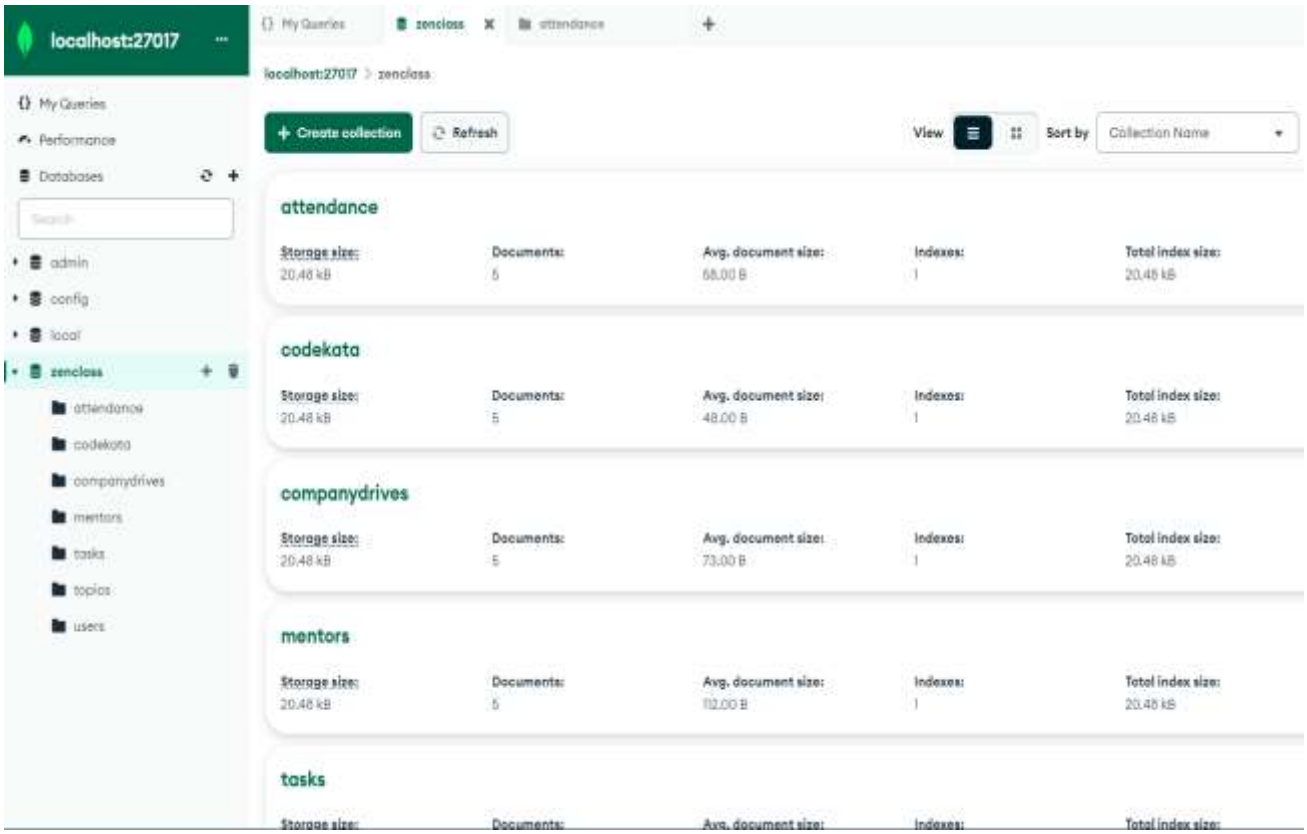
CREATED DATABASE



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

Solution :

```
db.topics.aggregate([

{

$lookup: {

from: "tasks",

localField: "topicid",

foreignField: "topicid",
```

