

MONGO DB TASK DAY 2

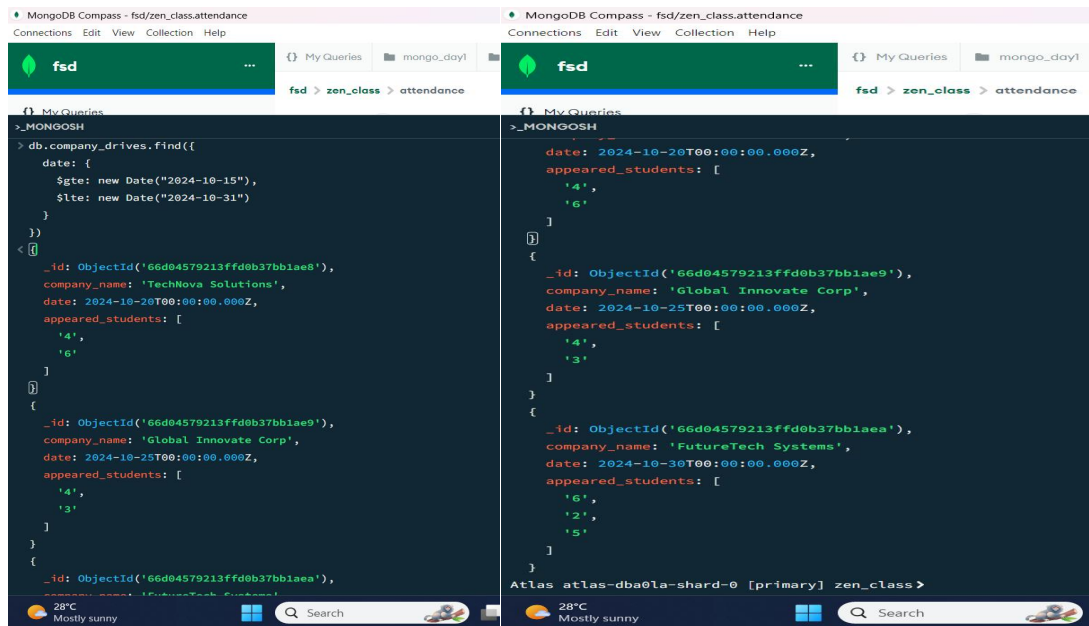
All the collections are uploaded in git hub repository

