**ASSIGNMENT 2:**

**PART 1,2:**

use movieStreamingDB

db.users.insertMany([

{ user\_id: 1, name: "Arjun", email: "arjun@mail.com", country: "India" },

{ user\_id: 2, name: "Liam", email: "liam@mail.com", country: "USA" },

{ user\_id: 3, name: "Wei", email: "wei@mail.com", country: "China" },

{ user\_id: 4, name: "Sophia", email: "sophia@mail.com", country: "UK" },

{ user\_id: 5, name: "Carlos", email: "carlos@mail.com", country: "Mexico" }

])

db.movies.insertMany([

{ movie\_id: 201, title: "Dream Beyond Code", genre: "Sci-Fi", release\_year: 2022, duration: 120 },

{ movie\_id: 202, title: "Love in Paris", genre: "Romance", release\_year: 2019, duration: 95 },

{ movie\_id: 203, title: "The Hacker's Quest", genre: "Thriller", release\_year: 2021, duration: 110 },

{ movie\_id: 204, title: "Galaxy Guardians", genre: "Action", release\_year: 2020, duration: 140 },

{ movie\_id: 205, title: "Cooking Chaos", genre: "Comedy", release\_year: 2018, duration: 90 },

{ movie\_id: 206, title: "Deep Space", genre: "Sci-Fi", release\_year: 2023, duration: 130 }

])

db.watch\_history.insertMany([

{ watch\_id: 1, user\_id: 1, movie\_id: 201, watched\_on: ISODate("2024-01-10"), watch\_time: 120 },

{ watch\_id: 2, user\_id: 2, movie\_id: 203, watched\_on: ISODate("2024-02-15"), watch\_time: 100 },

{ watch\_id: 3, user\_id: 1, movie\_id: 202, watched\_on: ISODate("2024-03-12"), watch\_time: 90 },

{ watch\_id: 4, user\_id: 3, movie\_id: 204, watched\_on: ISODate("2024-04-18"), watch\_time: 140 },

{ watch\_id: 5, user\_id: 2, movie\_id: 201, watched\_on: ISODate("2024-05-01"), watch\_time: 110 },

{ watch\_id: 6, user\_id: 4, movie\_id: 205, watched\_on: ISODate("2024-06-20"), watch\_time: 90 },

{ watch\_id: 7, user\_id: 5, movie\_id: 206, watched\_on: ISODate("2024-07-05"), watch\_time: 130 },

{ watch\_id: 8, user\_id: 1, movie\_id: 201, watched\_on: ISODate("2024-07-15"), watch\_time: 120 }

])

**PART 3:**

1. db.movies.find({duration:{$gt:100}})
2. db.users.find({country:”India”})
3. db.movies.find({release\_year:{$gt:2020}})
4. db.watch\_history.aggregate([

{

$lookup: {

from: "users",

localField: "user\_id",

foreignField: "user\_id",

as: "user"

}

},

{ $unwind: "$user" },

{

$lookup: {

from: "movies",

localField: "movie\_id",

foreignField: "movie\_id",

as: "movie"

}

},

{ $unwind: "$movie" },

{

$project: {

\_id: 0,

user\_name: "$user.name",

movie\_title: "$movie.title",

watch\_time: 1,

watched\_on: 1

}

}

])

1. db.watch\_history.aggregate([

{

$lookup: {

from: "movies",

localField: "movie\_id",

foreignField: "movie\_id",

as: "movie"

}

},

{ $unwind: "$movie" },

{

$group: {

\_id: "$movie.genre",

watch\_count: { $sum: 1 }

}

},

{

$project: {

\_id: 0,

genre: "$\_id",

watch\_count: 1

}

}

])

1. db.watch\_history.aggregate([

{

$group: {

\_id: "$user\_id",

total\_watch\_time: { $sum: "$watch\_time" }

}

},

{

$project:{

\_id:0,

user\_id:"$\_id",

total\_watch\_time:1

}

}

])

1. db.watch\_history.aggregate([

{

$group: {

\_id: "$movie\_id",

watch\_count: { $sum: 1 }

}

},

{ $sort: { watch\_count: -1 } },

{ $limit: 1 },

{

$lookup: {

from: "movies",

localField: "\_id",

foreignField: "movie\_id",

as: "movie"

}

},

{ $unwind: "$movie" },

{

$project: {

movie\_title: "$movie.title",

watch\_count: 1

}

}

])

1. db.watch\_history.aggregate([

{

$group: {

\_id: { user\_id: "$user\_id", movie\_id: "$movie\_id" }

}

},

{

$group: {

\_id: "$\_id.user\_id",

unique\_movies: { $sum: 1 }

}

},

{ $match: { unique\_movies: { $gt: 2 } } }

])

1. db.watch\_history.aggregate([

{

$group: {

\_id: { user\_id: "$user\_id", movie\_id: "$movie\_id" },

watch\_count: { $sum: 1 }

}

},

{

$match: {

watch\_count: { $gt: 1 }

}

},

{

$project: {

\_id: 0,

user\_id: "$\_id.user\_id",

movie\_id: "$\_id.movie\_id",

watch\_count: 1

}

}

])

1. db.watch\_history.aggregate([

{

$lookup: {

from: "movies",

localField: "movie\_id",

foreignField: "movie\_id",

as: "movie"

}

},

{ $unwind: "$movie" },

{

$project: {

\_id: 0,

user\_id: 1,

movie\_title: "$movie.title",

watch\_time: 1,

duration: "$movie.duration",

percentage\_watched: {

$multiply: [

{ $divide: ["$watch\_time", "$movie.duration"] },

100

]

}

}

}

])