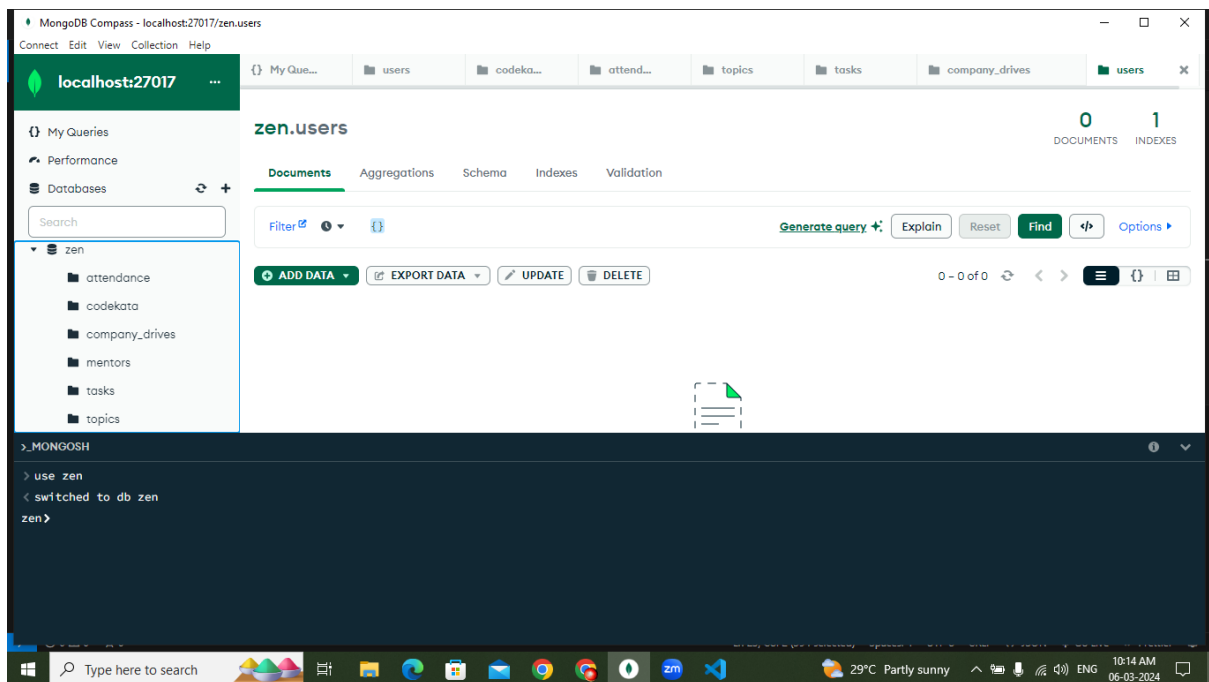


MongoDB Task - 2

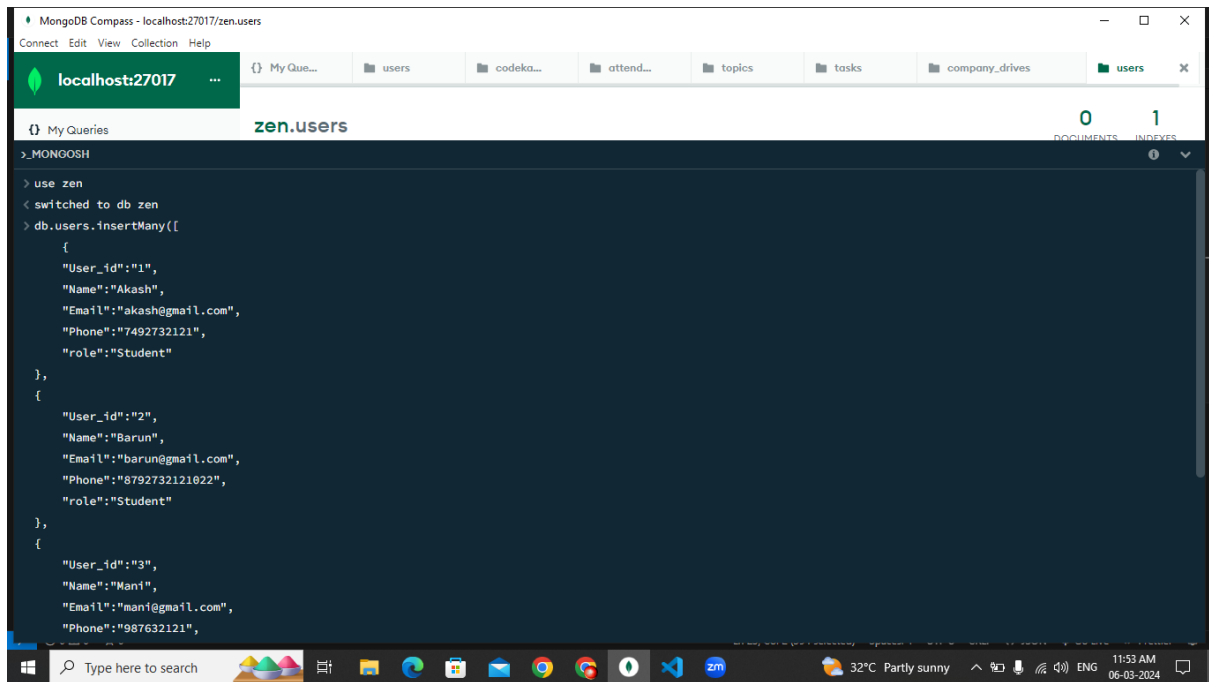
Design database for Zen class programme

users
codekata
attendance
topics
tasks
company_drives
mentors

Create DB and collections

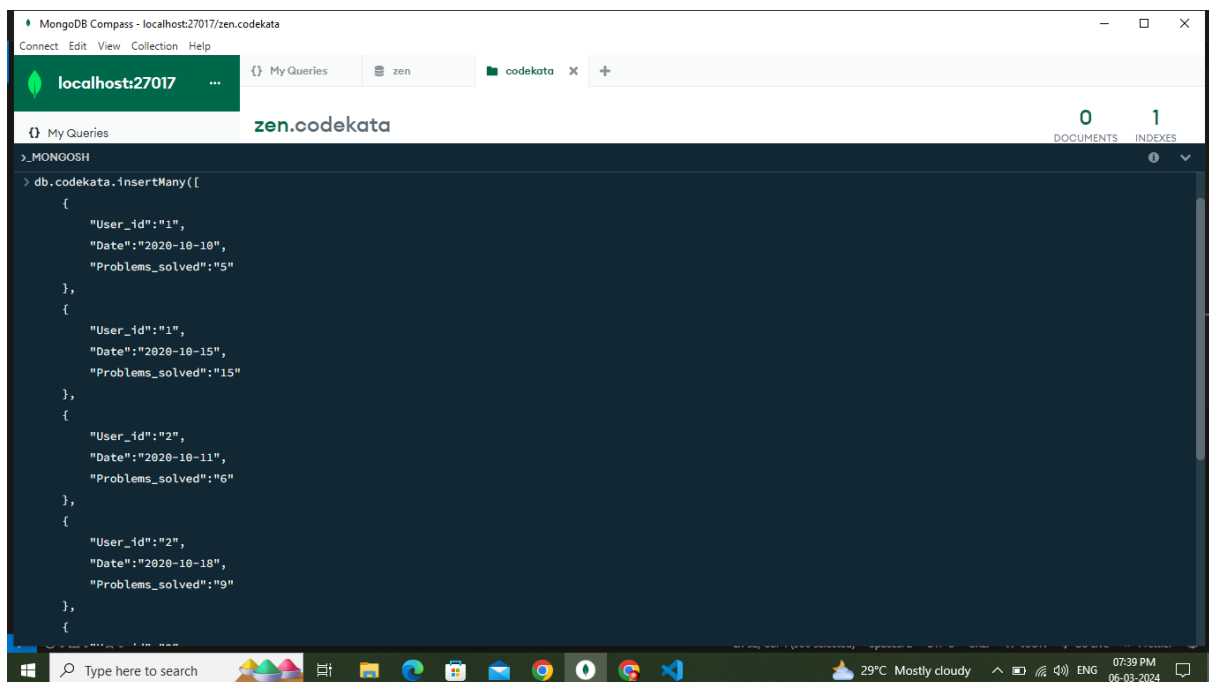


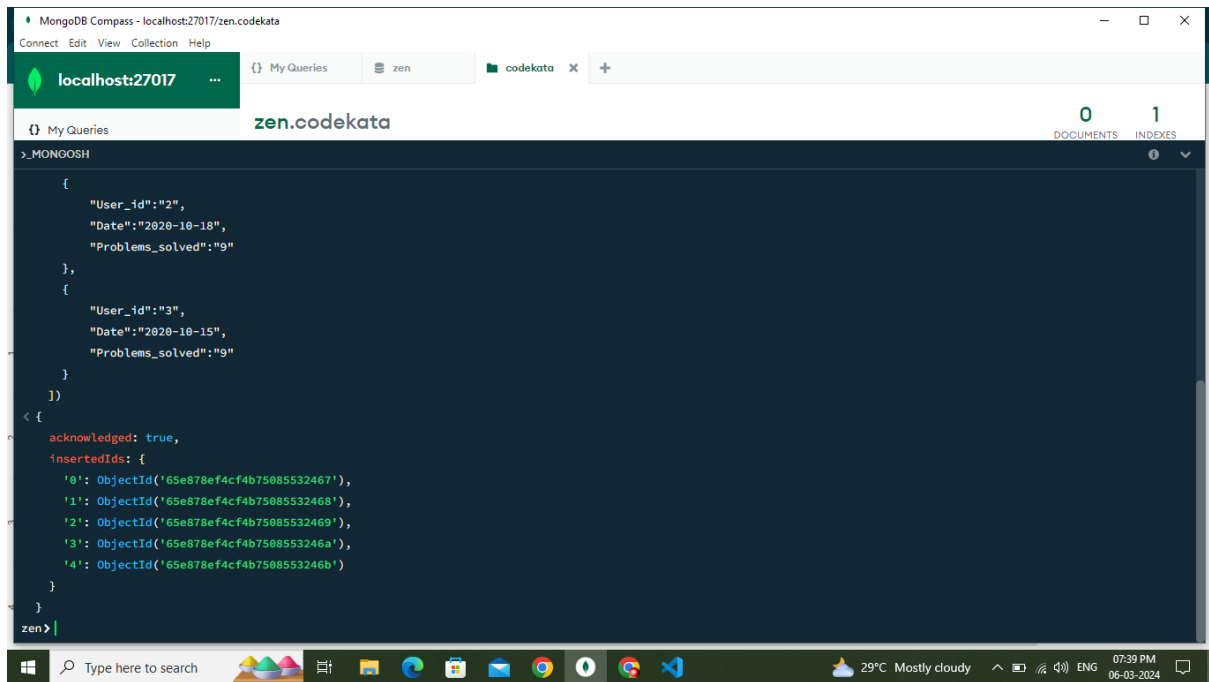
Insert data in 'users' collection
db.users.insertMany()



Insert data in 'codekata' collection

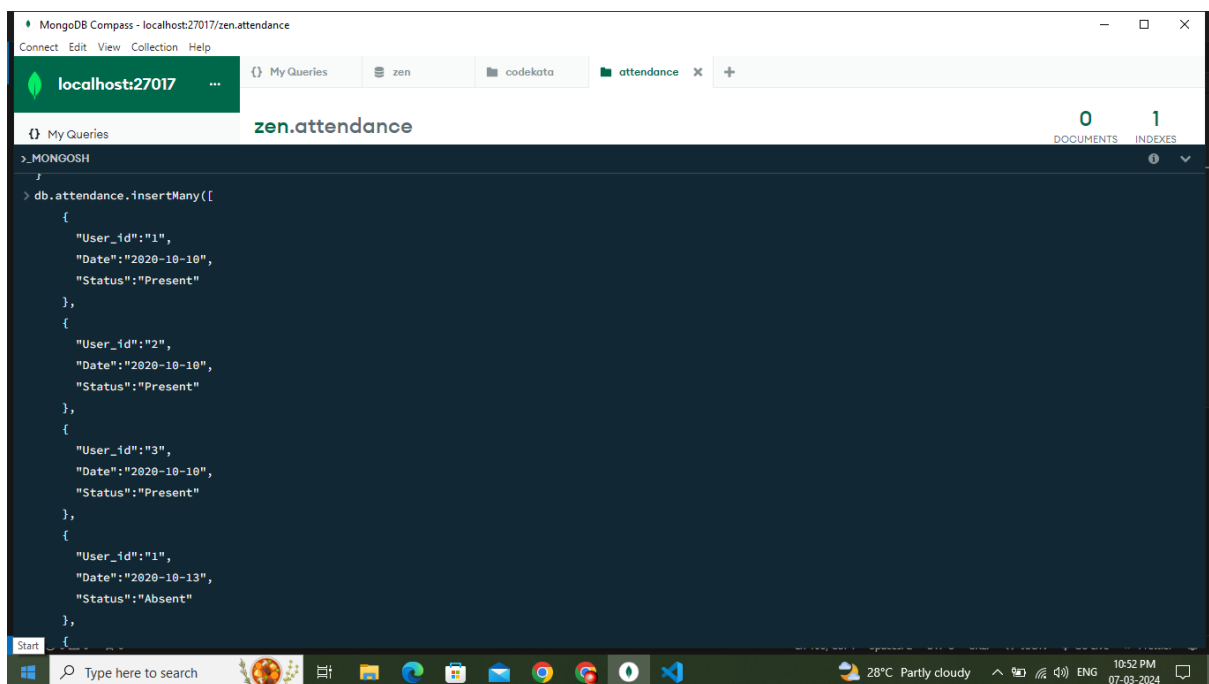
db.codekata.insertMany()





Insert data in 'attendance' collection

`db.attendance.insertMany()`



The screenshot shows the MongoDB Compass interface for the 'zen.attendance' collection. The 'My Queries' tab is active, displaying a MongoDB insertMany query. The query is as follows:

```
>_MONGOSSH
{
  "Date": "2020-10-13",
  "Status": "Present"
},
{
  "User_id": "1",
  "Date": "2020-10-14",
  "Status": "Present"
},
{
  "User_id": "2",
  "Date": "2020-10-14",
  "Status": "Present"
},
{
  "User_id": "3",
  "Date": "2020-10-14",
  "Status": "Absent"
}
})
< {
  acknowledged: true,
```

The interface shows 0 documents and 1 index. The Windows taskbar at the bottom indicates the system time is 10:53 PM on 07-03-2024.