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

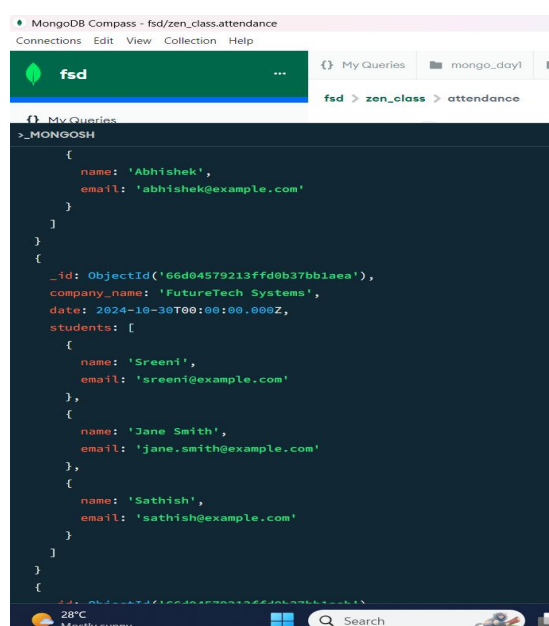
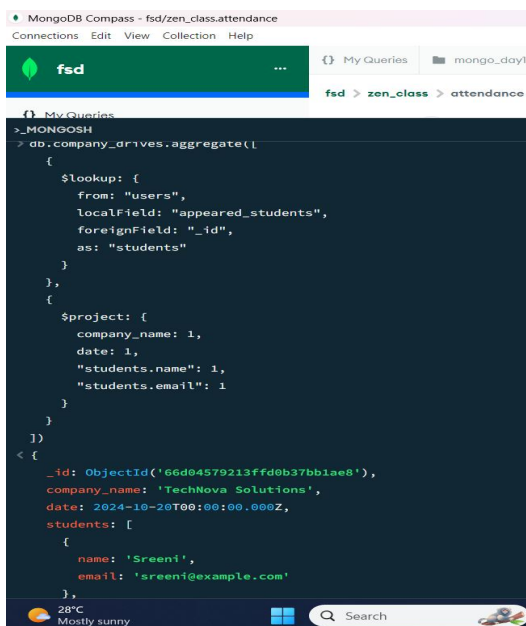
```
> db.topics.aggregate([
  {
    $match: {
      date: {
        $gte: new Date("2024-10-01"),
        $lte: new Date("2024-10-31")
      }
    }
  },
  {
    $lookup: {
      from: "tasks",
      localField: "_id",
      foreignField: "topic_id",
      as: "related_tasks"
    }
  }
])
< [
  {
    _id: ObjectId('66d04031213ffdb37bb1adc'),
    name: 'Introduction to JavaScript',
    date: 2024-10-05T00:00:00.000Z,
    custom_id: 'js_intro_id',
    related_tasks: [
      {
        _id: ObjectId('66d0412e213ffdb37bb1ae2'),
        topic_id: ObjectId('66d04031213ffdb37bb1adc'),
        description: 'Create a simple calculator using JavaScript',
        due_date: 2024-10-10T00:00:00.000Z
      }
    ]
  },
  {
    _id: ObjectId('66d04031213ffdb37bb1add'),
    name: 'MongoDB Basics',
    date: 2024-10-12T00:00:00.000Z,
    custom_id: 'mongo_basics_id',
    related_tasks: [
      {
        _id: ObjectId('66d0412e213ffdb37bb1ae3'),
        topic_id: ObjectId('66d04031213ffdb37bb1add'),
        description: 'Design a MongoDB schema for a blog application',
        due_date: 2024-10-17T00:00:00.000Z
      }
    ]
  }
]
```

```
> db.topics.aggregate([
  {
    $match: {
      date: {
        $gte: new Date("2024-10-01"),
        $lte: new Date("2024-10-31")
      }
    }
  },
  {
    $lookup: {
      from: "tasks",
      localField: "_id",
      foreignField: "topic_id",
      as: "related_tasks"
    }
  }
])
< [
  {
    _id: ObjectId('66d04031213ffdb37bb1ade'),
    name: 'React Fundamentals',
    date: 2024-10-19T00:00:00.000Z,
    custom_id: 'react_fundamentals_id',
    related_tasks: [
      {
        _id: ObjectId('66d0412e213ffdb37bb1ae4'),
        topic_id: ObjectId('66d04031213ffdb37bb1ade'),
        description: 'Build a to-do list application using React',
        due_date: 2024-10-24T00:00:00.000Z
      }
    ]
  },
  {
    _id: ObjectId('66d04031213ffdb37bb1adf'),
    name: 'Node.js and Express',
    date: 2024-10-26T00:00:00.000Z,
    custom_id: 'nodejs_express_id',
    related_tasks: [
      {
        _id: ObjectId('66d0412e213ffdb37bb1ae5'),
        topic_id: ObjectId('66d04031213ffdb37bb1adf'),
        description: 'Create a RESTful API using Node.js and Express',
        due_date: 2024-10-31T00:00:00.000Z
      }
    ]
  }
]
```

- Find all the company drives which appeared between 15 oct-2024 and 31-oct-2024



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



MongoDB Compass - fsd/zen_class.attendance

Connections Edit View Collection Help

fsd ... {} My Queries mongo_dayl us

fsd > zen_class > attendance

```
>_MONGOSH
{
  name: 'Jane Smith',
  email: 'jane.smith@example.com'
}
]
{
  _id: ObjectId('66d04579213ffd9b37bb1aec'),
  company_name: 'EcoTech Innovations',
  date: 2024-11-10T00:00:00.000Z,
  students: [
    {
      name: 'Sreeni',
      email: 'sreeni@example.com'
    },
    {
      name: 'Abhishek',
      email: 'abhishek@example.com'
    },
    {
      name: 'John Doe',
      email: 'john.doe@example.com'
    }
  ]
}
```

