

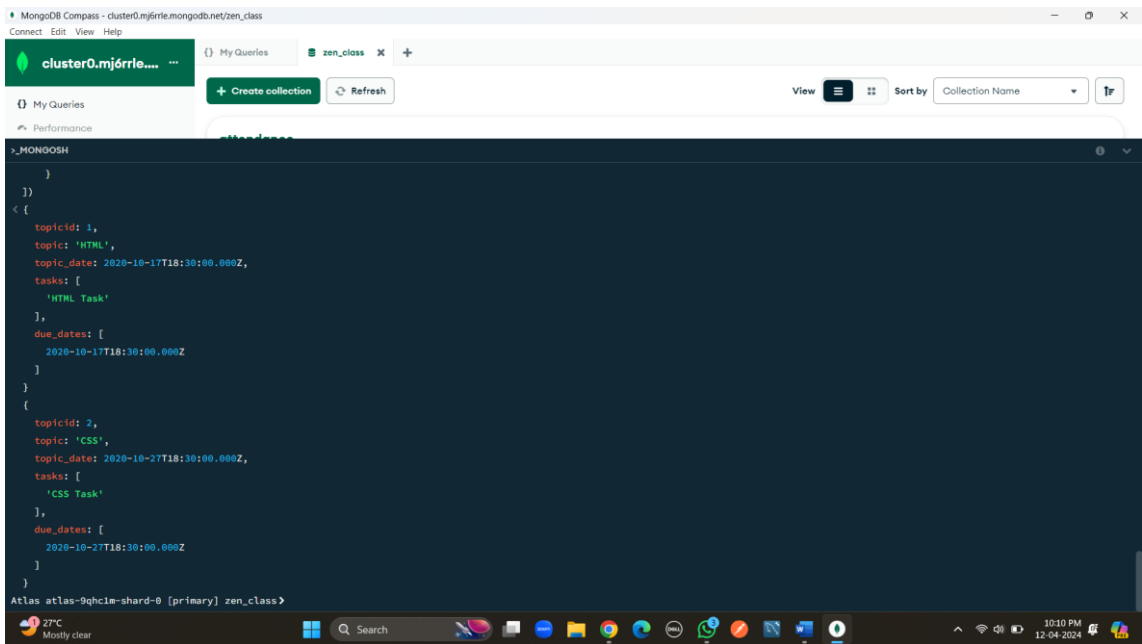
Task Solutions

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

QUERY:

```
db.topics.aggregate([
  {
    $lookup: {
      from: "tasks",
      localField: "topicid",
      foreignField: "topicid",
      as: "taskinfo"
    }
  },
  {
    $match: {
      $and: [
        { topic_date: { $gte: new Date("2020-10-01"), $lt: new Date("2020-11-01") } },
        {
          $or: [
            { "taskinfo.due_date": { $gte: new Date("2020-10-01"), $lt: new Date("2020-11-01") } },
            { "taskinfo.due_date": { $exists: false } }
          ]
        }
      ]
    }
  },
  {
    $project: {
      _id: 0,
      topicid: 1,
      topic: 1,
      topic_date: 1,
      tasks: "$taskinfo.task",
      due_dates: "$taskinfo.due_date"
    }
  }
])
```

OUTPUT:

