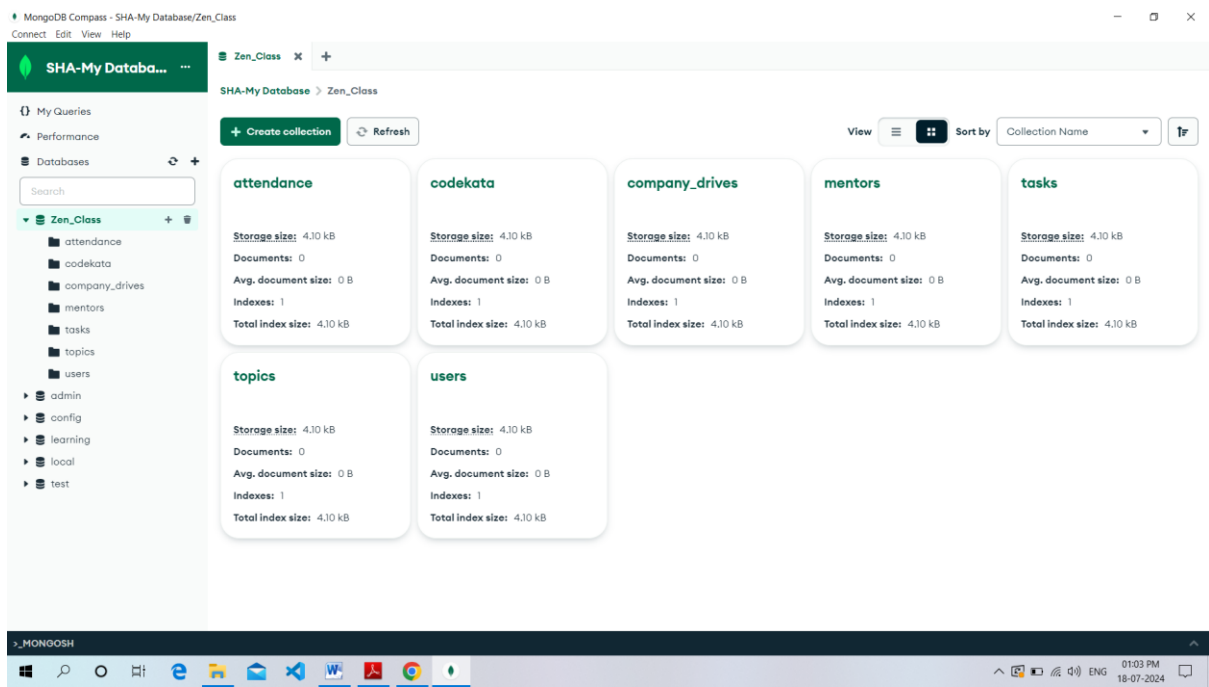# MongoDB Task – 2

Zen Class Database Collections :

users
codekata
attendance
topics
tasks
company_drives
mentors

Screenshot:-

then added the documents as required

Question & Answers :

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

Answer :
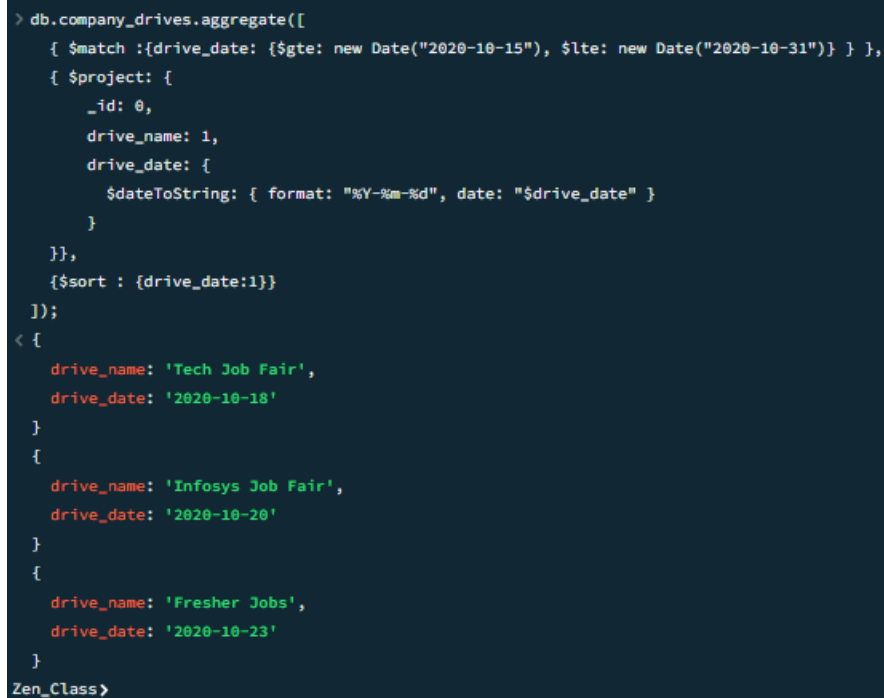
db.topics.aggregate([{ $lookup: {
from: "tasks",
localField: "_id",
foreignField: "topic_id",
as: "taskInfo" } },{ $unwind: "$taskInfo" }, { $match: {
"topic_taught_date": { $gte: new Date("2020-10-01"), $lt: new Date("2020-11-01") },
"taskInfo.task_taught_date": {
$gte: new Date("2020-10-01"),
$lt: new Date("2020-11-01") } } },
{ $project: {
_id: 0,
topic_name: 1,
topic_taught_date: {
$dateToString: { format: "%Y-%m-%d", date: "$topic_taught_date" } },
task_name: "$taskInfo.task_name",
task_taught_date: {
$dateToString: { format: "%Y-%m-%d", date: "$taskInfo.task_taught_date" } } } }]);

