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

```
> db.topics.find({
      datetaught: {
          $gte: ISODate("2020-10-01T00:00:00Z"),
          $lte: ISODate("2020-10-31T23:59:59Z")
      }
  })
< {
    _id: ObjectId('66cc83e8f4cd494e3a0b5022'),
    topic_id: 'topic1',
    name: 'JavaScript Basics',
    datetaught: 2020-10-15T00:00:00.000Z
  }
  {
    _id: ObjectId('66cc83e8f4cd494e3a0b5023'),
    topic_id: 'topic2',
    name: 'MongoDB',
    datetaught: 2020-10-20T00:00:00.000Z
  }
  {
    _id: ObjectId('66cc83e8f4cd494e3a0b5024'),
    topic_id: 'topic3',
    name: 'React.js',
    datetaught: 2020-10-22T00:00:00.000Z
  }
  {
    _id: ObjectId('66cc83e8f4cd494e3a0b5025'),
    topic_id: 'topic4',
    name: 'Node.js',
    datetaught: 2020-10-24T00:00:00.000Z
  }
  {
```

```
>_MONGOSH
> db.tasks.find({
      dateassigned: {
          $gte: ISODate("2020-10-01T00:00:00Z"),
          $lte: ISODate("2020-10-31T23:59:59Z")
      }
  })
< {
    _id: ObjectId('66cc84cff4cd494e3a0b502c'),
    taskid: 'task_1',
    topic_id: 'topic1',
    dateassigned: 2020-10-15T00:00:00.000Z,
    submitted_by: [
      '1',
      '3'
    ]
  }
  {
    _id: ObjectId('66cc84cff4cd494e3a0b502d'),
    taskid: 'task_2',
    topic_id: 'topic2',
    dateassigned: 2020-10-20T00:00:00.000Z,
    submitted_by: [
      '1',
      '5'
    ]
  }
  {
    _id: ObjectId('66cc84cff4cd494e3a0b502e'),
    taskid: 'task_3',
    topic_id: 'topic3',
    dateassigned: 2020-10-22T00:00:00.000Z,
    submitted_by: [
```

```
> db.topics.find({
      datetaught: {
          $gte: ISODate("2020-10-01T00:00:00Z"),
          $lte: ISODate("2020-10-31T23:59:59Z")
      }
  }).count()
< 5
> db.tasks.find({
      dateassigned: {
          $gte: ISODate("2020-10-01T00:00:00Z"),
          $lte: ISODate("2020-10-31T23:59:59Z")
      }
  }).count()
< 5
test>
```

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

```
>_MONGOSH
> db.company_drives.find({}, {
      driveid: 1,
      company_name: 1,
      date: 1,
      studentsappeared: 1
  })
< {
    _id: ObjectId('66cc853ff4cd494e3a0b5031'),
    driveid: 'drive1',
    company_name: 'Google',
    date: 2020-10-25T00:00:00.000Z,
    studentsappeared: [
      '1',
      '5'
    ]
  }
  {
    _id: ObjectId('66cc853ff4cd494e3a0b5032'),
    driveid: 'drive2',
    company_name: 'Zoho',
    date: 2020-10-30T00:00:00.000Z,
    studentsappeared: [
      '1',
      '4'
    ]
  }
  {
    _id: ObjectId('66cc853ff4cd494e3a0b5033'),
    driveid: 'drive3',
    company_name: 'Amazon',
    date: 2020-10-29T00:00:00.000Z,
```

```
> db.company_drives.find({}, {
      driveid: 1,
      company_name: 1,
      date: 1,
      studentsappeared: 1
  }).count()
< 5
test>
```

Find the number of problems solved by the user in codekata

```
> db.codekata.find({}, { userid: 1, problemssolved: 1 })
< {
    _id: ObjectId('66cc8226f4cd494e3a0b5010'),
    userid: '1',
    problemssolved: 120
  }
  {
    _id: ObjectId('66cc8226f4cd494e3a0b5011'),
    userid: '2',
    problemssolved: 80
  }
  {
    _id: ObjectId('66cc8226f4cd494e3a0b5012'),
    userid: '3',
    problemssolved: 95
  }
  {
    _id: ObjectId('66cc8226f4cd494e3a0b5013'),
    userid: '4',
    problemssolved: 60
  }
  {
    _id: ObjectId('66cc8226f4cd494e3a0b5014'),
    userid: '5',
    problemssolved: 150
  }
test>
```

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

```
> db.mentors.find({
      $where: "this.menteeid.length > 15"
  })
<
test>
```

