

MongoDB Task

Design database for Zen class programme

users

codekata

attendance

topics

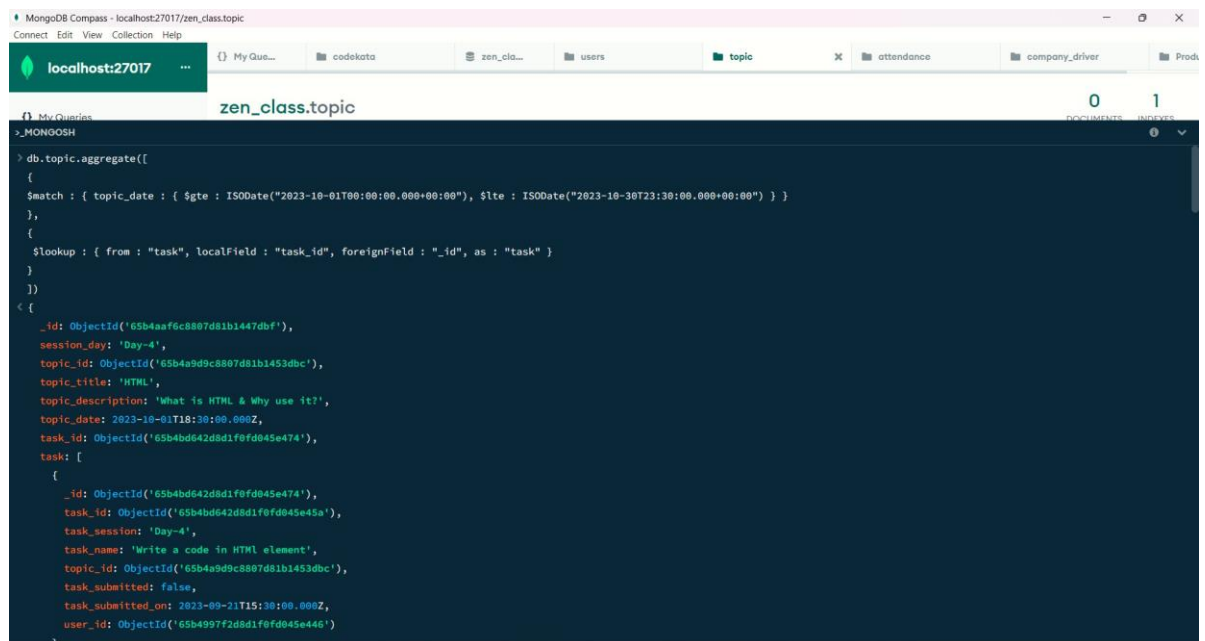
tasks

company_drives

mentors

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

ANS :



