Recommender System Case Study

Problem Statement:

Sam's next exam would be to build a "Recommender System" using the Singular Value Decomposition (SVD) algorithm. Questions would be asked on the basis of what you've learnt in the respective module.

Questions:

1. Implementing User-Based Recommender System using SVD (Singular Value Decomposition) method:
    a. Load the 'ratings' and 'movies' datasets which is a part of 'MovieLense'
    b. Find the unique number of users and movies in the 'ratings' dataset
    c. Create a rating matrix for the 'ratings' dataset and store it in 'Ratings'
    d. Load the 'ratings' dataset as SVD's Dataset object and compute 3-fold cross-validation using the SVD object
    e. Find all the movies rated as 5 stars by user id '5' and store it in 'ratings_1' data frame
    f. Create a shallow copy of the 'movies' dataset and store the result in 'user_5'
    g. Train a recommender system using the SVD object and predict the ratings for user id '5'
    h. Print the top10 movie recommendations for the user id '5'