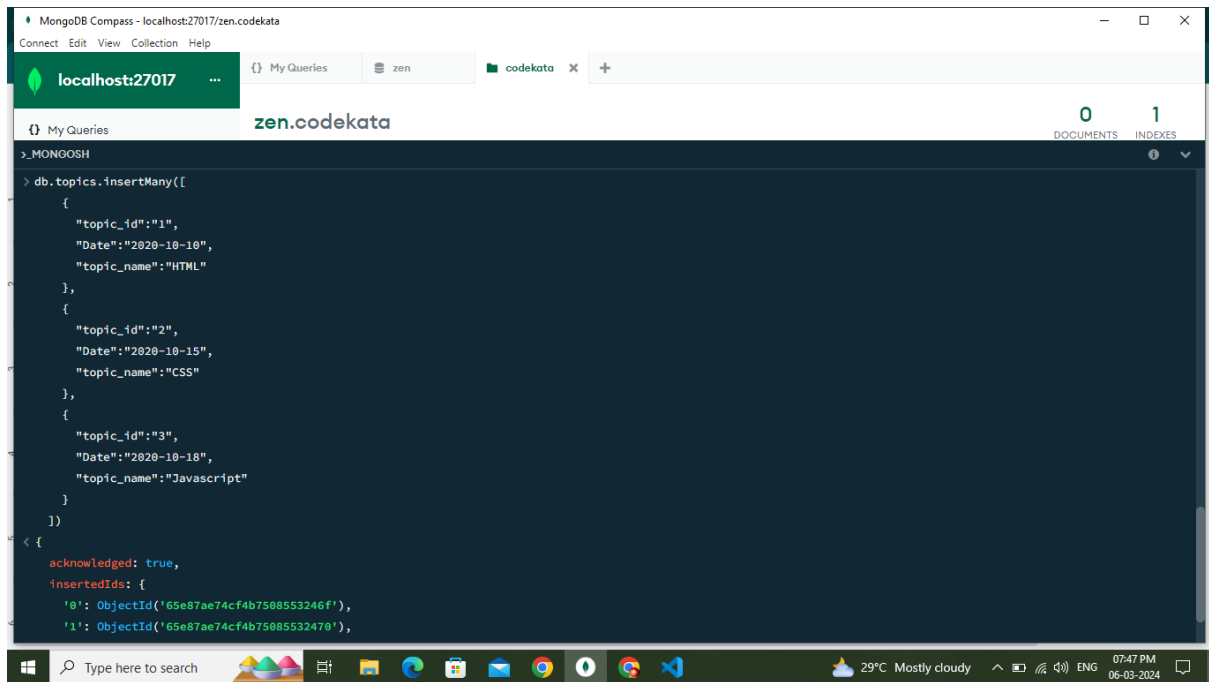
The screenshot shows the MongoDB Compass interface for the 'zen.attendance' collection. The 'My Queries' tab is active, displaying the result of the insertMany operation. The result is as follows:

```
>_MONGOSSH
{
  "User_id": "3",
  "Date": "2020-10-14",
  "Status": "Absent"
}
})
< {
  acknowledged: true,
  insertedIds: {
    '0': ObjectId('65e9f7c5a13b4a60c5d552bc'),
    '1': ObjectId('65e9f7c5a13b4a60c5d552bd'),
    '2': ObjectId('65e9f7c5a13b4a60c5d552be'),
    '3': ObjectId('65e9f7c5a13b4a60c5d552bf'),
    '4': ObjectId('65e9f7c5a13b4a60c5d552c0'),
    '5': ObjectId('65e9f7c5a13b4a60c5d552c1'),
    '6': ObjectId('65e9f7c5a13b4a60c5d552c2'),
    '7': ObjectId('65e9f7c5a13b4a60c5d552c3'),
    '8': ObjectId('65e9f7c5a13b4a60c5d552c4')
  }
}
```

The interface shows 0 documents and 1 index. The Windows taskbar at the bottom indicates the system time is 10:53 PM on 07-03-2024.

