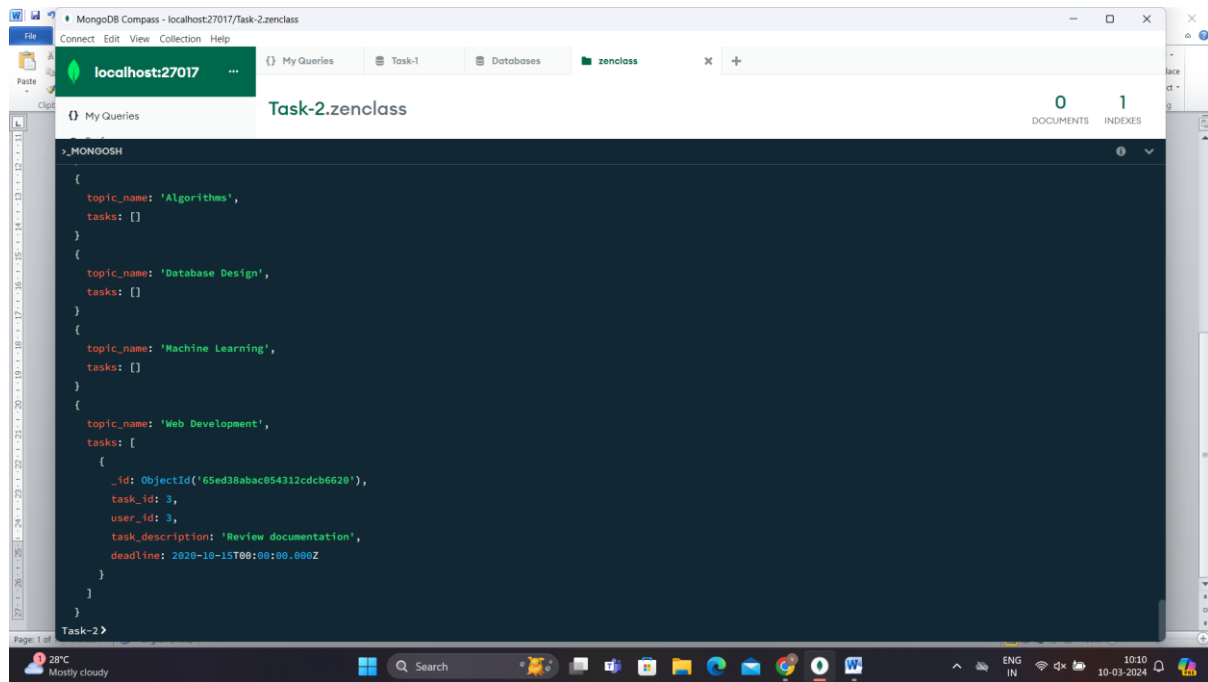


1.Find all the topics and tasks which are thought in the month of October.

Query :

```
db.topics.aggregate([
  {
    $lookup: {
      from: "tasks",
      localField: "date_taught",
      foreignField: "deadline",
      as: "tasks"
    }
  },
  {
    $match: {
      date_taught: {
        $gte: ISODate('2020-10-01'),
        $lte: ISODate('2020-10-31')
      }
    }
  },
  {
    $project: {
      _id: 0,
      topic_name: 1,
      tasks: {
        $filter: {
          input: "$tasks",
          as: "task",
          cond: { $eq: [{ $month: "$$task.deadline" }, 10] }
        }
      }
    }
  }
]);
```



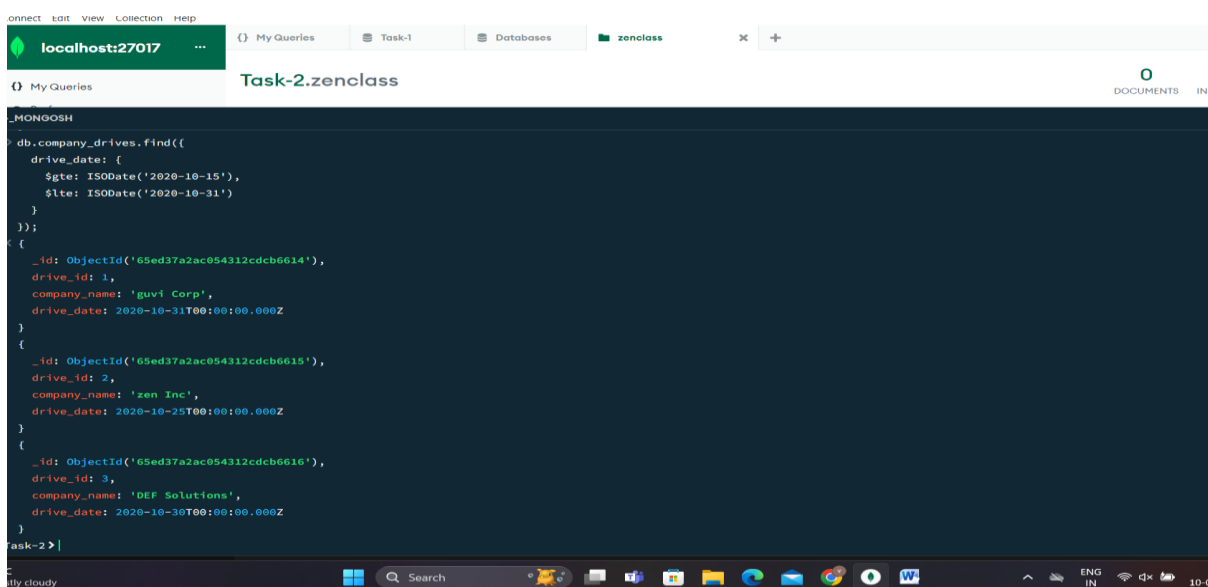
2. Find all the company drives which appeared between 15 oct-2020 and 31-oct-2020