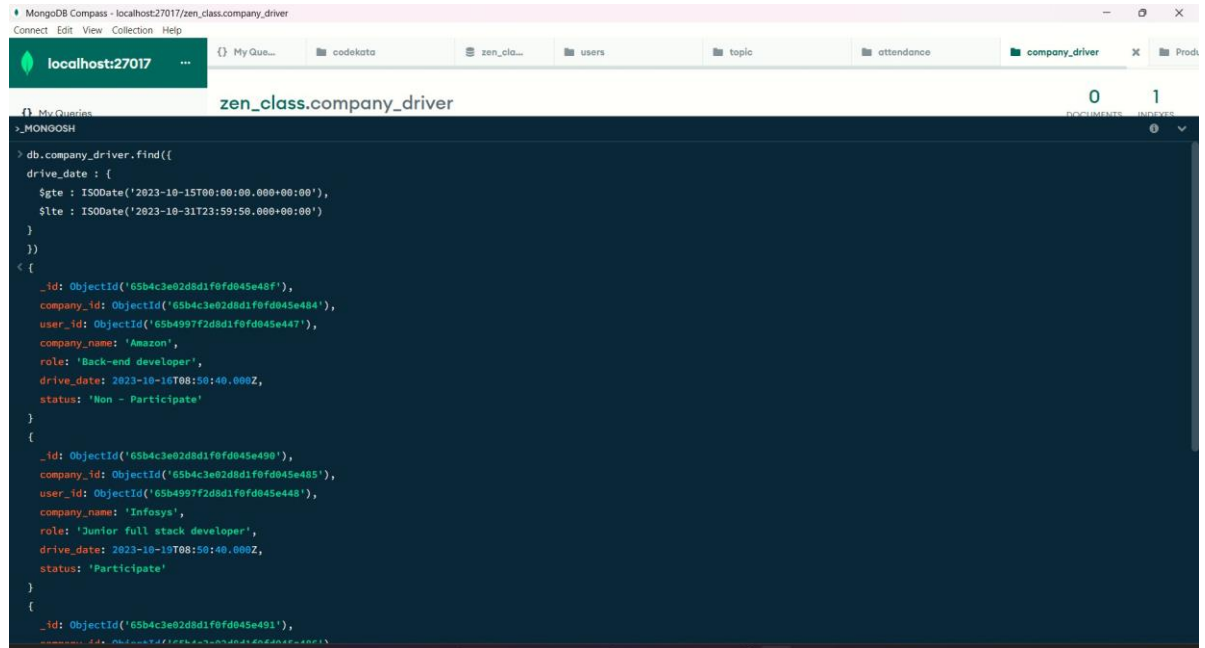
The screenshot shows the MongoDB Compass interface. The top bar indicates the connection to 'localhost:27017' and the selected database 'zen_class'. The 'My Queries' tab is active, displaying a query in the editor. The query is an aggregation pipeline that filters topics by date and performs a lookup to include related tasks. The result pane on the right shows a single document with details about a topic and its associated task.

```
>_MONOOOSH
> db.topic.aggregate([
  {
    $match : { topic_date : { $gte : ISODate("2023-10-01T00:00:00.000+00:00"), $lte : ISODate("2023-10-30T23:30:00.000+00:00") } }
  },
  {
    $lookup : { from : "task", localField : "task_id", foreignField : "_id", as : "task" }
  }
])
{
  "_id": ObjectId('65b4aaf6c8807d81b1447dbf'),
  "session_day": "Day-4",
  "topic_id": ObjectId('65b4a9d9c8807d81b1453dbc'),
  "topic_title": "HTML",
  "topic_description": "What is HTML & Why use it?",
  "topic_date": 2023-10-01T18:30:00.000Z,
  "task_id": ObjectId('65b4bd642d8d1f0fd045e474'),
  "task": [
    {
      "_id": ObjectId('65b4bd642d8d1f0fd045e474'),
      "task_id": ObjectId('65b4bd642d8d1f0fd045e45a'),
      "task_session": "Day-4",
      "task_name": "Write a code in HTML element",
      "topic_id": ObjectId('65b4a9d9c8807d81b1453dbc'),
      "task_submitted": false,
      "task_submitted_on": 2023-09-21T15:30:00.000Z,
      "user_id": ObjectId('65b4997f2d8d1f0fd045e446')
    }
  ]
}
```

```
db.topic.aggregate([
{
$match : { topic_date : { $gte :
ISODate("2023-10-01T00:00:00.000+00:00"), $lte :
ISODate("2023-10-30T23:30:00.000+00:00") } }
},
{
$lookup : { from : "task", localField : "task_id", foreignField : "_id", as :
"task" }
}
])
```

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

ANS :



The screenshot shows the MongoDB Compass interface. The top bar indicates the connection to 'localhost:27017' and the selected database 'zen_class'. The 'company_driver' collection is open. The query editor shows the following query:

```
db.company_driver.find({
  drive_date : {
    $gte : ISODate('2023-10-15T00:00:00.000+00:00'),
    $lte : ISODate('2023-10-31T23:59:50.000+00:00')
  }
})
```

The results pane shows three documents:

```
{
  "_id": ObjectId("65b4c3e02d8d1f0fd045e48f"),
  "company_id": ObjectId("65b4c3e02d8d1f0fd045e484"),
  "user_id": ObjectId("65b4997f2d8d1f0fd045e447"),
  "company_name": "Amazon",
  "role": "Back-end developer",
  "drive_date": 2023-10-16T08:50:40.000Z,
  "status": "Non - Participate"
},
{
  "_id": ObjectId("65b4c3e02d8d1f0fd045e490"),
  "company_id": ObjectId("65b4c3e02d8d1f0fd045e485"),
  "user_id": ObjectId("65b4997f2d8d1f0fd045e448"),
  "company_name": "Infosys",
  "role": "Junior full stack developer",
  "drive_date": 2023-10-19T08:50:40.000Z,
  "status": "Participate"
},
{
  "_id": ObjectId("65b4c3e02d8d1f0fd045e491"),
```

```
db.company_driver.find({
  drive_date : {
    $gte : ISODate('2023-10-15T00:00:00.000+00:00'),
    $lte : ISODate('2023-10-31T23:59:50.000+00:00')
  }
})
```