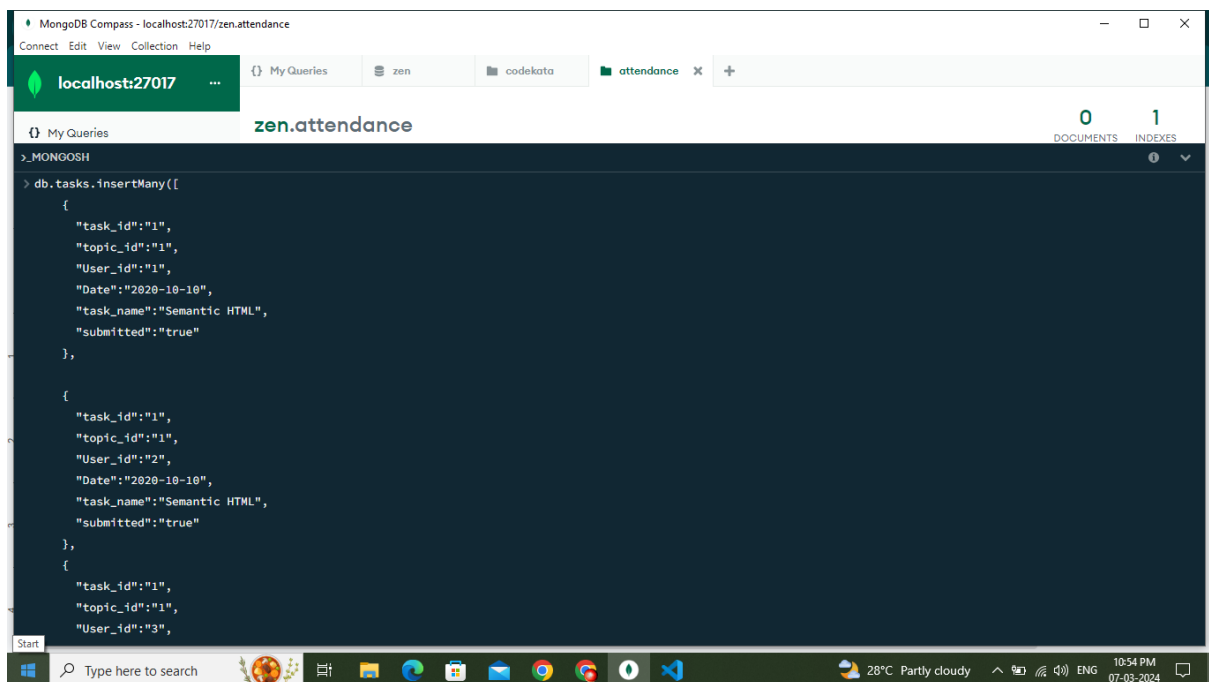
Insert data in 'topics' collection

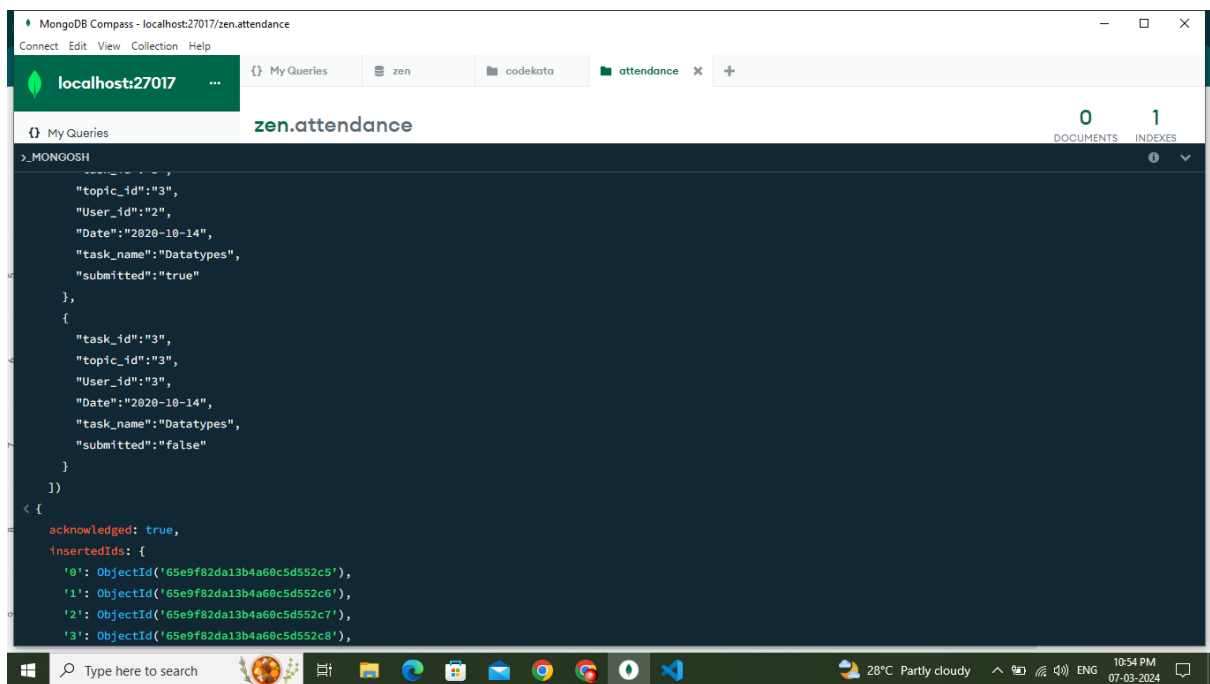
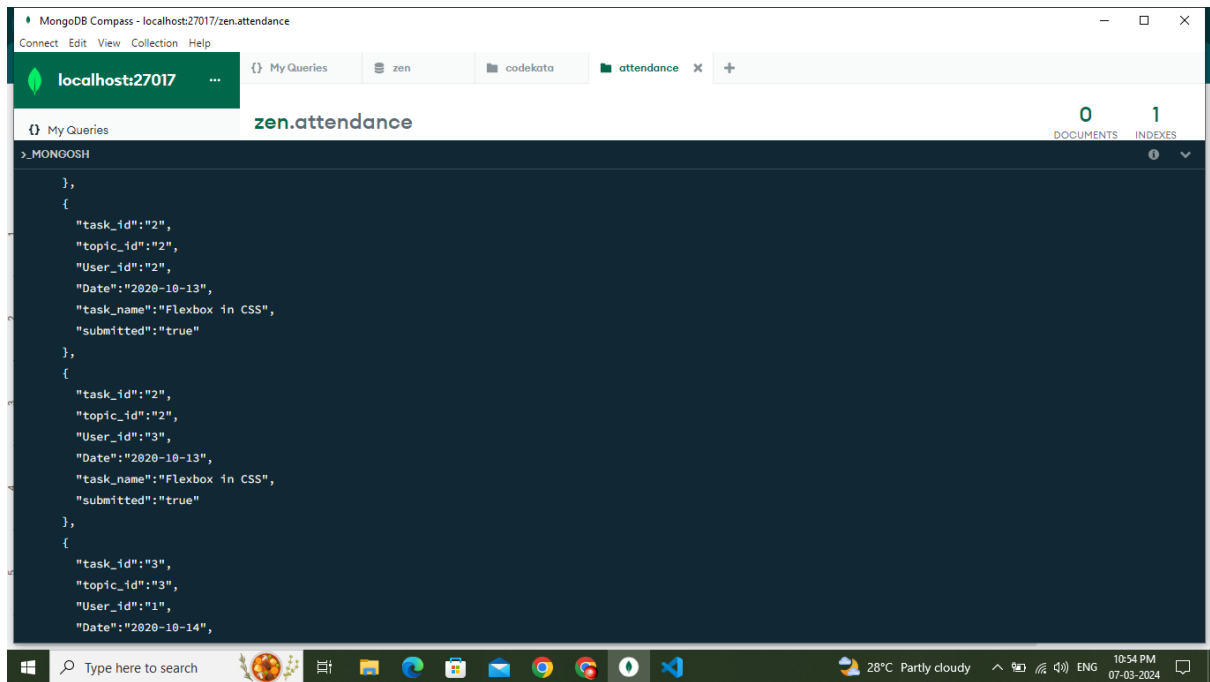
db.topics.insertMany()

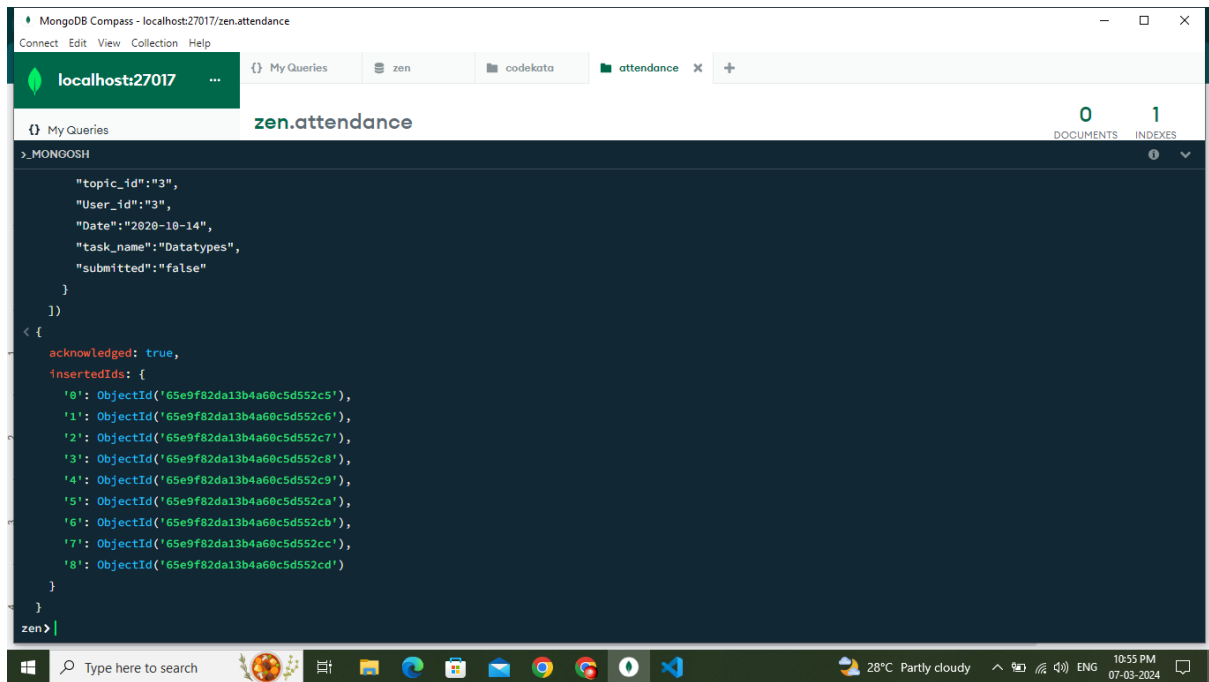


Insert data in 'tasks' collection

db.tasks.insertMany()

