Assignment 2 – Practice

1. Create database Theatre.
   ```
   use Theatre
   ```

2. Create collection Movie.
   ```
   db.createCollection("Movie")
   ```

3. Insert 10 documents with above mentioned structure.
   ```
   db.Movie.insertMany([
           {},
           {},
           {},
           …
   ])
   ```

4. Display all Movies information
   ```
   db.Movie.aggregate([
           {$match: {}}
   ])
   ```

5. Display the count of movies having tag 'comedy'
   ```
   db.movies.aggregate([
           {$unwind: "$tags"},
           {$match:{"tags": "comedy"}},
           {$group: {_id: null, "total":{$sum:1}}},
           {$project:{_id:0, "total":1}}
   ])
   ```

2. Display three most common tags
   ```
   db.movies.aggregate([
           {$unwind: "$tags"},
           {$group: {_id: "$tags", "frequency":{$sum:1}}},
           {$sort:{frequency:-1}},
           {$limit:5}
   ])
   ```

3. Display the top five movies
   ```
   db.movies.aggregate([
           {$sort: {likes: -1}},
           {$limit: 5},
           {$project: {title:1, likes:1}}
   ])
   ```

4. Display the count of writers for each movie

```
db.movies.aggregate([
        {$unwind: "$writers"},
        {$group: {_id: "$title", writer_count: {$sum: 1}}}
])
```

5. Display the count of stars for each movie
```
db.movies.aggregate([
        {$unwind: "$stars"},
        {$group: {_id: "$title", star_count: {$sum: 1}}}
])
```

6. Display the count of directors for each movie
```
db.movies.aggregate([
        {$unwind: "$directors"},
        {$group: {_id: "$title", director_count: {$sum: 1}}}
])
```

7. Display the count of movies directed by each director
```
db.movies.aggregate([
        {$unwind: "$directors"},
        {$group: {_id: "$directors.Name", no_of_movies: {$sum: 1}}}
])
```

8. Display the count of movies in which 'Amir khan' has worked as star
```
db.movies.aggregate([
        {$unwind: "$stars"},
        {$match: {"stars.Name": "Aamir Khan"}},
        {$group: {_id: null , no_of_movies: {$sum:1}}},
        {$project: {_id: 0, no_of_movies: 1}}
])
```

9. Display the name of writers who have written more than 3 movies
```
db.movies.aggregate([
        {$unwind: "$writers"},
        {$group: {_id: "$writers.Name", movie_count: {$sum: 1}}},
        {$match: {movie_count: {$gt:3}}}
])
```

10. Display the name of movies ordered by year of release
```
db.movies.aggregate([
        {$project: {title: 1, year: 1}},
        {$sort: {year: 1}}
])
```