793804816 03768 0.126465680175 02137 0.126436281655 10935 0.117790951923 03124 0.117708531879

(b) How many users are present in the database? What is the highest score? What is the second highest score?

The number of users are: 44651 Highest score: 0.113354503558

Second highest score: 0.102920679491

(c) What is the user-id of the user with the highest score? Write out the ratings of this user from the database, and verify if they are similar to the ratings in the auxiliary information.

User with maximum score: 1664010

Ratings done by user 1664010

Comparing Aux and user ratings

Movie	AUX	Rating	User Rating
01292	3.3	3	
03124	3.5	4	
03768	3.5	4	
06004	3.9	4	
06315	4.0	4	
07242	3.9	4	
08191	3.8	4	
11977	4.2	4	
14199	4.5	4	
15267	4.2	4	
16944	4.2	4	
17113	4.2	4	

Using the above table we can find out the ratings of the user are similar and comparable to ratings in aux

(d) What is the value of the eccentricity threshold? What is the difference between the highest and second highest score? Is it greater than the eccentricity metric?

The eccentricity with gamma value 0.1 is 0.0120683445592

Difference between the highest and second highest score 0.0104338240671

Difference between the highest and second highest score is lesser than the eccentricity metric

SCREENSHOTS:

P.T.O.

```
Nida@Nida MINGW64 ~/Desktop/Privacy/Hw1/Hw1/hw1-files
$ python link.py
Movie Weight
03276 0.117848147906
06004 0.126459795051
14199 0.117771001943
17113 0.117810937409
06315 0.117731208043
01292 0.126506952176
11977 0.117819513515
15267
         0.12656614447
08191 0.117822373672
16944 0.117745403957
07242 0.117793804816
         0.126465680175
03768
02137 0.126436281655
10935 0.117790951923
03124 0.117708531879
The number of users are: 44651
Highest score: 0.113354503558
Second highest score: 0.102920679491
User with maximum score: 1664010
```

Movie	Rating	
01292	3	
02137	4	
03124	4	
03276	4	
03768	4	
06004	4	
06315	4	
07242	4	
08191	4	
11977	4	
14199	4	
15267	4	
16944		
10344	4	
17113	4	
17113 Compari		
17113 Compari	AUX and user AUX Rating	
17113 Compari Movie 01292	AUX and user AUX Rating	User Rating
17113 Compari Movie 01292 03124 03768	AUX and user AUX Rating 3.3 3.5	User Rating3 4
17113 Compari Movie 01292 03124	AUX and user AUX Rating 3.3 3.5	User Rating3 4
17113 Compari Movie 01292 03124 03768 06004 06315	Aux and user AUX Rating 3.3 3.5 3.5 3.9 4.0	User Rating3 4
17113 Compari Movie 01292 03124 03768 06004 06315 07242	Aux and user AUX Rating 3.3 3.5 3.5 3.9 4.0 3.9	User Rating 3 4 4 4
17113 Compari Movie 01292 03124 03768 06004 06315	Aux and user AUX Rating 3.3 3.5 3.5 3.9 4.0 3.9	User Rating 3 4 4 4 4
T7113 Compari Movie 01292 03124 03768 06004 06315 07242 08191 11977	Aux and user AUX Rating 3.3 3.5 3.5 3.9 4.0 3.9 3.8 4.2	User Rating 3 4 4 4 4 4 4 4
T7113 Compari Movie 01292 03124 03768 06004 06315 07242 08191 11977 14199	AUX and user AUX Rating 3.3 3.5 3.5 3.9 4.0 3.9 3.8 4.2 4.5	User Rating 3 4 4 4 4 4 4
T7113 Compari Movie 01292 03124 03768 06004 06315 07242 08191 11977 14199 15267	AUX and user AUX Rating 3.3 3.5 3.5 3.9 4.0 3.9 3.8 4.2 4.5 4.2	User Rating 3 4 4 4 4 4 4 4 4 4 4
T7113 Compari Movie 01292 03124 03768 06004 06315 07242 08191 11977 14199	Aux and user AUX Rating 3.3 3.5 3.5 3.9 4.0 3.9 3.8 4.2 4.5 4.2 4.5	User Rating 3 4 4 4 4 4 4 4 4 4

The eccentricity with gamma value 0.1 is 0.0120683445592

Difference between the highest and second highest score 0.0104338240671

Difference between the highest and second highest score is lesser than the eccentricity metric

Nida@Nida MINGW64 ~/Desktop/Privacy/Hw1/Hw1/hw1-files

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