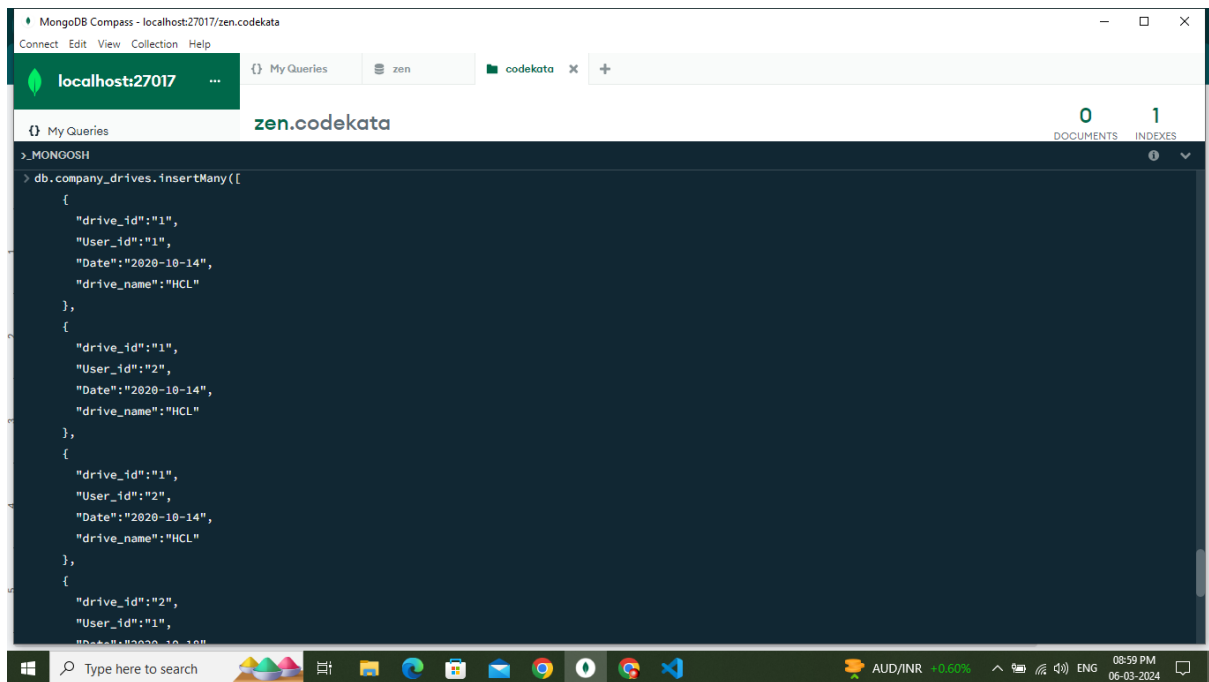


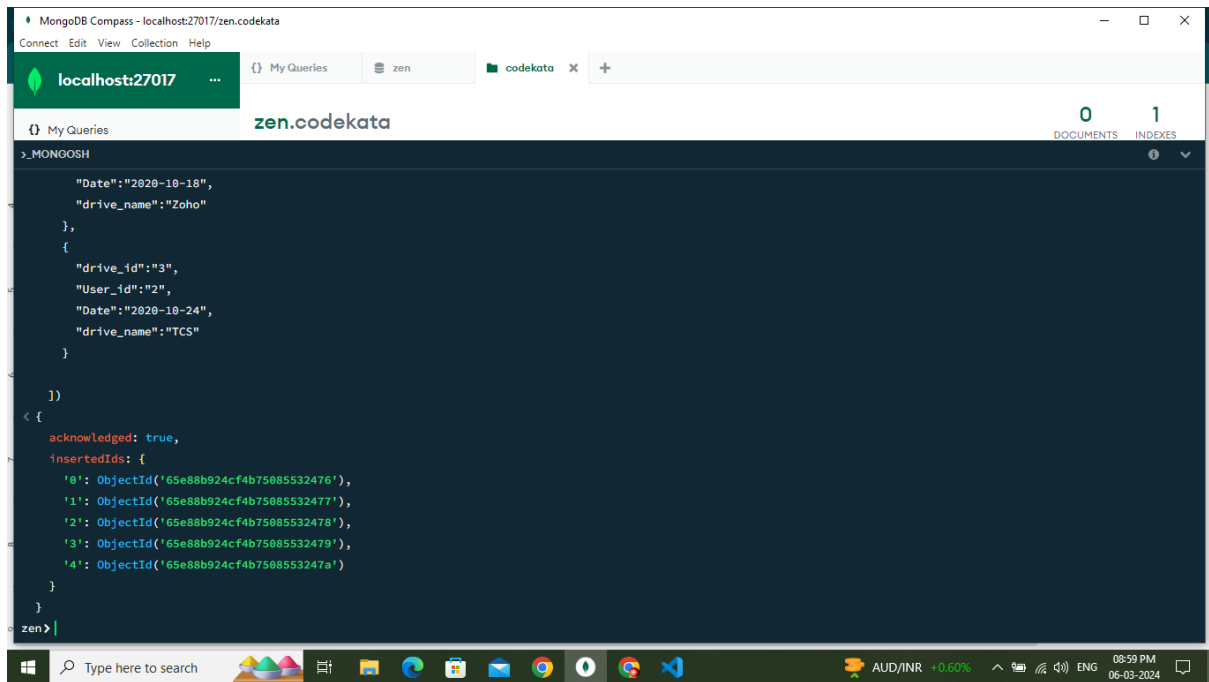




Insert data in 'company_drives' collection

db.company_drives.insertMany()



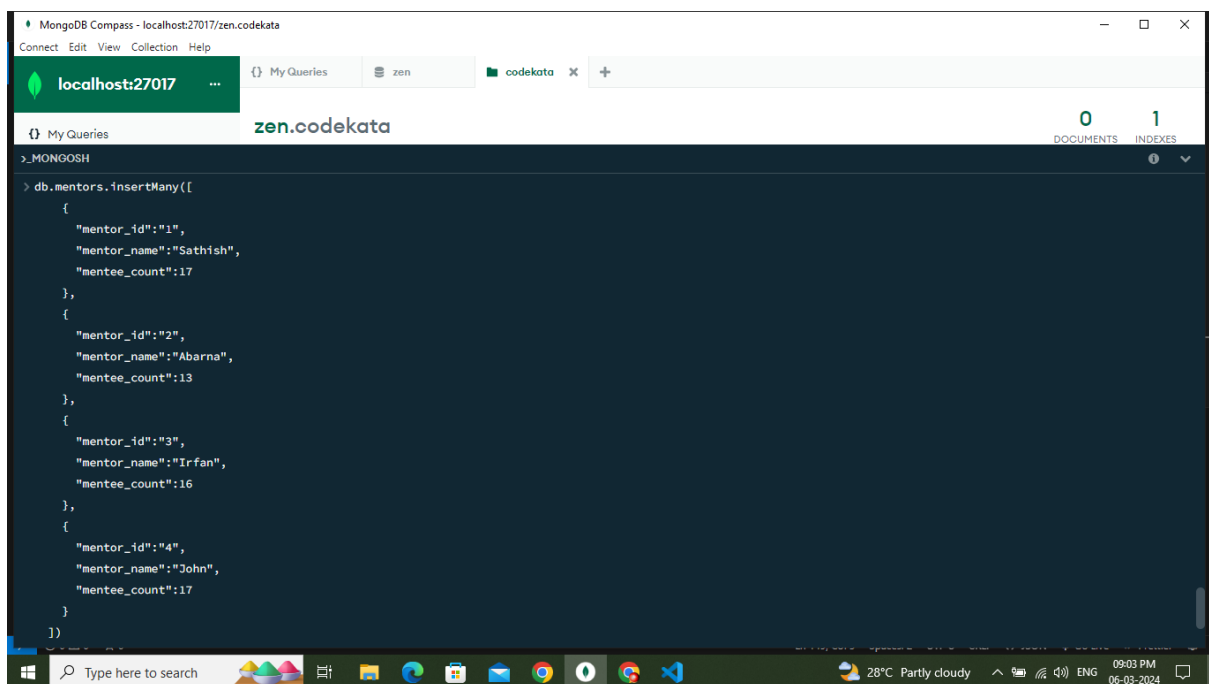


The screenshot shows the MongoDB Compass interface connected to localhost:27017. The 'zen' collection is selected, and the 'My Queries' tab is active. The command prompt shows a successful `insertMany` operation. The response indicates that 5 documents were inserted, with their respective IDs listed in the `insertedIds` field.

```
> MONGODB
{
  "Date": "2020-10-10",
  "drive_name": "Zoho"
},
{
  "drive_id": "3",
  "User_id": "2",
  "Date": "2020-10-24",
  "drive_name": "TCS"
}
})
< {
  acknowledged: true,
  insertedIds: {
    '0': ObjectId('65e88b924cf4b75085532476'),
    '1': ObjectId('65e88b924cf4b75085532477'),
    '2': ObjectId('65e88b924cf4b75085532478'),
    '3': ObjectId('65e88b924cf4b75085532479'),
    '4': ObjectId('65e88b924cf4b7508553247a')
  }
}
zen>
```