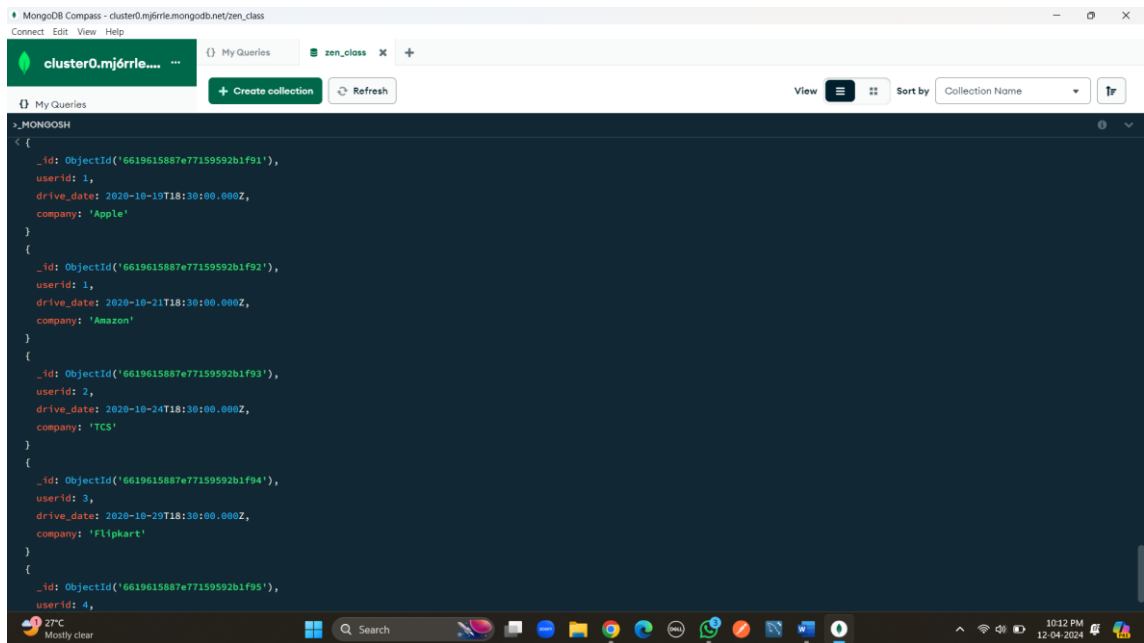


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2. Find all the company drives which appeared between 15 oct-2020 and 31-oct-2020.

QUERY:

```
db.companydrives.find({
  $or: [
    { drive_date: { $gte: new Date("15-oct-2020") } },
    { drive_date: { $lte: new Date("31-oct-2020") } }
  ]
})
```

OUTPUT:



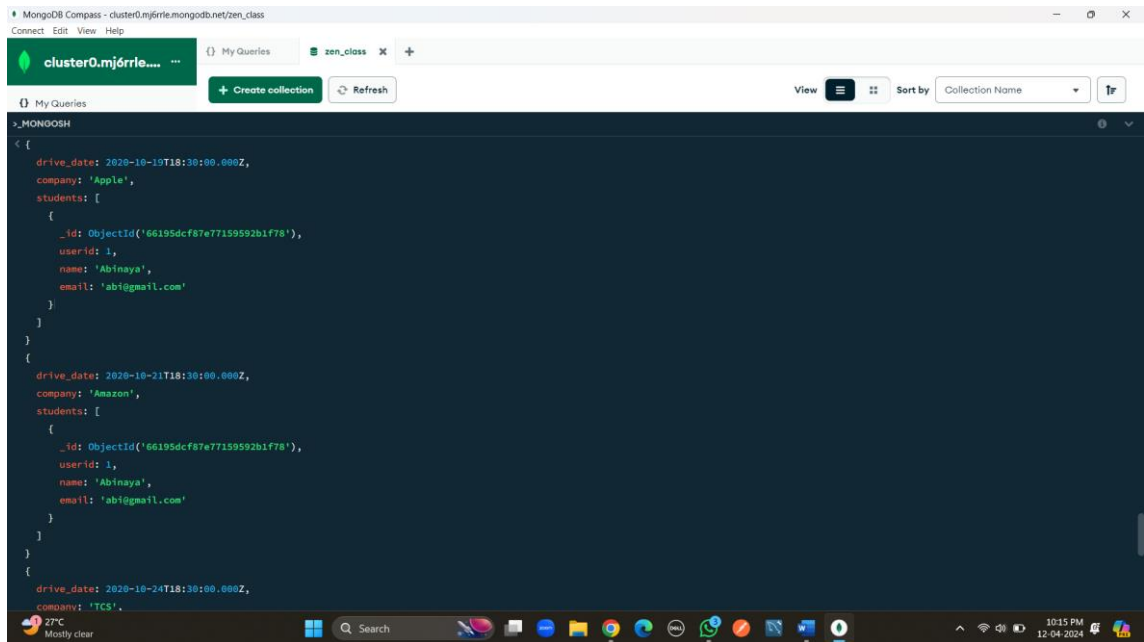
3. Find all the company drives and students who are appeared for the placement .

QUERY:

```
db.companydrives.aggregate([
  {
    $lookup: {
      from: "users",
      localField: "userid",
      foreignField: "userid",
      as: "userinfo"
    }
  },
  {
    $project: {
      _id: 0,
      company: 1,
      drive_date: 1,
      students: "$userinfo"
    }
  }
])
```

```
}  
}]}
```

OUTPUT:



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

QUERY:

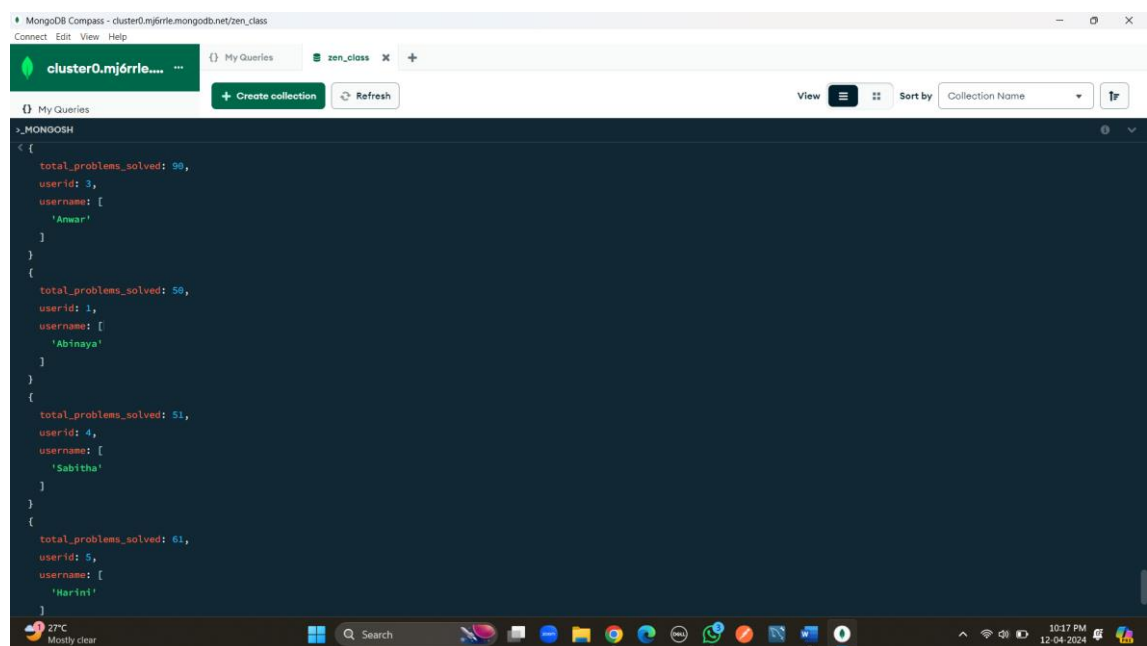
```
db.codekata.aggregate([  
  {  
    $lookup: {  
      from: "users",  
      localField: "userid",  
      foreignField: "userid",  
      as: "userinfo"  
    }  
  },  
  {  
    $group: {  
      _id: {  
        userid: "$userid",
```

```

        username: "$userinfo.name"
      },
      total_problems_solved: { $sum: "$problems" }
    }
  },
  {
    $project: {
      _id: 0,
      userid: "$_id.userid",
      username: "$_id.username",
      total_problems_solved: 1
    }
  }
}
})

```

OUTPUT:



```

>_MONGODB
< {
  total_problems_solved: 99,
  userid: 3,
  username: [
    'Anwar'
  ]
}
{
  total_problems_solved: 99,
  userid: 1,
  username: [
    'Abinaya'
  ]
}
{
  total_problems_solved: 51,
  userid: 4,
  username: [
    'Sabitha'
  ]
}
{
  total_problems_solved: 61,
  userid: 5,
  username: [
    'Harini'
  ]
}

```

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

QUERY:

```

db.users.aggregate([
{

```

```

    $match: { mentorid: { $exists: true } }
  },
  {
    $group: {
      _id: "$mentorid",
      mentorname: { $first: "$mentorname" },
      mentee_count: { $sum: 1 }
    }
  },
  {
    $match: { mentee_count: { $gt: 15 } }
  },
  {
    $project: {
      _id: 0,
      mentorid: "$_id",
      mentorname: 1,
      mentee_count: 1
    }
  }
}
)

```

OUTPUT:

The screenshot shows the MongoDB Compass interface. The top bar indicates the connection to 'cluster0.mj6rrie.mongodb.net/zen_class'. The left sidebar shows 'My Queries' and 'zen_class'. The main area displays the aggregation pipeline in a dark theme editor. The pipeline is as follows:

```

db.users.aggregate([
  {
    $match: { mentorid: { $exists: true } }
  },
  {
    $group: {
      _id: "$mentorid",
      mentorname: { $first: "$mentorname" },
      mentee_count: { $sum: 1 }
    }
  },
  {
    $match: { mentee_count: { $gt: 15 } }
  },
  {
    $project: {
      _id: 0,
      mentorid: "$_id",
      mentorname: 1,
      mentee_count: 1
    }
  }
])

```

The status bar at the bottom shows 'Atlas atlas-9ghclm-shard-0 [primary] zen_class'.

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

QUERY:

```
db.attendance.aggregate([
  {
    $lookup: {
      from: "topics",
      localField: "topicid",
      foreignField: "topicid",
      as: "topics"
    }
  },
  {
    $lookup: {
      from: "tasks",
      localField: "topicid",
      foreignField: "topicid",
      as: "tasks"
    }
  },
  {
    $match: {
      attended: false,
      "tasks.submitted": false,
      $and: [
        { "topics.topic_date": { $gte: new Date("15-oct-2020") } },
        { "topics.topic_date": { $lte: new Date("31-oct-2020") } },
        { "tasks.due_date": { $gte: new Date("15-oct-2020") } },
        { "tasks.due_date": { $lte: new Date("31-oct-2020") } }
      ]
    }
  },
  {
    $count: "No_of_students_absent"
  }
])
```

OUTPUT:

