1. Find all the topics and tasks which are Thought (taught) in the month of October:
2. topics that are taught in the month of October – We will be displaying only topic\_id , topic\_name, topic\_date  
   **Answer**:

db.topics.aggregate([

{

$match: {

$expr: {

$eq: [{ $month: "$topic\_date" }, 10]

}

}

},

{

$project: {

\_id: 0,

topic\_id: 1,

topic\_name: 1,

topic\_date: 1

}

}

])



1. tasks that are completed in the month of October – We will be displaying only task\_id task\_name, task\_completion\_date  
   **Answer:**

db.tasks.aggregate([

{

$match: {

$expr: {

$eq: [{ $month: "$task\_completion\_date" }, 10]

}

}

},

{

$project: {

\_id: 1,

task\_name: 1,

task\_completion\_date: 1

}

}

])  


2)

db.company\_drives.find({

$and: [

{ drive\_date: { $gte: new Date("2020-10-15T00:00:00.000Z") } },

{ drive\_date: { $lt: new Date("2020-11-01T00:00:00.000Z") } }

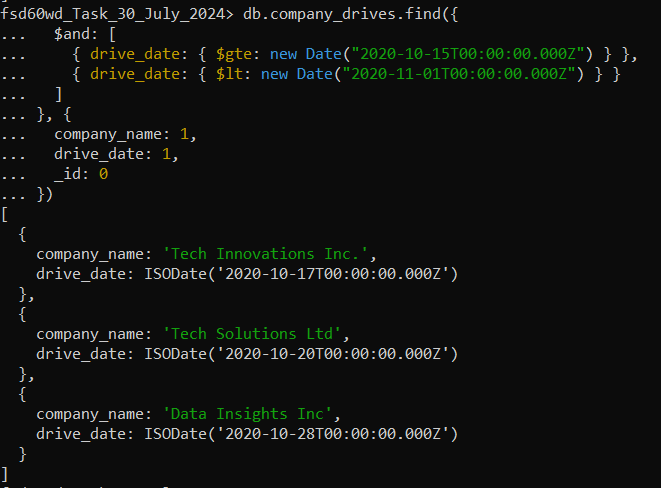
]

}, {

company\_name: 1,

drive\_date: 1,

\_id: 0

})  


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

Answer:

db.company\_drives.aggregate([

{

$group: {

\_id: null,

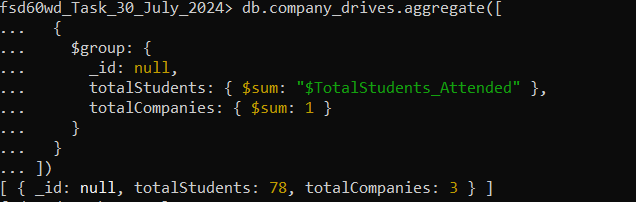
totalStudents: { $sum: "$TotalStudents\_Attended" },

totalCompanies: { $sum: 1 }

}

}

])  
In the above MongoDB query, totalCompanies uses $sum: 1 to count the number of documents (each document represents a company).

  
Total number of students and companies who attended placement is 78 and 3 respectively.

4) Find the number of problems solved by the user

a) Number of questions answered by each user

db.codekata.aggregate([

{

$project: {

user\_id: 1,

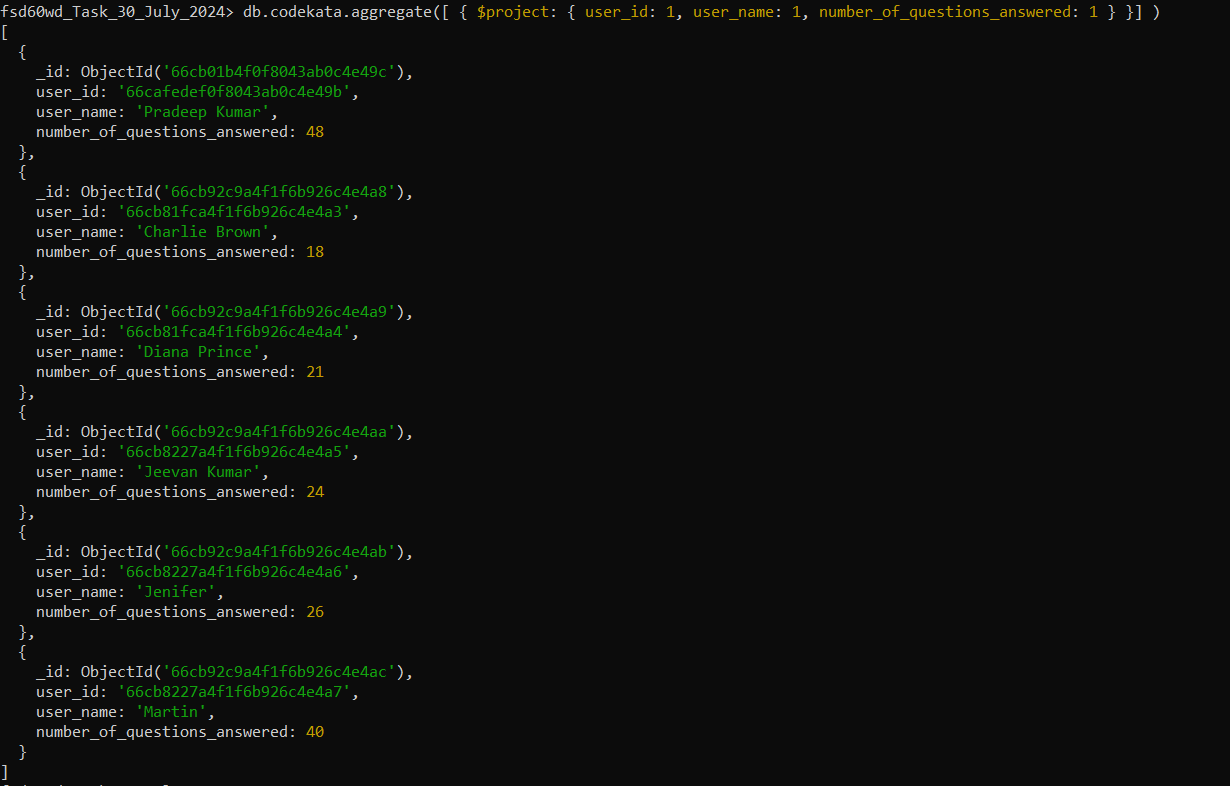
user\_name: 1,

number\_of\_questions\_answered: 1

}

}

])



b) Total number of questions solved by all users

db.codekata.aggregate([

{

$group: {

\_id: null,

totalQuestions: { $sum: "$number\_of\_questions\_answered" }

}

}

])

5) Find all the mentors with who has mentee’s count more than 15  
Answer:   
db.mentors.find({ Total\_Number\_of\_students: { $gt: 15 } })



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

db.tasks.aggregate([

{

$match: {

status: { $ne: "Completed" },

task\_completion\_date: {

$gte: ISODate("2020-10-15T00:00:00Z"),

$lte: ISODate("2020-10-31T23:59:59Z")

}

}

},

{

$group: {

\_id: null,

count: { $sum: 1 },

tasks: {

$push: {

\_id: "$\_id",

task\_name: "$task\_name"

}

}

}

},

{

$project: {

\_id: 0,

count: 1,

tasks: 1

}

}

])

Totally, there are 2 tasks that are not submitted between 15-oct-2020 and 31-oct-2020.