Insert data in 'mentors' collection

db.mentors.insertMany()



The screenshot shows the MongoDB Compass interface connected to localhost:27017. The 'mentors' collection is selected, and the 'My Queries' tab is active. The command prompt shows a successful `insertMany` operation. The response indicates that 4 documents were inserted, with their respective IDs listed in the `insertedIds` field.

```
> db.mentors.insertMany([
  {
    "mentor_id": "1",
    "mentor_name": "Sathish",
    "mentee_count": 17
  },
  {
    "mentor_id": "2",
    "mentor_name": "Abarna",
    "mentee_count": 13
  },
  {
    "mentor_id": "3",
    "mentor_name": "Irfan",
    "mentee_count": 16
  },
  {
    "mentor_id": "4",
    "mentor_name": "John",
    "mentee_count": 17
  }
])
```


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

```
db.createView( "octoberSession", "topics", [  
  {  
    $lookup:  
    {  
      from: "tasks",  
      localField: "topic_id",  
      foreignField: "topic_id",  
      as: "tasksDocs"  
    }  
  },  
  {  
    $project:  
    {  
      _id: 0,  
      topic_id:1,  
      task_id:"$tasksDocs.task_id",  
      Date:1,  
      topic_name:1,  
      task_name:"$tasksDocs.task_name"  
    }  
  },  
  { $unwind: "$task_id" },  
  { $unwind: "$task_name" }  
])
```

```
db.octoberSession.aggregate([{$match:{$expr:{$eq:[{$month:{$dateFrom  
mString:{dateString:"$Date", format:"%Y-%m-%d"}}},10]}}]})
```

MongoDB Compass - localhost:27017/zen.attendance

Connect Edit View Collection Help

localhost:27017 ... {} My Queries zen codekata attendance x +

My Queries zen.attendance 0 DOCUMENTS 1 INDEXES

```
> MONGOSH
> db.createView( "octoberSession", "topics", [
  {
    $lookup:
      {
        from: "tasks",
        localField: "topic_id",
        foreignField: "topic_id",
        as: "tasksDocs"
      }
    },
    {
      $project:
        {
          _id: 0,
          topic_id:1,
          task_id:"$tasksDocs.task_id",
          Date:1,
          topic_name:1,
          task_name:"$tasksDocs.task_name"
        }
      },
    { $unwind: "$task_id" },
    { $unwind: "$task_name" }
  ]
)
```

Type here to search

Near record

12:11 AM 08-03-2024

MongoDB Compass - localhost:27017/zen.attendance

Connect Edit View Collection Help

localhost:27017 ... {} My Queries zen codekata attendance x +

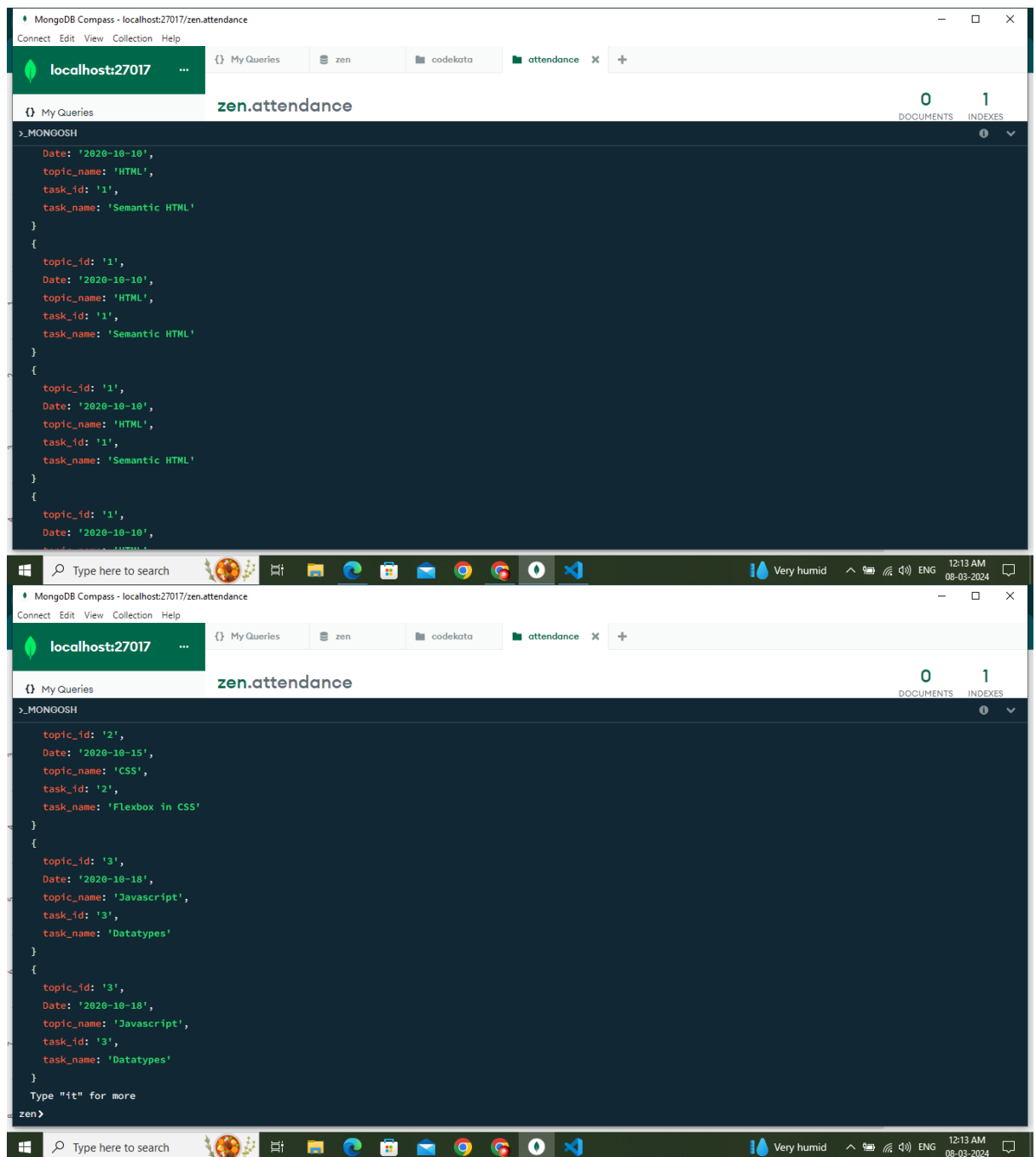
My Queries zen.attendance 0 DOCUMENTS 1 INDEXES

```
> MONGOSH
< { ok: 1 }
> db.octoberSession.aggregate([{$match:{$expr:{$eq:[$month:{$dateFromString:{dateString:"$Date", format:"%Y-%m-%d"}]},10}}]})
< {
  topic_id: '1',
  Date: '2020-10-10',
  topic_name: 'HTML',
  task_id: '1',
  task_name: 'Semantic HTML'
}
{
  topic_id: '1',
  Date: '2020-10-10',
  topic_name: 'HTML',
  task_id: '1',
  task_name: 'Semantic HTML'
}
{
  topic_id: '1',
  Date: '2020-10-10',
  topic_name: 'HTML',
  task_id: '1',
  task_name: 'Semantic HTML'
}
```

