Project setup and Pre-Requisites

1. *Setup MongoDB locally*
2. *Install MongoDB UI ⟶ Robo3T or Studio3T*
3. *Setup MongoDB CLI*
4. *Dataset - Mflix Dataset*
5. *Dataset description - Sample Mflix Dataset — MongoDB Atlas*
6. *Install Python*
7. *Install PyCharm*

Tasks -

1. *Create a Python application to connect to MongoDB.*
2. *Bulk load the JSON files in the individual MongoDB collections using Python. MongoDB collections -*
    a. *comments*
    b. *movies*
    c. *theaters*
    d. *users*
3. *Create Python methods and MongoDB queries to insert new comments, movies, theatres, and users into respective MongoDB collections.*
4. *Create Python methods and MongoDB queries to support the below operations -*
    a. ***comments** collection*
        i. *Find top 10 users who made the maximum number of comments*
        ii. *Find top 10 movies with most comments*
        iii. *Given a year find the total number of comments created each month in that year*
    b. ***movies** collection*
        i. *Find top `N` movies -*
            1. with the highest IMDB rating

2. *with the highest IMDB rating in a given year*
3. *with highest IMDB rating with number of votes > 1000*
4. *with title matching a given pattern sorted by highest tomatoes ratings*

ii. *Find top `N` directors -*
1. *who created the maximum number of movies*
2. *who created the maximum number of movies in a given year*
3. *who created the maximum number of movies for a given genre*

iii. *Find top `N` actors -*
1. *who starred in the maximum number of movies*
2. *who starred in the maximum number of movies in a given year*
3. *who starred in the maximum number of movies for a given genre*

iv. *Find top `N` movies for each genre with the highest IMDB rating*

c. ***theatre** collection*
i. *Top 10 cities with the maximum number of theatres*
ii. *top 10 theatres nearby given coordinates*

Approach :

1. monogoDB_setup.py contains code for initial setup for connecting to the mongoDB server and switching to the respective database and creating collections , insert methods.

2. mongoDB_comments.py contains queries on comments collection (Task 4a)

3. mongoDB_movies.py contains queries on movies collection (Task 4b → i)

4. mongoDB_movies_directors.py contains queries on movies collection (Task 4b → ii)

5. mongoDB_movies_actors.py contains queries on movies collection (Task 4b → iii)

6. mongoDB_theatre.py contains queries on movies collection (Task 4c)