Query :

```

db.company_drives.find({
  drive_date: {
    $gte: ISODate('2020-10-15'),
    $lte: ISODate('2020-10-31')
  }
});

```



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

Query :

```
db.company_drives.aggregate([
  {
    $lookup: {
      from: "attendance",
      localField: "drive_date",
      foreignField: "attendance_date",
      as: "attendances"
    }
  },
  {
    $unwind: "$attendances"
  },
  {
    $lookup: {
      from: "users",
      localField: "attendances.user_id",
      foreignField: "user_id",
      as: "students"
    }
  },
  {
    $project: {
      _id: 0,
      company_name: 1,
      students: "$students.user_name"
    }
  }
]);
```

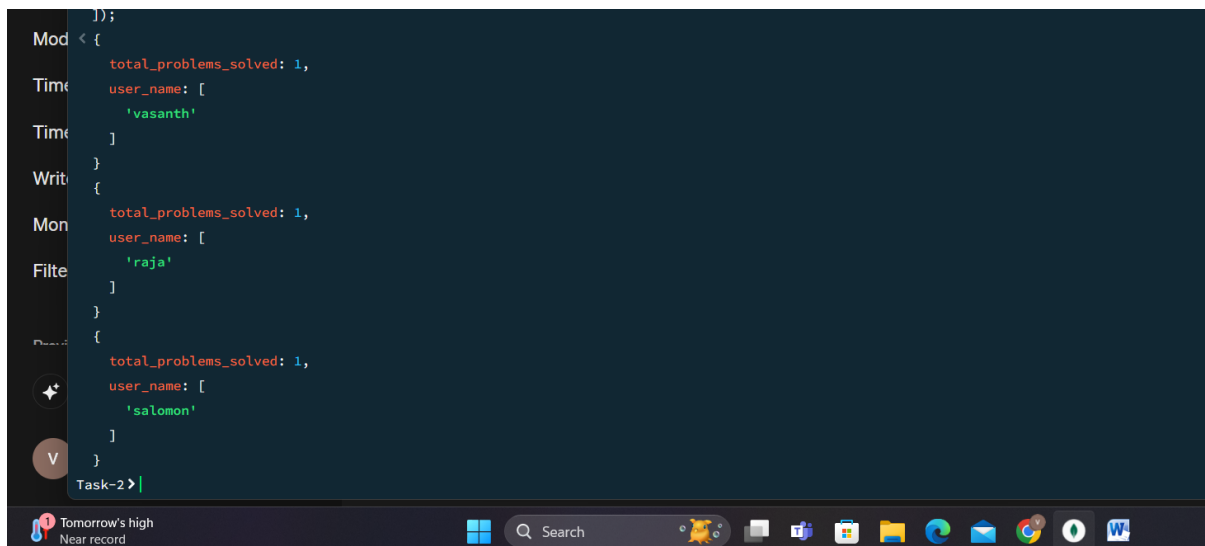
```
    foreignField: "user_id",
    as: "students"
  }
},
{
  $project: {
    _id: 0,
    company_name: 1,
    students: "$students.user_name"
  }
}
]);
< {
  company_name: 'guvi Corp',
  students: [
    'maha'
  ]
}
```

Task-2 >

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

Query :

```
db.codekata.aggregate([
  {
    $match: {
      solved: true
    }
  },
  {
    $group: {
      _id: "$user_id",
      total_problems_solved: { $sum: 1 }
    }
  },
  {
    $lookup: {
      from: "users",
      localField: "_id",
      foreignField: "user_id",
      as: "user"
    }
  },
  {
    $project: {
      _id: 0,
      user_name: "$user.user_name",
      total_problems_solved: 1
    }
  }
]);
```



The screenshot shows a terminal window with a MongoDB query result. The query is: `db.codekata.aggregate([{$match: {solved: true}}, {$group: {_id: '$user_id', total_problems_solved: {$sum: 1}}, {$lookup: {from: 'users', localField: '_id', foreignField: 'user_id', as: 'user'}, {$project: {_id: 0, user_name: '$user.user_name', total_problems_solved: 1}}]);`. The result is a JSON array with three objects, each representing a user and the number of problems solved. The users are 'vasanth', 'raja', and 'salomon', each with 1 problem solved. The terminal window has a dark background with light-colored text. The task bar at the bottom shows various icons, including the Windows logo, a search bar, and several application icons.

```
Mod < {
  total_problems_solved: 1,
  user_name: [
    'vasanth'
  ]
},
{
  total_problems_solved: 1,
  user_name: [
    'raja'
  ]
},
{
  total_problems_solved: 1,
  user_name: [
    'salomon'
  ]
}
Task-2>
```

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

Query :

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

Result:empty (no one)

6. 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([
  {
    $match: {
      attendance_status: "absent",
      task_submission_status: "not submitted",
      attendance_date: {
        $gte: ISODate("2020-10-15"),
        $lte: ISODate("2020-10-31")
      }
    }
  },
  {
    $group: {
      _id: "$user_id"
    }
  },
  {
    $group: {
      _id: null,
      count: { $sum: 1 }
    }
  }
]);
```

Results:

```
{
  _id: null,
  count: 1
}
```