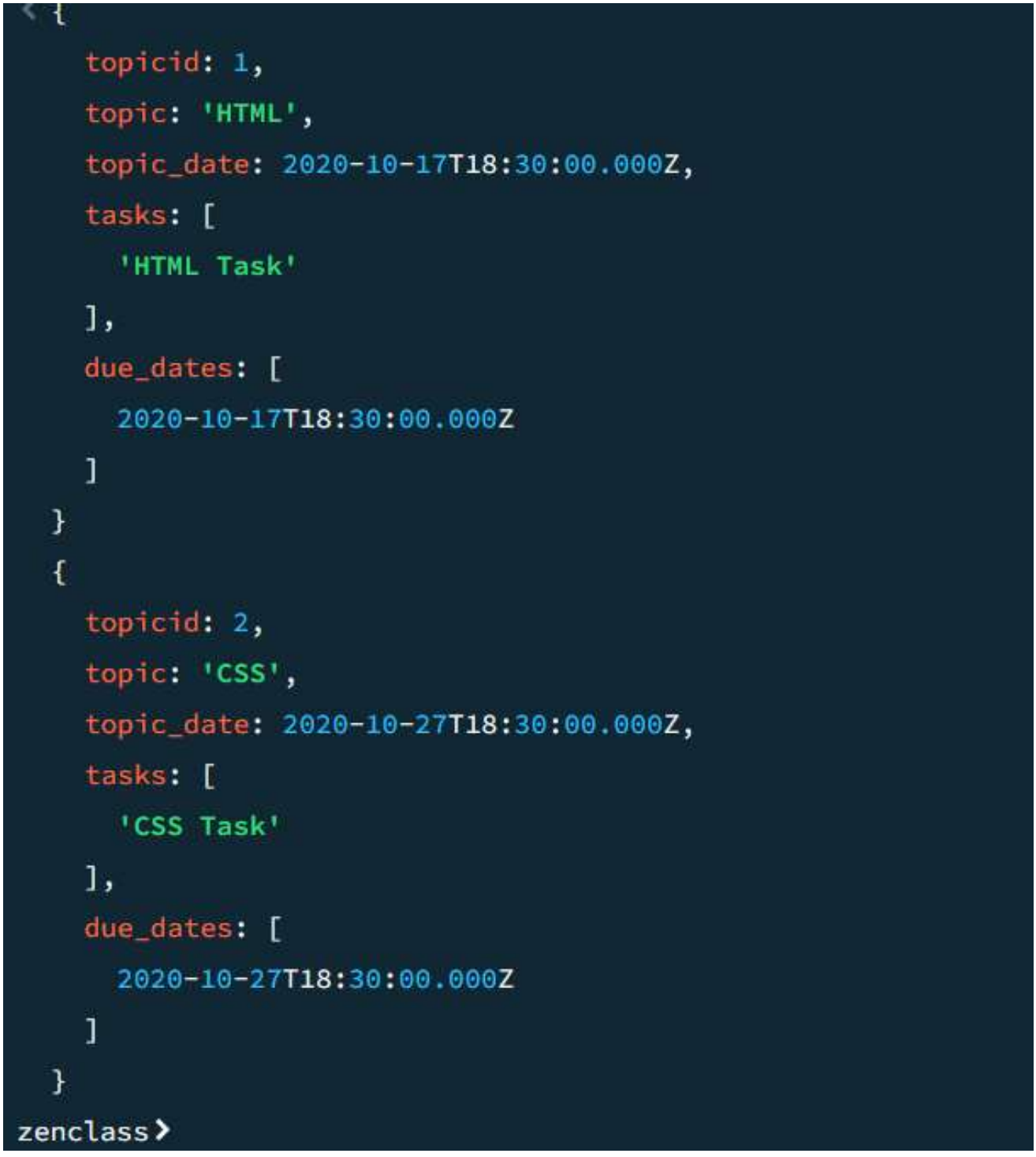
```
as: "taskinfo"

}

},

{

$match: {

$and: [

{ topic_date: { $gte: new Date("2020-10-01"), $lt: new Date("2020-11-01") } },

{

$or: [

{ "taskinfo.due_date": { $gte: new Date("2020-10-01"), $lt: new Date("2020-11-
01") } },

{ "taskinfo.due_date": { $exists: false } }

]

}

]

}

},

{

$project: {

_id: 0,

topicid: 1,

topic: 1,

topic_date: 1,

tasks: "$taskinfo.task",
```

due_dates: "$taskinfo.due_date"

}

}

])



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

Solution :

