# Building user-based recommendation model for Amazon.

I've read all the requirement in the descriptions from LMS. It was a totally new challenge for me to make a recommendation model. I've followed the following step to perform this project.

1. Firstly, Imported Pandas library to get the dataset into python environment.
2. Printed the dataset through head function.
3. Then describe the dataset through describe() function.
4. Made a copy of existed dataset.
5. Then, found that movies which have maximum ratings.
6. Then, found top 5 movies with average rating.
7. Top 5 movies with least audience.
8. Then I started installing the scikit-surprise package to work on recommendation model.
9. Then, I imported different functions from surprise library.
10. After all, I need to bring all the movie name in the same feature called 'movie_name'. Then used melt() function to perform this operation.
11. Then, I divided data into train and test split.
12. Started working on training the dataset using SVD() function from surprise package.
13. Making predictions on the provided dataset.
14. Then, I calculated the accuracy through rmse.
15. Then, I cross validate to select the best fit model.
16. Then, I defined a user defined function to automate the process to cross validation.
17. Then, I filled the NA values with 0, mean(), median() respectively.
18. Then, I used GridSearchCV to get best score of RMSE and MAE.

I've faced some difficulty applying the surprise package. It was quite new for me to perform a task using surprise to do recommendation. It was not taught us in our live class sessions. Thanks to Sunny Bhavin Chandra who taught us in mentoring session.