MongoDB Day -2 Task

Sample Data :

user	_id: ObjectId('65a64a5dd0e1f6d85d501e44') userId: 1 user_name: "Arun" codekata_solved_problems: Array mentor_id: 12
codekata	_id: ObjectId('65a67608d0e1f6d85d501e9a') problem_id: 123 problem_title: "Two Pointers (I)" users_solved: Array
attendance	_id: ObjectId('65a64d22d0e1f6d85d501e69') topic_id: 1 date: 2024-01-13T00:00:00.000+00:00 stu_present: Array stu_absent: Array
topics	_id:ObjectId('65a64d69d0e1f6d85d501e74') topic_id: 1 task_id: 1 date: 2024-01-13T00:00:00.000+00:00
tasks	_id: ObjectId('65a64e57d0e1f6d85d501e80') task_id: 1 task_topic: "Two Pointers (I)" date: 2024-01-13T00:00:00.000+00:00 stu_submitted: Array
company_drives	_id: ObjectId('65a64e9fd0e1f6d85d501e8b') drive_id: 1 company_name: "TechCorp" date: 2024-01-13T00:00:00.000+00:00 role: "Software Engineer" location: "CityA" max_ctc: 800000

	applied_stu_id: Array selected_stu_id: Array
mentors	_id: ObjectId('65a64f27d0e1f6d85d501e93') mentor_id: 12 mentor_name: "MentorA" course: Array (2) mentees: Array (3)

1. Find all the topics and tasks which are thought in the month of October

```
db.topics.find({
    "date": {
       $gte: ISODate("2024-10-01T00:00:00Z"),
       $lt: ISODate("2024-11-01T00:00:00Z")
     }
   })

db.tasks.find({
     "date": {
       $gte: ISODate("2024-10-01T00:00:00Z"),
       $lte: ISODate("2024-11-01T00:00:00Z")
     }
   })
```

2. Find all the company drives which appeared between 15 oct-2020 and 31-oct-2020

```
db.company_drives.find({ "date" : { $gte : ISODate("2024-10-15T00:00:00Z"), $lte : ISODate("2024-10-31T23:59:59Z")}})
```

3. Find all the company drives and students who are appeared for the placement.

```
db.company_drives.find({}, { "applied_stu_id": 1, "selected_stu_id": 1 })
```

```
db.company_drives.aggregate([
  {
    $lookup: {
      from: "users",
      localField: "applied_stu_id",
      foreignField: "userId",
      as: "applied_students"
    }
  },
  {
    $lookup: {
      from: "users",
      localField: "selected_stu_id",
      foreignField: "userId",
      as: "selected_students"
    }
  }
])
```

4. Find the number of problems solved by the user in codekata

```
db.codekata.aggregate([
  {
    $project: {
      userId: 1,
      num_problems_solved: { $size: "$users_solved" }
    }
  }
])
```

5. Find all the mentors with who has the mentee's count more than 15

```
db.mentors.find({
  $where: "this.mentees.length > 15"
})
```

6. Find the number of users who are absent and task is not submitted between 15 oct-2020 and 31-oct-2020

```
db.attendance.find({
 "date": {
   $gte: ISODate("2024-10-15T00:00:00Z"),
   $lt: ISODate("2024-10-31T23:59:59Z")
 },
 "stu_absent": { $ne: [] },
 "stu_present": { $eq: [] }
}).count()
```