**1. Find all the topics and tasks taught in the month of October:**

db.getCollection('topics').aggregate(

[

{

$lookup: {

from: 'tasks',

localField: 'topic',

foreignField: 'task',

as: 'Topic Task Data'

}

},

{

$match: { topicDate: { $regex: '2020-10' } }

},

{

$project: {

\_id: 0,

topic: 1,

topicDate: 1,

'Topic Task Data.userId': 1,

'Topic Task Data.submitted': 1,

'Topic Task Data.task': 1

}

}

],

{maxTimeMS: 60000, allowDiskUse: true }

);

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

db.getCollection('company\_drives').find({

driveDate: {

$gte: '2020-10-15',

$lte: '2020-10-31'

}

});

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

db.getCollection('Company\_Drives').aggregate(

[

{

$lookup: {

from: 'Users',

localField: 'userId',

foreignField: 'userId',

as: 'studentInfo'

}

},

{

$project: {

\_id: 0,

'studentInfo.userName': 1,

company: 1,

driveDate: 1,

'studentInfo.userEmail': 1,

'studentInfo.userId': 1

}

}

],

{ maxTimeMS: 60000, allowDiskUse: true }

);

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

db.getCollection('codekata').aggregate(

[

{

$group: {

\_id: 'Total Problem Solved By Users',

count: { $sum: '$problemSolved' }

}

}

],

{ maxTimeMS: 60000, allowDiskUse: true }

);

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

db.getCollection('mentors').aggregate(

[{ $match: { menteeCount: { $gt: 15 } } }],

{ maxTimeMS: 60000, allowDiskUse: true }

);

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

db.getCollection('attendence').aggregate(

[

{

$lookup: {

from: 'topics',

localField: 'topicId',

foreignField: 'topicId',

as: 'Absent'

}

},

{

$lookup: {

from: 'tasks',

localField: 'userId',

foreignField: 'userId',

as: 'Task-notSubmitted'

}

},

{ $unwind: '$Task-notSubmitted' },

{ $unwind: '$Absent' },

{

$match: {

attended: false,

'Absent.topicDate': {

$gte: '2020-10-15',

$lte: '2020-10-31'

}

}

},

{

$match: {

'Task-notSubmitted.dueDate': {

$gte: '2020-10-15',

$lte: '2020-10-31'

},

'Task-notSubmitted.submitted': false

}

},

{ $project: { \_id: 0, 'Absent.\_id': 0 } },

{ $project: { 'task-notSubmitted.\_id': 0 } }

],

{ maxTimeMS: 60000, allowDiskUse: true }

);