Atlas atlas-dba0la-shard-0 [primary] zen_class>

28°C Mostly sunny

MongoDB Compass - fsd/zen_class.attendance

Connections Edit View Collection Help

fsd ... {} My Queries mongo_dayl us

fsd > zen_class > attendance

```
>_MONGOSH
]]
< {
  _id: ObjectId('66d04579213ffd9b37bb1ae8'),
  company_name: 'TechNova Solutions',
  date: 2024-10-20T00:00:00.000Z,
  students: [
    {
      name: 'Sreeni',
      email: 'sreeni@example.com'
    },
    {
      name: 'Abhishek',
      email: 'abhishek@example.com'
    }
  ]
}
{
  _id: ObjectId('66d04579213ffd9b37bb1ae9'),
  company_name: 'Global Innovate Corp',
  date: 2024-10-25T00:00:00.000Z,
  students: [
    {
      name: 'Bob Johnson',
      email: 'bob.johnson@example.com'
    },
    {
      name: 'Jane Smith',
      email: 'jane.smith@example.com'
    }
  ]
}
```

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MongoDB Compass - fsd/zen_class.attendance

Connections Edit View Collection Help

fsd ... {} My Queries mongo_dayl users

fsd > zen_class > attendance

```
>_MONGOSH
]]
{
  email: 'sathish@example.com'
}
]
{
  _id: ObjectId('66d04579213ffd9b37bb1aeb'),
  company_name: 'Quantum Data Solutions',
  date: 2024-11-05T00:00:00.000Z,
  students: [
    {
      name: 'Abhishek',
      email: 'abhishek@example.com'
    },
    {
      name: 'Sreeni',
      email: 'sreeni@example.com'
    },
    {
      name: 'Bob Johnson',
      email: 'bob.johnson@example.com'
    },
    {
      name: 'Jane Smith',
      email: 'jane.smith@example.com'
    }
  ]
}
```

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

The first screenshot shows an aggregation query in MongoDB Compass:

```
> db.codekata.aggregate([
  {
    $group: {
      _id: "$user_id",
      total_problems: { $sum: "$problems_solved" }
    }
  },
  {
    $lookup: {
      from: "users",
      localField: "_id",
      foreignField: "_id",
      as: "user_info"
    }
  },
  {
    $project: {
      "user_info.name": 1,
      total_problems: 1
    }
  }
])
```

The second screenshot shows the results of the aggregation query, displaying a list of documents with user information and the total number of problems solved.

_id	total_problems	user_info
'3'	40	{ name: 'Bob Johnson' }
'1'	75	{ name: 'John Doe' }
'5'	50	{ }
'4'	25	{ }
'6'	50	{ name: 'Sathish' }
'2'	100	{ name: 'Abhishek' }
'7'	100	{ }
'8'	100	{ name: 'Sreeni' }
'9'	100	{ name: 'Jane Smith' }

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

The screenshot shows a query in MongoDB Compass:

```
> db.mentors.find({mentee_count :{$gt : 15}})
```

The results show a list of mentors with their names and mentee counts:

_id	name	mentee_count
ObjectId('66d045b7213ffd0b37bb1aed')	Dr. Anita Desai	25
ObjectId('66d045b7213ffd0b37bb1aee')	Prof. David Chen	18
ObjectId('66d045b7213ffd0b37bb1aef')	Eng. Maria Rodriguez	22
ObjectId('66d045b7213ffd0b37bb1af1')	Ms. Emily Wong	20

6. Find the number of users who are absent and task is not submitted between 15 oct-2024 and 31-oct-2024

The screenshot shows the MongoDB Compass interface with an aggregation pipeline in the 'fsd' database, 'zen_class' collection, and 'mentors' view. The pipeline is as follows:

```
> db.users.aggregate([
  {
    $lookup: {
      from: "attendance",
      localField: "_id",
      foreignField: "User_id",
      as: "attendance"
    }
  },
  {
    $lookup: {
      from: "tasks",
      localField: "_id",
      foreignField: "user_id",
      as: "tasks"
    }
  },
  {
    $match: {
      "attendance.date": {
        $gte: new Date("2024-10-15"),
        $lte: new Date("2024-10-31")
      }
    }
  },
  {
    $count: "absent_users_with_no_tasks"
  }
])
```

The result of the aggregation is shown at the bottom of the query editor:

```
< {
  absent_users_with_no_tasks: 1
}
```

The status bar at the bottom indicates the connection is to 'Atlas atlas-dba01a-shard-0 [primary] zen_class'.