Type here to search

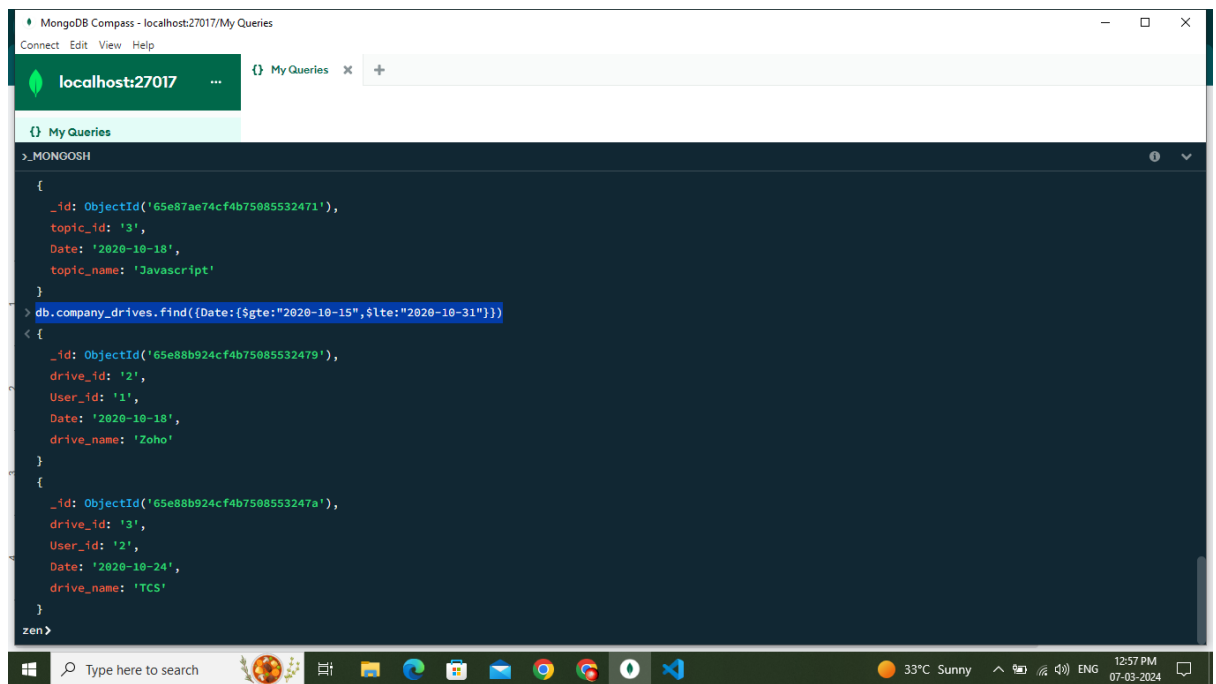
Very humid

12:13 AM 08-03-2024



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

```
db.company_drives.find({Date:{$gte:"2020-10-15",$lte:"2020-10-31"}})
```

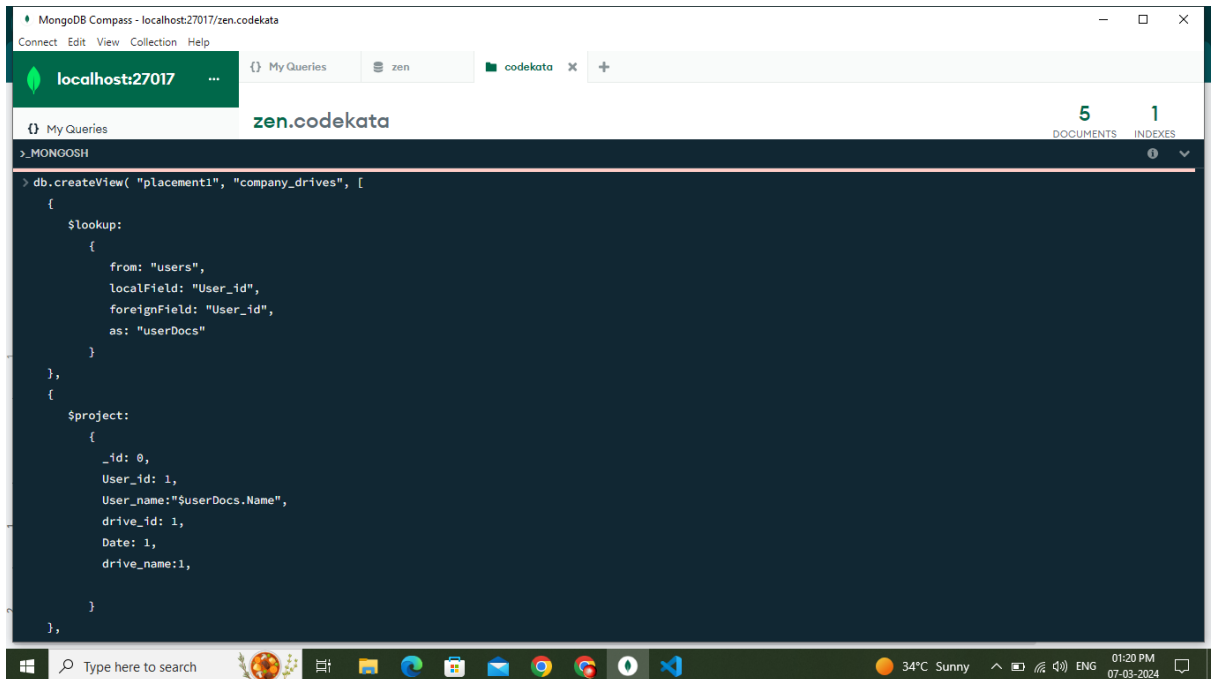


3. Find all the company drives and students who are appeared for the placement.

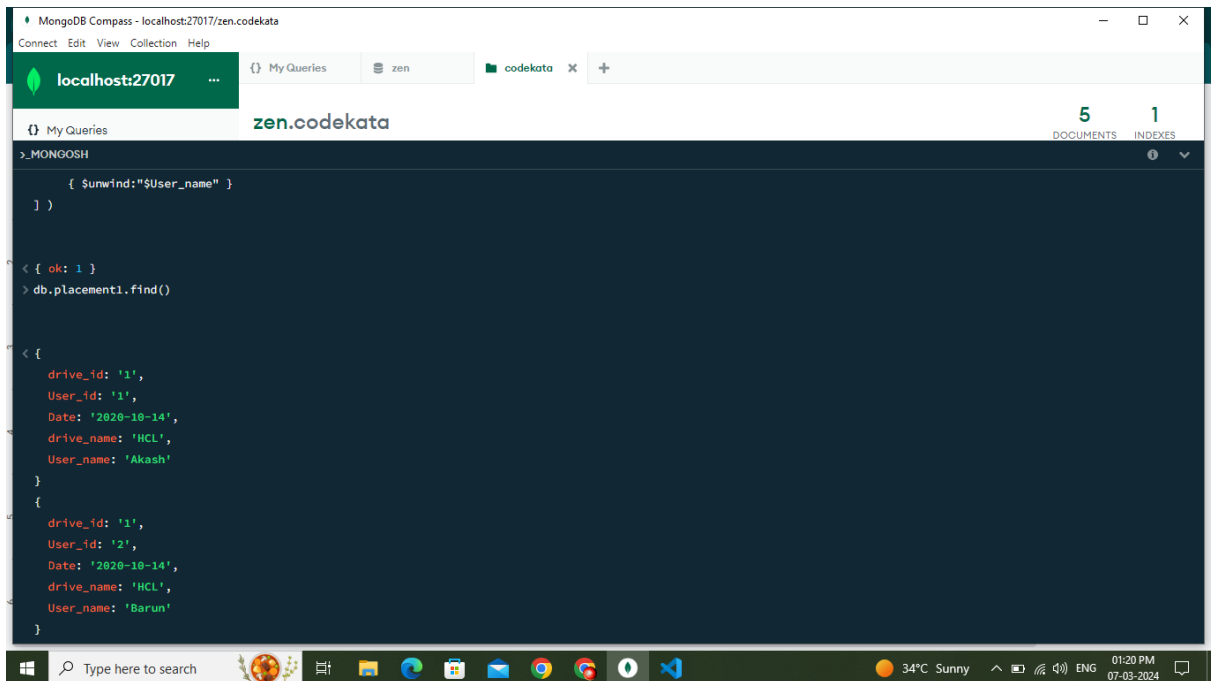
```
db.createView( "placement1", "company_drives", [
  {
    $lookup:
    {
      from: "users",
      localField: "User_id",
      foreignField: "User_id",
      as: "userDocs"
    }
  },
  {
    $project:
    {
      _id: 0,
      User_id: 1,
      User_name: "$userDocs.Name",
      drive_id: 1,
      Date: 1,
      drive_name: 1,
    }
  }
])
```

```
},  
  { $unwind:"$User_name" }  
])
```

