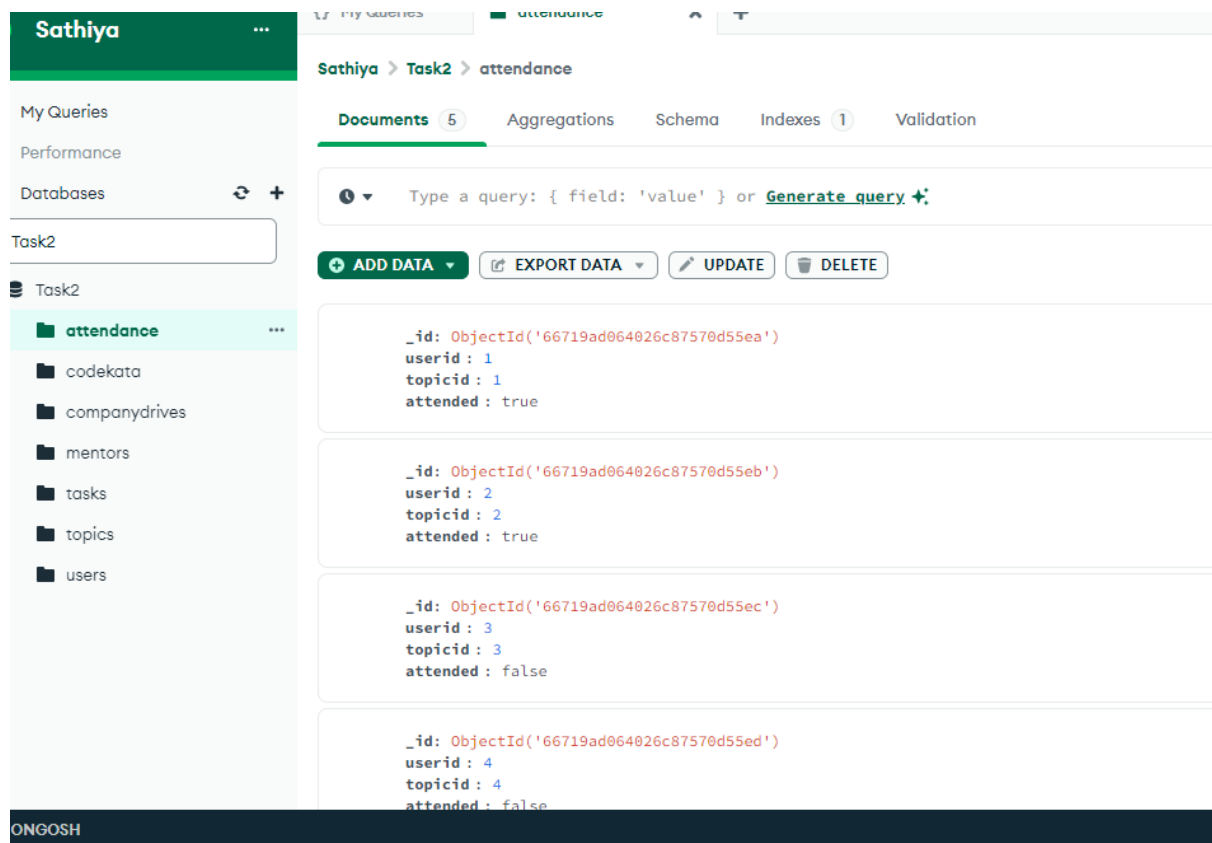


Design Database for Zen Class Programme

1. Created a database called 'Task2'.
2. Created collections like
 - users
 - codekata
 - attendance
 - topics
 - tasks
 - companydrives
 - mentors
3. In that collections inserted documents for all .



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

```
db.topics.aggregate([  
  $lookup: {  
    from: "tasks",  
    localField: "topicid",  
    foreignField: "topicid",  
    as: "taskinfo",  
  },  
],  
{  
  $match: {  
    $and: [{  
      $or: [  
        { topic_date: { $gt: new Date("30-sep-  
2020") } },  
        { topic_date: { $lt: new Date("1-nov-  
2020") } },  
      ],  
    },  
  },  
})
```

```
{
  $or: [
    { "taskinfo.due_date": { $gt: new
Date("30-sep-2020") } } },
    { "taskinfo.due_date": { $lt: new
Date("1-nov-2020") } } },
  ],
},
],
},
],
]);
```

```

{
  _id: ObjectId('66719a2e64026c87570d55d6'),
  topicid: 1,
  topic: 'html',
  topic_date: 2020-10-03T18:30:00.000Z,
  taskinfo: [
    {
      _id: ObjectId('66719a5d64026c87570d55db'),
      taskid: 1,
      topicid: 1,
      userid: 1,
      task: 'html task',
      due_date: 2020-10-03T18:30:00.000Z,
      submitted: true
    },
    {
      _id: ObjectId('66719a8a64026c87570d55e0'),
      taskid: 1,
      topicid: 1,
      userid: 1,
      task: 'html task',
      due_date: 2020-10-03T18:30:00.000Z,

