Download the Movielens dataset 1 (the 100K dataset) from http://www.grouplens.org/node/73

Build a simple user-based and item-based recommender system (papers have been provided).

The dataset will have available and missing ratings. For evaluation you should use 5 fold cross validation. In each run, use 4 parts for training and the remaining 1 part for testing. Use the training set to predict the ratings of the test set.

For user based approach use a threshold of 0.4 on cosine similarity to select the most similar neighbours.

For the item based approach use top 40 as the number of similar items.

To test how good or bad your recommender system is, you should compute the Mean Absolute Error (MAE) on the test set.

For measuring similarity you should use the **Cosine Similarity**

Table 1. MAE values

Fold #	User based	Item based
1		
2		
3		
4		
5		
Average		