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

ANS :

```
db.company_driver.aggregate([
  { $match : { status : "Participate" } },
  {
    $lookup : { from : "users", localField : "user_id", foreignField:
      "_id", as : "participated" }
  }
])
```



```
MongoDB Compass - localhost:27017/zen_class.company_driver
Connect Edit View Collection Help
localhost:27017
My Queries
zen_class.company_driver
0 1
>_MONGOOSH
> db.company_driver.aggregate([
  { $match : { status : "Participate" } },
  {
    $lookup : { from : "users", localField : "user_id", foreignField : "_id", as : "participated" }
  }
])
< [
  {
    _id: ObjectId('65b4c3e02d8d1f0fd045e48b'),
    company_id: ObjectId('65b4c3e02d8d1f0fd045e480'),
    user_id: ObjectId('65b4997f2d8d1f0fd045e446'),
    company_name: 'Zoho',
    role: 'Front-end developer',
    drive_date: 2023-09-17T08:58:48.000Z,
    status: 'Participate',
    participated: [
      {
        _id: ObjectId('65b4997f2d8d1f0fd045e446'),
        user_name: 'Madan',
        user_email: 'madanraj@gmail.com',
        user_phone: '+9907654323',
        batch_name: 'FSD-01',
        mentor_name: 'Vishnu',
        task_id: '',
        problem_id: '',
        attendance: ''
      }
    ]
  }
]
```

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

ANS :

```
MongoDB Compass - localhost:27017/zen_class.users
Connect Edit View Collection Help
localhost:27017
My Queries
zen_class.users
0 1
>_MONGOOSH
> db.codekata.aggregate([
  {
    $match : { problem_solved : true }
  },
  {
    $group : {
      _id : "$user_id",
      total_sum_solved : { $sum : "$earned_points" }
    }
  }
])
< [
  {
    _id: ObjectId('65b4997f2d8d1f0fd045e446'),
    total_sum_solved: 22
  },
  {
    _id: ObjectId('65b499b72d8d1f0fd045e447'),
    total_sum_solved: 17
  },
  {
    _id: ObjectId('65b499d12d8d1f0fd045e448'),
    total_sum_solved: 5
  }
]
zen_class>
```

```
db.codekata.aggregate([
{
  $match : { problem_solved : true}
},
{

```

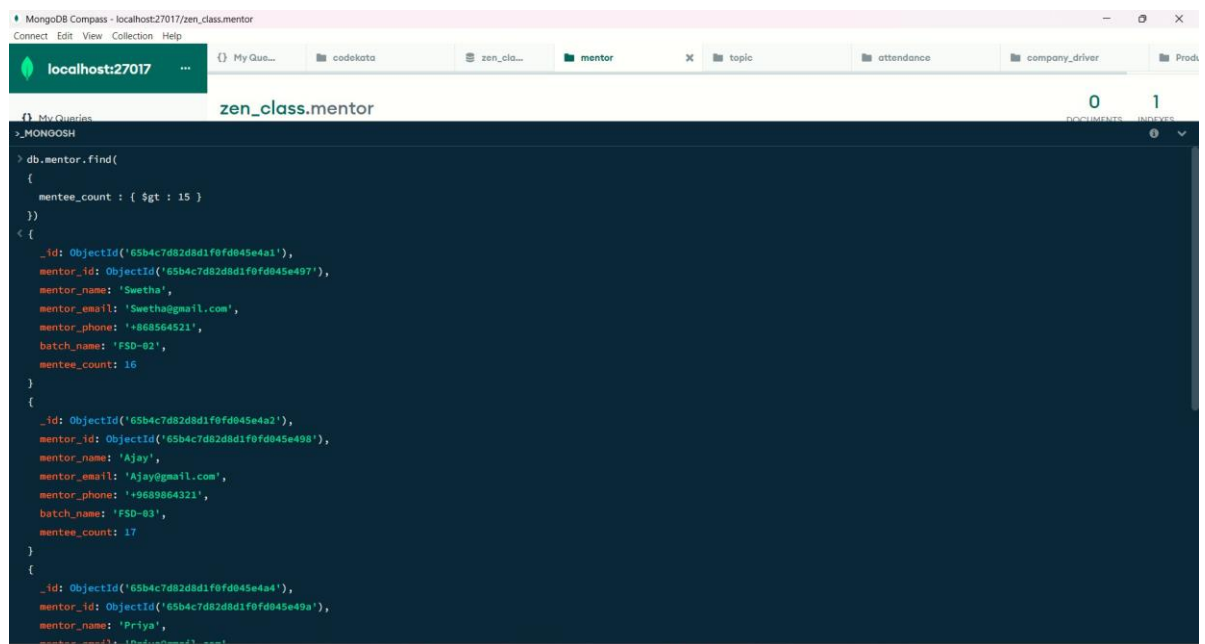
```

$group : {
  _id : "$user_id",
  total_sum_solved : { $sum : "$earned_points" }
}
}
}
)