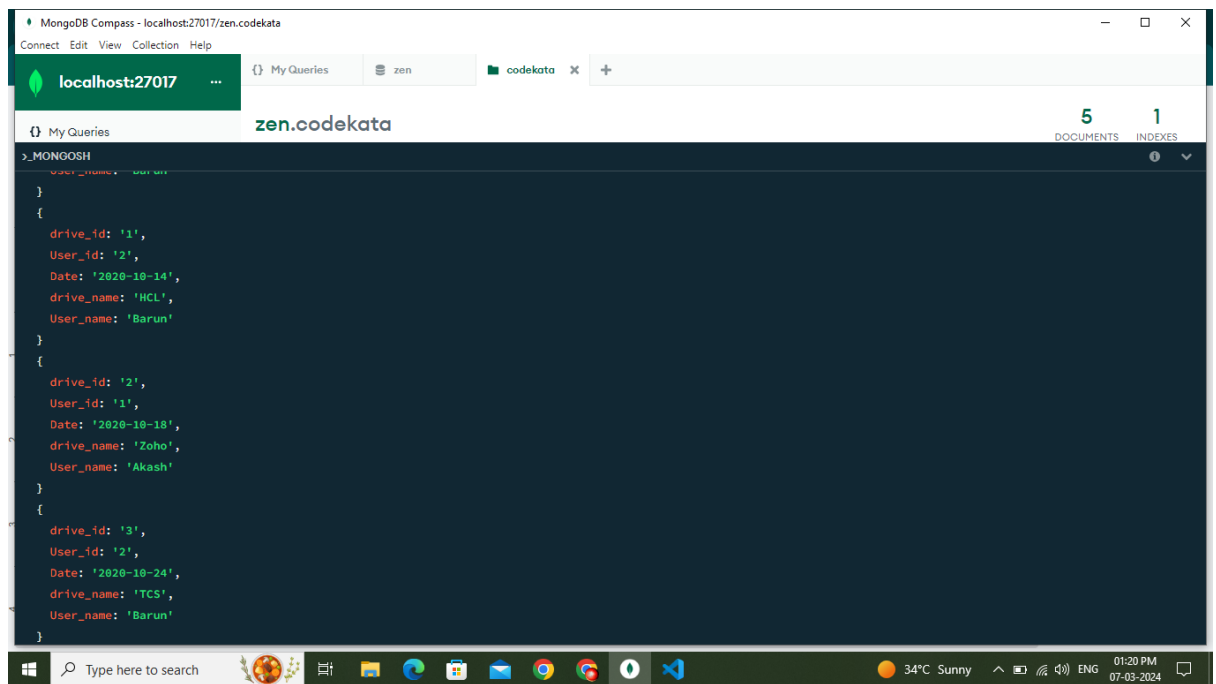
```
db.placement1.find()
```



```
MongoDB Compass - localhost:27017/zen.codekata  
Connect Edit View Collection Help  
localhost:27017 ... My Queries zen codekata +  
My Queries zen.codekata 5 DOCUMENTS 1 INDEXES  
>_MONGOSH  
> db.createView( "placement1", "company_drives", [  
  {  
    $lookup:  
    {  
      from: "users",  
      localField: "User_id",  
      foreignField: "User_id",  
      as: "userDocs"  
    }  
  },  
  {  
    $project:  
    {  
      _id: 0,  
      User_id: 1,  
      User_name: "$userDocs.Name",  
      drive_id: 1,  
      Date: 1,  
      drive_name: 1,  
    }  
  }  
],
```



```
MongoDB Compass - localhost:27017/zen.codekata  
Connect Edit View Collection Help  
localhost:27017 ... My Queries zen codekata +  
My Queries zen.codekata 5 DOCUMENTS 1 INDEXES  
>_MONGOSH  
> { $unwind:"$User_name" }  
> }  
< { ok: 1 }  
> db.placement1.find()  
  
< {  
  drive_id: '1',  
  User_id: '1',  
  Date: '2020-10-14',  
  drive_name: 'HCL',  
  User_name: 'Akash'  
}  
{  
  drive_id: '1',  
  User_id: '2',  
  Date: '2020-10-14',  
  drive_name: 'HCL',  
  User_name: 'Barun'  
}
```



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

```
db.codekata.aggregate( [
  {
    $group:
    {
      _id: "$User_id",
      totalProblemsSolved: { $sum: { $toInt: "$Problems_solved" } }
    }
  }
])
```

```

> MONGOSH
>
> db.codekata.aggregate( [
  {
    $group:
    {
      _id: "$User_id",
      totalProblemsSolved: { $sum: { $toInt: "$Problems_solved" } }
    }
  }
] )
< {
  _id: '2',
  totalProblemsSolved: 15
}
{
  _id: '1',
  totalProblemsSolved: 20
}
{
  _id: '3',
  totalProblemsSolved: 9
}

```

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

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

```

totalProblemsSolved: 9
}
}
> db.mentors.find({ mentee_count: { $gt: 15 } }).pretty()
< {
  _id: ObjectId('65e88c6e4cf4b7508553247b'),
  mentor_id: '1',
  mentor_name: 'Sathish',
  mentee_count: 17
}
{
  _id: ObjectId('65e88c6e4cf4b7508553247d'),
  mentor_id: '3',
  mentor_name: 'Irfan',
  mentee_count: 16
}
{
  _id: ObjectId('65e88c6e4cf4b7508553247e'),
  mentor_id: '4',
  mentor_name: 'John',
  mentee_count: 17
}
zen>

```

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

```
db.attendance.aggregate([
{
```

```

    $match:{
      Date:{
        $gte:"2020-10-15", $lte:"2020-10-31"
      },
      Status:"Absent"
    },
    {
      $lookup:{
        from :"tasks",
        localField:"User_id",
        foreignField:"User_id",
        as:"tasksDocs"
      },
      {
        $match:{
          "tasksDocs.submitted":"false"
        },
        {
          $group:{
            _id:null,
            count:{$sum:1 }
          }
        }
      }
    }
  }
)

```


MongoDB Compass - localhost:27017/zen

Connect Edit View Help

localhost:27017 ...

My Queries

+ Create collection Refresh

View Sort by Collection Name

Performance

> MONGOSH

```
17 |
> db.attendance.aggregate([
  {
    $match: {
      Date: {
        $gte: "2020-10-15", $lte: "2020-10-31"
      },
      Status: "Absent"
    }
  },
  {
    $lookup: {
      from: "tasks",
      localField: "User_id",
      foreignField: "User_id",
      as: "tasksDocs"
    }
  },
  {
    $match: {
      "tasksDocs.submitted": "false"
    }
  }
])
```

Type here to search

High UV

11:22 AM 08-03-2024

MongoDB Compass - localhost:27017/zen

Connect Edit View Help

localhost:27017 ...

My Queries

+ Create collection Refresh

View Sort by Collection Name

Performance

> MONGOSH

```
foreignField: "User_id",
as: "tasksDocs"
}
},
{
  $match: {
    "tasksDocs.submitted": "false"
  }
},
{
  $group: {
    _id: null,
    count: { $sum: 1 }
  }
}
})
< {
  _id: null,
  count: 2
}
zen>
```

Type here to search

32°C Mostly sunny

11:23 AM 08-03-2024