```

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

```

db.companydrives.find({
  $or: [
    { drive_date: { $gte: new Date("15-oct-2020") } },
    { drive_date: { $lte: new Date("31-Oct-2020") } },
  ],
});

```

```

> db.companydrives.find({
  $or: [
    { drive_date: { $gte: new Date("15-oct-2020") } },
    { drive_date: { $lte: new Date("31-oct-2020") } },
  ],
});
< {
  _id: ObjectId('6671999464026c87570d55cd'),
  userid: 1,
  drive_date: 2020-10-14T18:30:00.000Z,
  company: 'Amazon'
}
{
  _id: ObjectId('6671999464026c87570d55ce'),
  userid: 2,
  drive_date: 2020-10-19T18:30:00.000Z,
  company: 'SAP labs'
}
{
  _id: ObjectId('6671999464026c87570d55cf'),
  userid: 3,
  drive_date: 2020-10-24T18:30:00.000Z,

```

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

```

db.companydrives.aggregate([
  $lookup: {
    from: "users",
    localField: "userid",
    foreignField: "userid",
    as: "userinfo",
  },
],

```

```

{
  $project: {
    _id: 0,
    "userinfo.name": 1,
    company: 1,
    drive_date: 1,
    "userinfo.email": 1,
    "userinfo.userid": 1,
  },
},
]);

```

```

< {
  drive_date: 2020-10-09T18:30:00.000Z,
  company: 'Google',
  userinfo: [
    {
      userid: 1,
      name: 'Hari',
      email: 'hari@gmail.com'
    }
  ]
}
{
  drive_date: 2020-10-14T18:30:00.000Z,
  company: 'Amazon',
  userinfo: [
    {
      userid: 1,
      name: 'Hari',
      email: 'hari@gmail.com'
    }
  ]
}
{

```

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

```
db.codekata.aggregate([  
  $lookup: {  
    from: "users",  
    localField: "userid",  
    foreignField: "userid",  
    as: "userinfo",  
  },  
],  
{  
  $project: {  
    _id: 0,  
    userid: 1,  
    problems: 1,  
    "userinfo.name": 1,  
  },  
},  
]);
```

```

    });
  < {
    userid: 1,
    problems: 10,
    userinfo: [
      {
        name: 'Hari'
      }
    ]
  }
  {
    userid: 2,
    problems: 40,
    userinfo: [
      {
        name: 'KaviArasan'
      }
    ]
  }
  {
    userid: 3,
    problems: 20,
    userinfo: [

```

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

```

db.users.aggregate([
  $lookup: {
    from: "mentors",

```



```
        localField: "mentorid",
        foreignField: "mentorid",
        as: "mentorInfo",
    },
},
{
    $group: {
        _id: {
            mentorid: "$mentorInfo.mentorid",
            mentorname: "$mentorInfo.mentorname",
        },
        mentee_count: { $sum: 1 },
    },
},
{ $match: { mentee_count: { $gt: 15 } } },
]);
```

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

```
db.attendance.aggregate([  
  $lookup: {  
    from: "topics",  
    localField: "topicid",  
    foreignField: "topicid",  
    as: "topics",  
  },  
},  
{  
  $lookup: {  
    from: "tasks",  
    localField: "topicid",  
    foreignField: "topicid",  
    as: "tasks",  
  },  
},  
],
```

```

{ $match: { $and: [{ attended: false }, { "tasks.submitted": false
}} } },

{
  $match: {
    $and: [{
      $or: [
        { "topics.topic_date": { $gte: new Date("15-oct-
2020") } },
        { "topics.topic_date": { $lte: new Date("31-oct-
2020") } },
      ],
    },
    {
      $or: [
        { "tasks.due_date": { $gte: new Date("15-oct-
2020") } },
        { "tasks.due_date": { $lte: new Date("31-oct-2020")
} },
      ],
    },
  ],
},
{

```

```
$count: "No_of_students_absent",  
},  
);
```

```
    $or: [  
      { "topics.topic_date": { $gte: new Date("15-oct-2020") } },  
      { "topics.topic_date": { $lte: new Date("31-oct-2020") } },  
    ],  
  },  
  {  
    $or: [  
      { "tasks.due_date": { $gte: new Date("15-oct-2020") } },  
      { "tasks.due_date": { $lte: new Date("31-oct-2020") } },  
    ],  
  },  
],  
},  
{  
  $count: "No_of_students_absent",  
},  
]);  
< {  
  No_of_students_absent: 3  
}  
Atlas atlas-stsul4-shard-0 [primary] Task2>
```