

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

```
> db.topics.find({month_taught : "October"})
< {
  _id: 'topic3',
  topic: 'ReactJS Introduction',
  month_taught: 'October',
  year: 2023
}
{
  _id: 'topic4',
  topic: 'My Sql ',
  month_taught: 'October',
  year: 2023
}
{
  _id: 'topic5',
  topic: 'MongoDB ',
  month_taught: 'October',
  year: 2023
}
```

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

```
> _MONGOSH
> db.Drives.find({
  drive_date: {
    $gte: ISODate("2020-10-15T00:00:00.000Z"),
    $lte: ISODate("2020-10-31T23:59:59.999Z")
  }
}).pretty()
< {
  _id: 'drive3',
  company_name: 'TCS',
  drive_date: 2020-10-15T00:00:00.000Z,
  students_appeared: [
    'user2',
    'user4'
  ],
  result: 'not selected'
}
{
  _id: 'drive4',
  company_name: 'Accenture',
  drive_date: 2020-10-18T00:00:00.000Z,
  students_appeared: [
    'user3',
    'user5'
  ],
  result: 'selected'
}
```

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

```
> db.Drives.aggregate([
  {
    $lookup: {
      from: "users",
      localField: "students_appeared",
      foreignField: "_id",
      as: "students_details"    }}})
< {
  _id: 'drive1',
  company_name: 'Zoho Corp',
  drive_date: 2020-10-10T00:00:00.000Z,
  students_appeared: [
    'user1',
    'user3'
  ],
  result: 'not selected',
  students_details: []
}
```

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

```
> db.codekata.find()
< {
  _id: 'user1',
  name: 'abdul',
  total_solved: 20
}
{
  _id: 'user2',
  name: 'madhavan',
  total_solved: 90
}
{
  _id: 'user3',
  name: 'mukesh',
  total_solved: 74
}
{
  _id: 'user4',
  name: 'prasanna',
  total_solved: 50
}
```

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

```
> db.mentors.aggregate([
  $match: {
    $expr: { $gt: [{ $size: "$mentees" }, 15] } } ])
< {
  _id: 'mentor1',
  name: 'sathish',
  mentees: [
    '1',
    '2',
    '3',
    '4',
    '5',
    '6',
    '7',
    '8',
    '9',
    '10',
    '11',
    '12',
    '13',
    '14',
    '15',
    '16'
  ]
}
```

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

```
users> db.users.aggregate([
  $match: {
    attendance: {
      $elemMatch: {
        date: { $gte: ISODate("2020-10-15T00:00:00.000Z"), $lte: ISODate("2020-10-31T00:00:00.000Z") },
        status: "absent" }}} },{$addFields: { absentees: 1 }},{$group: { _id: null, absentees: { $sum: 1 },task_not_submitt
$sum: { $cond: { if: { $eq: [ { $size: { $filter: {input: "$tasks_submitted"as: "task",cond: { $and: [
  { $gte: ["$$task.task_date", ISODate("2020-10-15T00:00:00.000Z")] },
  { $lte: ["$$task.task_date", ISODate("2020-10-31T00:00:00.000Z")] } ] } } ], 0 } ],
    then: 1, else: 0 } } } } },{
  $project: {
    _id: 0,
    absentees: "$absentees",
    task_not_submitted: "$task_not_submitted"
  }
}
])

< {
  absentees: 5,
  task_not_submitted: 4
}
```