

users

```
db.users.find();
{
  _id: ObjectId('67348edc5bab9a8867c0c01c'),
  Name: 'John joe',
  Email: 'johnjoe@example.com',
  codekata_problem_solved: 50,
  attendance: [
    {
      date: '202-10-15',
      status: 'Present'
    },
    {
      date: '2023-10-16',
      status: 'Absent'
    }
  ]
}
```

codekata

```
db.codekata.find();
{
  _id: ObjectId('673594ad442686e720821982'),
  user_id: ObjectId('67359402442686e720821981'),
  problems_solved: 20
}
```

topics

```
db.topics.find();
{
  _id: ObjectId('673594ad442686e720821982'),
  title: 'Introduction to MongoDB',
  date: '2023-10-15'
}
```

tasks

```
db.Tasks.find();

{
  _id: ObjectId('6735a9ea442686e720821986'),
  title: 'MongoDB Basics',
  date: '2023-10-15',
  submitted_by: [
    ObjectId('673594ad442686e720821982')
  ]
}
```

company_drives

```
db.company_drives.find();

{
  _id: ObjectId('6735aa69442686e720821987'),
  company_name: 'Tech Corp',
  date: '2020-10-20',
  appeared_students: [
    ObjectId('6735a9ea442686e720821986')
  ]
}
```

mentors

```
db.mentors.find();

{
  _id: ObjectId('6735ab73442686e720821988'),
  name: 'Mentor Name',
  mentees: [
    ObjectId('6735a9ea442686e720821986'),
    ObjectId('6735aa69442686e720821987')
  ],
  mentee_count: 20
}
```

Queries:

Find all topics and tasks taught in October

```
db.topics.find({ "date": { $gte: ISODate("2023-10-01"), $lte:
ISODate("2023-10-31") } });
db.tasks.find({ "date": { $gte: ISODate("2023-10-01"), $lte:
ISODate("2023-10-31") } });
```

Result:

```
{
  _id: ObjectId('6735e95f442686e72082198d'),
  title: 'JavaScript Practice',
  date: 2023-10-07T00:00:00.000Z
}

{
  _id: ObjectId('6735e95f442686e72082198e'),
  title: 'Build API with Node.js',
  date: 2023-10-15T00:00:00.000Z
}

{
  _id: ObjectId('6735e95f442686e72082198f'),
  title: 'MongoDB Query Task',
  date: 2023-10-25T00:00:00.000Z
}
```

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

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

Result:

```
{
  _id: ObjectId('6735ea59442686e720821991'),
  company_name: 'TechCorp',
  date: 2020-10-16T00:00:00.000Z,
  location: 'New York'
}
```

```
{
  _id: ObjectId('6735ea59442686e720821992'),
  company_name: 'InnoSoft',
  date: 2020-10-20T00:00:00.000Z,
  location: 'San Francisco'
}
```

```
{
  _id: ObjectId('6735ea59442686e720821993'),
  company_name: 'DataWorks',
  date: 2020-10-25T00:00:00.000Z,
  location: 'Chicago'
}
```

```
{
  _id: ObjectId('6735ea59442686e720821994'),
  company_name: 'NetSolutions',
  date: 2020-10-30T00:00:00.000Z,
  location: 'Los Angeles'
}
```

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

```
db.company_drives.aggregate([
  { $lookup: {
    from: "users",
    localField: "appeared_students",
    foreignField: "_id",
    as: "students"
  }}
]);
```