```

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

ANS :



```

MongoDB Compass - localhost:27017/zen_class.mentor
Connect Edit View Collection Help

localhost:27017 ... My Que... codekata zen_cla... mentor topic attendance company_driver Prod

zen_class.mentor 0 1
DOCUMENTS INDEXES

> db.mentor.find(
{
  mentee_count : { $gt : 15 }
})
< {
  _id: ObjectId('65b4c7d82d8d1f0fd045e4a1'),
  mentor_id: ObjectId('65b4c7d82d8d1f0fd045e497'),
  mentor_name: 'Swetha',
  mentor_email: 'Swetha@gmail.com',
  mentor_phone: '+868564521',
  batch_name: 'FSD-02',
  mentee_count: 16
}
{
  _id: ObjectId('65b4c7d82d8d1f0fd045e4a2'),
  mentor_id: ObjectId('65b4c7d82d8d1f0fd045e498'),
  mentor_name: 'Ajay',
  mentor_email: 'Ajay@gmail.com',
  mentor_phone: '+9689864321',
  batch_name: 'FSD-03',
  mentee_count: 17
}
{
  _id: ObjectId('65b4c7d82d8d1f0fd045e4a4'),
  mentor_id: ObjectId('65b4c7d82d8d1f0fd045e49a'),
  mentor_name: 'Priya',
  mentee_count: 17
}

```

```

db.mentor.find(
{
  mentee_count : { $gt : 15 }
})

```

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

Ans:

```

{
  $match : { date : { $gte : ISODate("2023-10-01T00:00:00.000+00:00"), $lte : ISODate("2023-10-31T23:59:00.000+00:00") }, attendance_status : false }
},
{
  $lookup : { from : "task", localField : "user_id", foreignField : "user_id", as : "task" }
}

```

```

    }
  }
  $match : { date : { $gte : ISODate("2023-10-01T00:00:00.000+00:00"), $lte
:ISODate("2023-10-31T23:59:00.000+00:00") }, "task.task_submitted" : false }
}
})

```

The screenshot shows the MongoDB Compass interface. The top bar indicates the connection to 'localhost:27017' and the current database is 'zen_class.task'. The left sidebar shows the database structure with 'My Queries' and '0' documents. The main area displays a query in the 'Query' tab and its result in the 'Results' tab.

Query:

```

db.attendance.aggregate([
  {
    $match : { date : { $gte : ISODate("2023-10-01T00:00:00.000+00:00"), $lte : ISODate("2023-10-31T23:59:00.000+00:00") }, attendance_status : false }
  },
  {
    $lookup : { from : "task", localField : "user_id", foreignField : "user_id", as : "task" }
  },
  {
    $match : { date : { $gte : ISODate("2023-10-01T00:00:00.000+00:00"), $lte : ISODate("2023-10-31T23:59:00.000+00:00") }, "task.task_submitted" : false }
  }
])

```

Result:

```

{
  "_id": ObjectId("65b4a5ccc8807d81b1447dal"),
  "user_id": ObjectId("65b4997f2d8d1f0fd045e446"),
  "date": 2023-10-11T08:30:00.000Z,
  "attendance_status": false,
  "task": [
    {
      "_id": ObjectId("65b4b7752d8d1f0fd045e455"),
      "task_id": ObjectId("65b4b7752d8d1f0fd045e452"),
      "task_session": "Day-1",
      "task_name": "Write a blog about javascript",
      "topic_id": ObjectId("65b4a9d9c8807d81b1447dbc"),
      "user_id": ObjectId("65b4997f2d8d1f0fd045e446"),
      "task_submitted": true,
      "task_submitted_on": 2023-09-11T15:30:00.000Z
    }
  ]
}

```