db.companydrives.find({

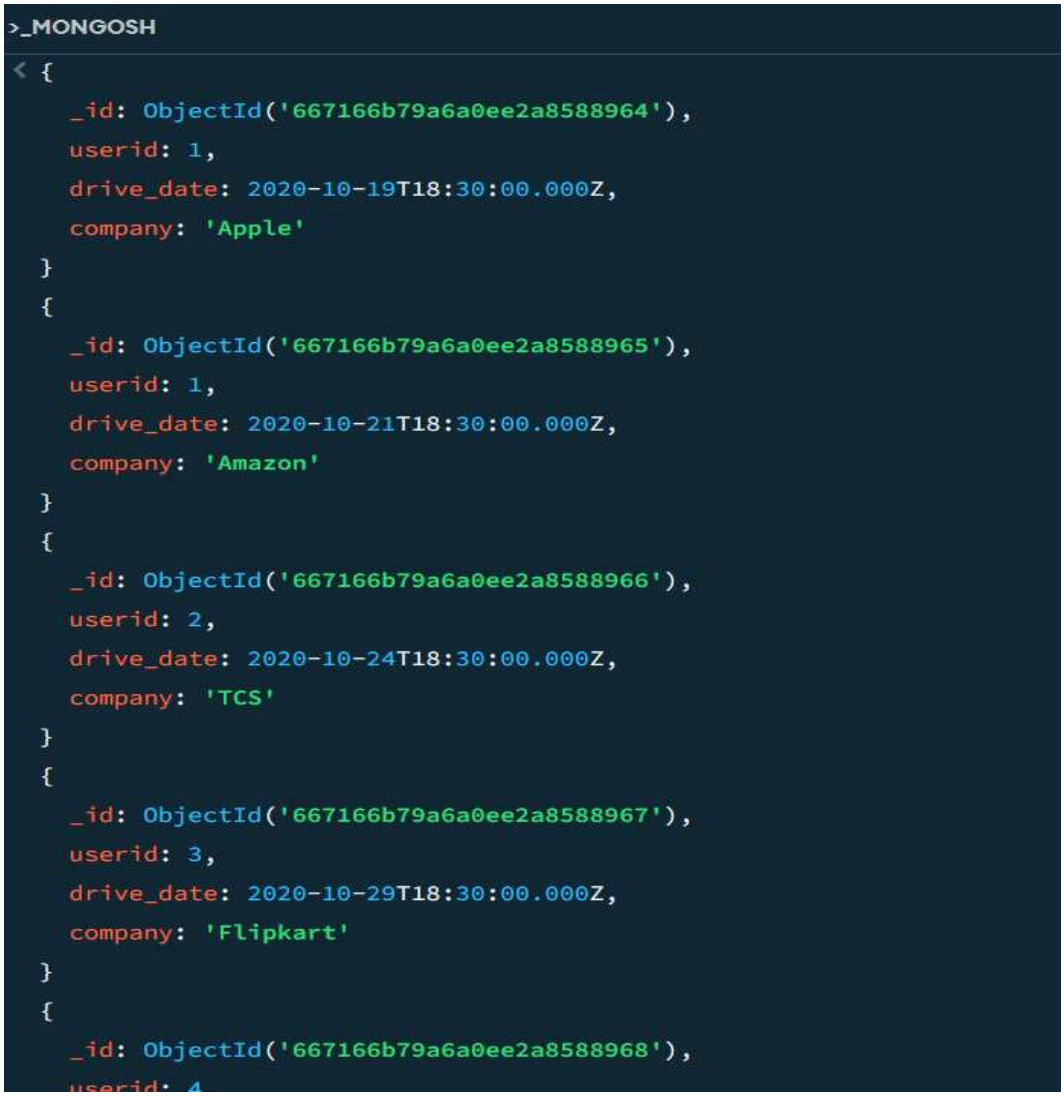
$or: [

{ drive_date: { $gte: new Date("15-oct-2020") } },

{ drive_date: { $lte: new Date("31-oct-2020") } }

]

})



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

Solution :

```
db.companydrives.aggregate([

{

$lookup: {

from: "users",

localField: "userid",

foreignField: "userid",

as: "userinfo"

}

},

{

$project: {

_id: 0,

company: 1,

drive_date: 1,

students: "$userinfo"

}

} ])
```

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

Solution :