Result:

```
{
  _id: ObjectId('6735aa69442686e720821987'),
  company_name: 'Tech Corp',
  date: '2020-10-20',
  appeared_students: [
```

```
    ObjectId('6735a9ea442686e720821986')
  ],
  students: []
}

{
  _id: ObjectId('6735ea59442686e720821991'),
  company_name: 'TechCorp',
  date: 2020-10-16T00:00:00.000Z,
  location: 'New York',
  students: []
}

{
  _id: ObjectId('6735ea59442686e720821992'),
  company_name: 'InnoSoft',
  date: 2020-10-20T00:00:00.000Z,
  location: 'San Francisco',
  students: []
}

{
  _id: ObjectId('6735ea59442686e720821993'),
  company_name: 'DataWorks',
  date: 2020-10-25T00:00:00.000Z,
  location: 'Chicago',
  students: []
}

{
  _id: ObjectId('6735ea59442686e720821994'),
  company_name: 'NetSolutions',
  date: 2020-10-30T00:00:00.000Z,
  location: 'Los Angeles',
  students: []
}

{
  _id: ObjectId('6735ea59442686e720821995'),
```

```

    company_name: 'FutureTech',
    date: 2020-11-05T00:00:00.000Z,
    location: 'Boston',
    students: []
}

{
  _id: ObjectId('6735ebdb442686e720821996'),
  company_name: 'TechCorp',
  date: 2020-10-16T00:00:00.000Z,
  location: 'New York',
  appeared_students: [
    ObjectId('5f8d0d55b54764421b7156b1'),
    ObjectId('5f8d0d55b54764421b7156b2')
  ],
  students: [
    {
      _id: ObjectId('5f8d0d55b54764421b7156b2'),
      name: 'Bob',
      status: 'student'
    },
    {
      _id: ObjectId('5f8d0d55b54764421b7156b1'),
      name: 'Alice',
      status: 'student'
    }
  ]
}

{
  _id: ObjectId('6735ebdb442686e720821997'),
  company_name: 'InnoSoft',
  date: 2020-10-20T00:00:00.000Z,
  location: 'San Francisco',
  appeared_students: [
    ObjectId('5f8d0d55b54764421b7156b2'),
    ObjectId('5f8d0d55b54764421b7156b3')
  ],
  students: [

```

```

    {
      _id: ObjectId('5f8d0d55b54764421b7156b3'),
      name: 'Charlie',
      status: 'student'
    },
    {
      _id: ObjectId('5f8d0d55b54764421b7156b2'),
      name: 'Bob',
      status: 'student'
    }
  ]
}

## Find the number of problems solved by the user in codekata

db.users.find({}, { name: 1, codekata_problems_solved: 1 });

# Result:
{
  _id: ObjectId('5f8d0d55b54764421b7156b1'),
  name: 'Alice'
}

{
  _id: ObjectId('5f8d0d55b54764421b7156b2'),
  name: 'Bob'
}

{
  _id: ObjectId('5f8d0d55b54764421b7156b3'),
  name: 'Charlie'
}

## Find mentors with more than 15 mentees

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

# Result:
{
  _id: ObjectId('6735ab73442686e720821988'),

```

```

    name: 'Mentor Name',
    mentees: [
      ObjectId('6735a9ea442686e720821986'),
      ObjectId('6735aa69442686e720821987')
    ],
    mentee_count: 20
  }
}

```

Find users absent and with tasks not submitted between 15 Oct 2020 and 31 Oct 2020

```

db.attendance.aggregate([
  { $match: { "date": { $gte: ISODate("2020-10-15"), $lte:
ISODate("2020-10-31") }, "status": "Absent" } },
  { $lookup: {
    from: "tasks",
    localField: "user_id",
    foreignField: "submitted_by",
    as: "tasks"
  }},
  { $match: { "tasks.submitted": false } }
]);

```

Result:

```

{
  _id: ObjectId('5f8d0d55b54764421b7156a1'),
  user_id: ObjectId('5f8d0d55b54764421b7156b1'),
  date: 2020-10-16T00:00:00.000Z,
  status: 'Absent',
  tasks: [
    {
      _id: ObjectId('6f8d0d55b54764421b7156c1'),
      submitted_by: ObjectId('5f8d0d55b54764421b7156b1'),
      submitted: false
    }
  ]
}

{
  _id: ObjectId('5f8d0d55b54764421b7156a2'),

```



```
user_id: ObjectId('5f8d0d55b54764421b7156b2'),
date: 2020-10-20T00:00:00.000Z,
status: 'Absent',
tasks: [
  {
    _id: ObjectId('6f8d0d55b54764421b7156c2'),
    submitted_by: ObjectId('5f8d0d55b54764421b7156b2'),
    submitted: false
  }
]
```