Screenshot:-

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

Answer :

db.company_drives.aggregate([
{ $match : {
drive_date: {$gte: new Date("2020-10-15"),
$lte: new Date("2020-10-31")} } },
{ $project: {
_id: 0,
drive_name: 1,
drive_date: { $dateToString: { format: "%Y-%m-%d", date: "$drive_date" } } }},
{ $sort : {drive_date:1} }]);

Screenshot:-

```
> db.company_drives.aggregate([
   { $match :{drive_date: {$gte: new Date("2020-10-15"), $lte: new Date("2020-10-31")} } },
   { $project: {
      _id: 0,
      drive_name: 1,
      drive_date: {
        $dateToString: { format: "%Y-%m-%d", date: "$drive_date" }
      }
   }},
   {$sort : {drive_date:1}}
 ]);
< {
    drive_name: 'Tech Job Fair',
    drive_date: '2020-10-18'
  }
  {
    drive_name: 'Infosys Job Fair',
    drive_date: '2020-10-20'
  }
  {
    drive_name: 'Fresher Jobs',
    drive_date: '2020-10-23'
  }
Zen_Class>
```

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

Answer :

```
db.company_drives.aggregate([
{ $lookup: {
from: 'users',
localField: '_id',
foreignField: 'company_drive_id',
as: 'studentInfo' } },
{ $unwind: '$studentInfo' },
{ $match: {'studentInfo.company_drive_status': 'attended' } },
{ $project: {
_id: 0,
drive_name: 1,
drive_date: { $dateToString: { format: "%Y-%m-%d", date: "$drive_date" } },
student_name: '$studentInfo.name',
student_email: '$studentInfo.email',
drive_status: '$studentInfo.company_drive_status', } },
{ $sort: { drive_date: 1 } } ]);
```

Screenshot:-

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

Answer :

db.codekata.aggregate([
{ $lookup: {
from: 'users',
localField: 'user_id',
foreignField: '_id',
as: 'studentInfo' } },
{ $unwind: '$studentInfo' },
{ $group: {
_id: { user_id: '$studentInfo._id',
User_Name: '$studentInfo.name' },
total_problems_solved: { $sum: 1 } } },
{ $project: {
_id: 0,
User_Name: '$_id.User_Name',
total_problems_solved: 1 } },
{ $sort: { total_problems_solved: -1 } }]);

Screenshot:-

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

db.mentors.aggregate([
{ $match : { mentees_count : { $gt : 15} } },
{ $project : {
_id : 0,
mentor_name : 1,
mentees_count : 1
}},
{ $sort : { mentees_count : -1} }
]);

Screenshot:-

```
> db.mentors.aggregate([
    { $match : { mentees_count : { $gt : 15} } },
    { $project : {
        _id : 0,
        mentor_name : 1,
        mentees_count : 1
}},
    { $sort : { mentees_count : -1} }
]);
< {
    mentor_name: 'suresh babu',
    mentees_count: 50
}
{
    mentor_name: 'thiru selvam',
    mentees_count: 20
}
Zen_Class>
```

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

```
db.users.aggregate([
{ $lookup: { from: 'attendance', localField: '_id', foreignField: 'user_id', as: 'attendanceInfo'}},
{ $lookup: { from: 'tasks', localField: '_id', foreignField: 'user_id', as: 'taskInfo' } },
{ $unwind: '$attendanceInfo' }, { $unwind: '$taskInfo' }, { $match: { $and: [
{ 'attendanceInfo.date': { $gte: new Date("2020-10-15"), $lte: new Date("2020-10-31") } },
{ 'attendanceInfo.status': 'absent' }, { 'taskInfo.task_status': 'not submitted' } ] } },
{ $group: { _id: null, user_count: { $sum: 1 } } }, { $project: { _id: 0, task_status: "Not
Submitted", attendance_status: "Absent", user_count: 1 } } ]);
```

Screenshot:-

```
> db.users.aggregate([
    { $lookup: {
        from: 'attendance',
        localField: '_id',
        foreignField: 'user_id',
        as: 'attendanceInfo'
    }
    },
    { $lookup: {
        from: 'tasks',
        localField: '_id',
        foreignField: 'user_id',
        as: 'taskInfo'
    }
    },
    { $unwind: '$attendanceInfo' },
    { $unwind: '$taskInfo' },
    { $match:
      { $and: [
          { 'attendanceInfo.date': { $gte: new Date("2020-10-15"), $lte: new Date("2020-10-31") } },
          { 'attendanceInfo.status': 'absent' },
          { 'taskInfo.task_status': 'not submitted' }
      ]
      }
    },
    { $group: {
        _id: null,
        user_count: { $sum: 1 }
    }
    },
    { $project: {
        _id: 0,
        task_status: "Not Submitted",
        attendance_status: "Absent",
        user_count: 1
    }
    }
]);
< {
]);
< {
    user_count: 3,
    task_status: 'Not Submitted',
    attendance_status: 'Absent'
}
Zen_Class>
```