db.codekata.aggregate([

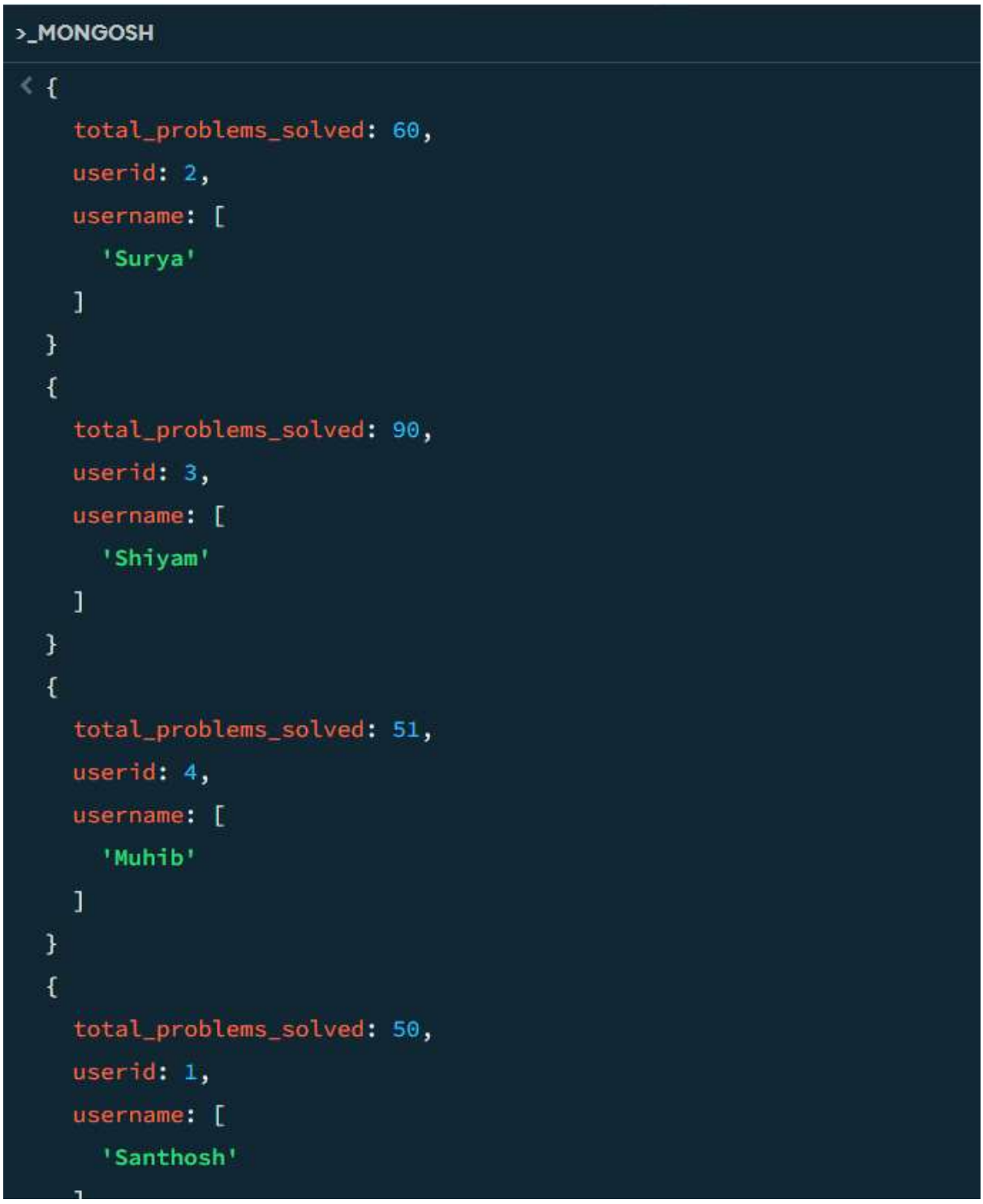
{

$lookup: {

from: "users",

localField: "userid",

```
foreignField: "userid",
as: "userinfo"
}
},
{
$group: {
_id: {
userid: "$userid",
},
total_problems_solved: { $sum: "$problems" }
}
},
{
$project: {
_id: 0,
userid: "$_id.userid",
username: "$_id.username",
total_problems_solved: 1
}
}
])
```



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

Solution :

```
db.users.aggregate([
{
$match: { mentorid: { $exists: true } }
},
{
$group: {
_id: "$mentorid",
mentorname: { $first: "$mentorname" },
mentee_count: { $sum: 1 }
}
},
{
$match: { mentee_count: { $gt: 15 } }
},
{
$project: {
_id: 0,
mentorid: "$_id",
mentorname: 1,
mentee_count: 1
}
}
])
```

```
>_MONGOSH
> db.getCollection('mentors').find({mentee_count:{$gt:15}})
< {
    _id: ObjectId('667166e09a6a0ee2a8588969'),
    mentorid: 1,
    mentorname: 'Rupan',
    mentor_email: 'rupan@gmail.com',
    mentee_count: 20
  }
  {
    _id: ObjectId('667166e09a6a0ee2a858896a'),
    mentorid: 2,
    mentorname: 'Nagaraj',
    mentor_email: 'nagaraj@gmail.com',
    mentee_count: 18
  }
  {
    _id: ObjectId('667166e09a6a0ee2a858896b'),
    mentorid: 3,
    mentorname: 'Krishna',
    mentor_email: 'krishna@gmail.com',
    mentee_count: 30
  }
  {
    _id: ObjectId('667166e09a6a0ee2a858896d'),
    mentorid: 5,
    mentorname: 'Manoj',
    mentor_email: 'manoj@gmail.com'
```

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

Solution:

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

```
    $lookup: {
        from: "topics",
        localField: "topicid",
        foreignField: "topicid",
        as: "topics"
    }
},
{
    $lookup: {
        from: "tasks",
        localField: "topicid",
        foreignField: "topicid",
        as: "tasks"
    }
},
{
    $match: {
        attended: false,
        "tasks.submitted": false,
        $and: [
            { "topics.topic_date": { $gte: new Date("15-oct-2020") } },
            { "topics.topic_date": { $lte: new Date("31-oct-2020") } },
            { "tasks.due_date": { $gte: new Date("15-oct-2020") } },
            { "tasks.due_date": { $lte: new Date("31-oct-2020") } }
        ]
```

```
    }
},
{$count: "No_of_students_absent"}])
```