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

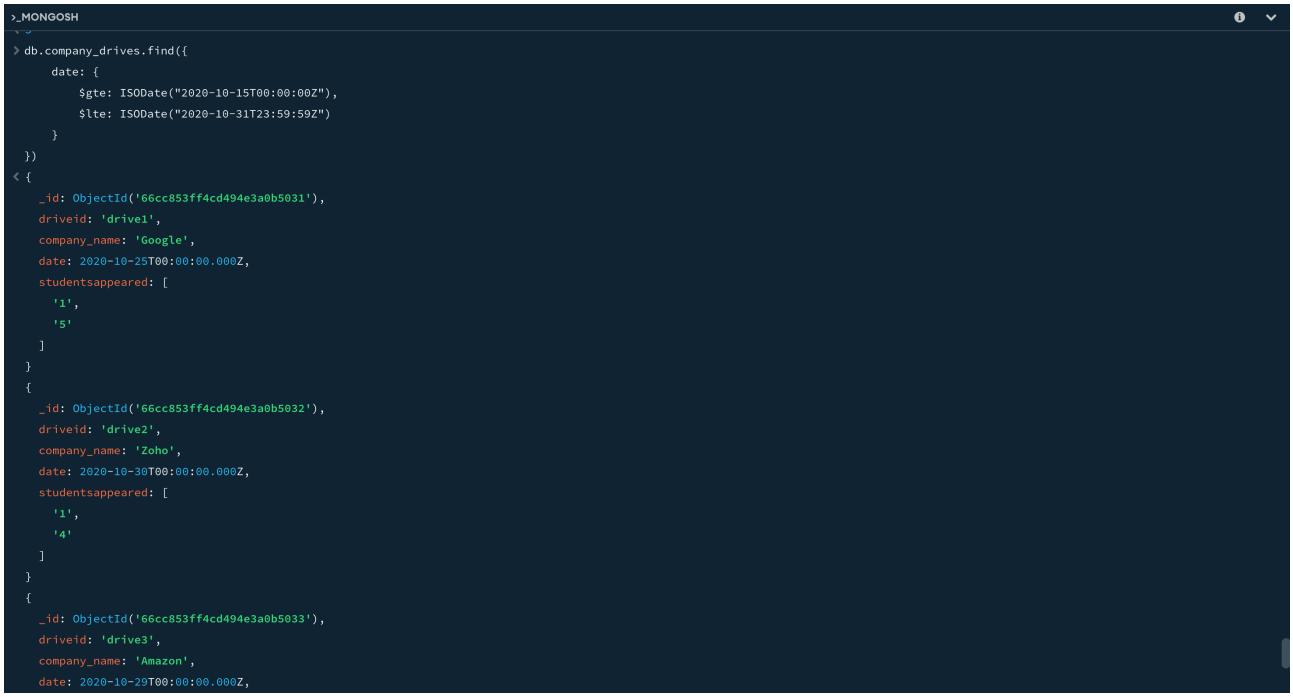
```
< [ '3', '2' ]
> db.tasks.aggregate([
    {
      $match: {
        dateassigned: { $gte: ISODate("2020-10-15"), $lte: ISODate("2020-10-31") }
      }
    },
    {
      $unwind: "$submitted_by"
    },
    {
      $group: {
        _id: "$submitted_by"
      }
    }
  ]).toArray().map(doc => doc._id);
< [ '1', '3', '5', '2', '4' ]
test>
```

```
>  db.attendance.aggregate([
    {
      $match: {
        date: { $gte: ISODate("2020-10-15"), $lte: ISODate("2020-10-31") },
        status: "absent"
      }
    },
    {
      $group: {
        _id: "$userid"
      }
    }
  ]).toArray().map(doc => doc._id);
< [ '3', '2' ]
test>
```

```
> const absentUsers = db.attendance.aggregate([
    {
      $match: {
        date: { $gte: ISODate("2020-10-15"), $lte: ISODate("2020-10-31") },
        status: "absent"
      }
    },
    {
      $group: {
        _id: "$userid"
      }
    }
  ]).toArray().map(doc => doc._id);
> const submittedUsers = db.tasks.aggregate([
    {
      $match: {
        dateassigned: { $gte: ISODate("2020-10-15"), $lte: ISODate("2020-10-31") }
      }
    },
    {
      $unwind: "$submitted_by"
    },
    {
      $group: {
        _id: "$submitted_by"
      }
    }
  ]).toArray().map(doc => doc._id);
> const absentAndNotSubmitted = absentUsers.filter(user => !submittedUsers.includes(user));

  print("Number of users who are absent and did not submit tasks: " + absentAndNotSubmitted.length);
< Number of users who are absent and did not submit tasks: 0
test>
```

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



```
>_MONGOSH
> db.company_drives.find({
    date: {
      $gte: ISODate("2020-10-15T00:00:00Z"),
      $lte: ISODate("2020-10-31T23:59:59Z")
    }
  })
< {
    _id: ObjectId('66cc853ff4cd494e3a0b5031'),
    driveid: 'drive1',
    company_name: 'Google',
    date: 2020-10-25T00:00:00.000Z,
    studentsappeared: [
      '1',
      '5'
    ]
  }
  {
    _id: ObjectId('66cc853ff4cd494e3a0b5032'),
    driveid: 'drive2',
    company_name: 'Zoho',
    date: 2020-10-30T00:00:00.000Z,
    studentsappeared: [
      '1',
      '4'
    ]
  }
  {
    _id: ObjectId('66cc853ff4cd494e3a0b5033'),
    driveid: 'drive3',
    company_name: 'Amazon',
    date: 2020-10-29T00:00:00.000Z,
```

```
> db.company_drives.find({
    date: {
      $gte: ISODate("2020-10-15T00:00:00Z"),
      $lte: ISODate("2020-10-31T23:59:59Z")
    }
  }).count();
< 5
test>
```