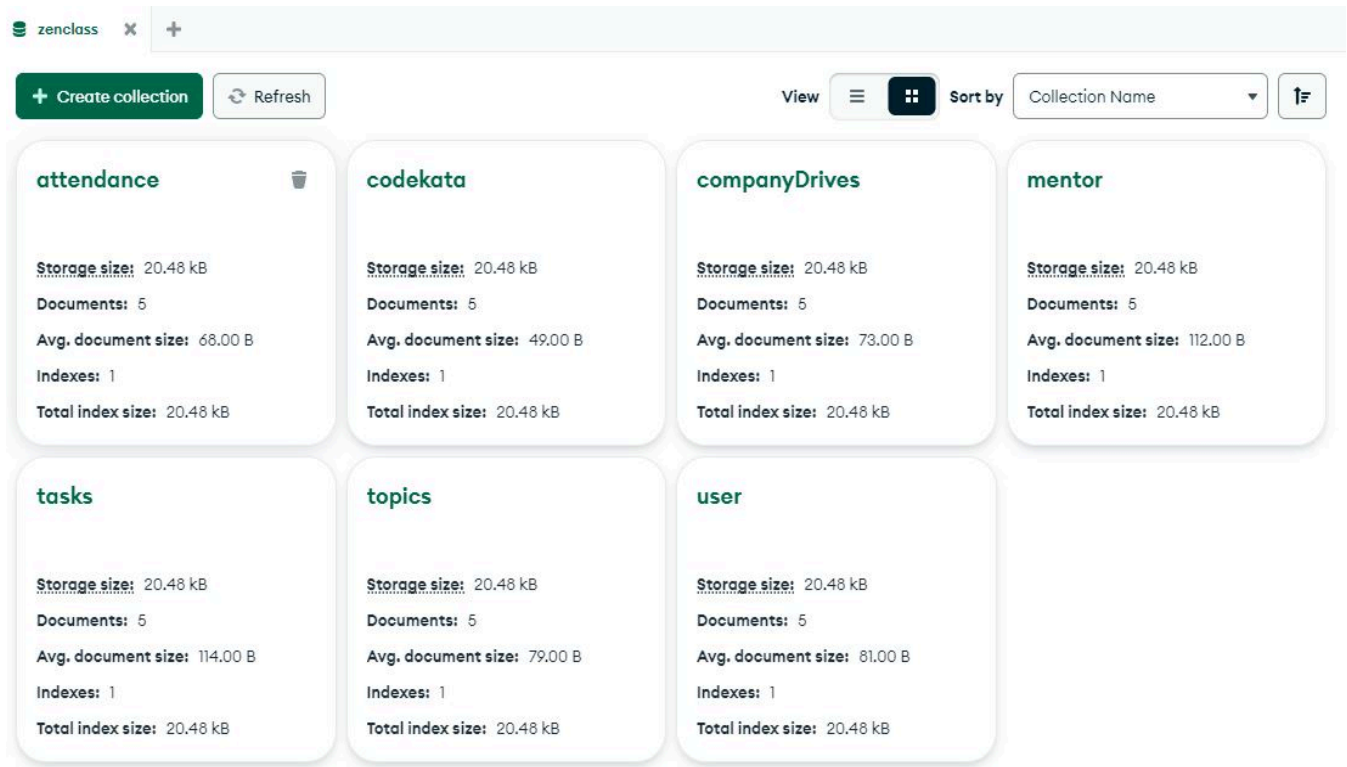


# MONGODB TASK 2

## DESIGN DATABASE FOR ZEN CLASS PROGRAMME



## TASK SOLUTIONS

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

```
db.topics.aggregate([
  {
    $lookup:{
      from:"tasks",
      localField:"topic_id",
```

```

foreignField: "topic_id",
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}}
]
}
]
}
]);

```

```

< {
  _id: ObjectId('65f53aed3d53dd401af13ae7'),
  topic_id: 1,
  topic_name: 'HTML',
  topic_date: 2020-10-17T18:30:00.000Z,
  taskInfo: [
    {
      _id: ObjectId('65f53d533d53dd401af13aec'),
      task_id: 1,
      topic_id: 1,
      user_id: 1,
      task: 'HTML Task',
      Due_Date: 2020-10-17T18:30:00.000Z,
      submitted: true
    }
  ]
}

```

```

{
  _id: ObjectId('65f53aed3d53dd401af13ae8'),
  topic_id: 2,
  topic_name: 'CSS',
  topic_date: 2020-10-27T18:30:00.000Z,
  taskInfo: [
    {
      _id: ObjectId('65f53d533d53dd401af13aed'),
      task_id: 2,
      topic_id: 2,
      user_id: 2,
      task: 'CSS Task',
      Due_Date: 2020-10-27T18:30:00.000Z,
      submitted: false
    }
  ]
}

```

## 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:{$lt: new Date("31-Oct-2020")}}]
});

```

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```
< {
  _id: ObjectId('65f53f3b3d53dd401af13af1'),
  user_id: 1,
  drive_date: 2020-10-19T18:30:00.000Z,
  company: 'Zoho'
}
{
  _id: ObjectId('65f53f3b3d53dd401af13af2'),
  user_id: 1,
  drive_date: 2020-10-21T18:30:00.000Z,
  company: 'TCS'
}
{
  _id: ObjectId('65f53f3b3d53dd401af13af3'),
  user_id: 2,
  drive_date: 2020-10-24T18:30:00.000Z,
  company: 'WIPRO'
}
{
  _id: ObjectId('65f53f3b3d53dd401af13af4'),
  user_id: 3,
  drive_date: 2020-10-29T18:30:00.000Z,
  company: 'AMAZON'
```

```
{
  _id: ObjectId('65f53f3b3d53dd401af13af4'),
  user_id: 3,
  drive_date: 2020-10-29T18:30:00.000Z,
  company: 'AMAZON'
}
{
  _id: ObjectId('65f53f3b3d53dd401af13af5'),
  user_id: 4,
  drive_date: 2020-11-04T18:30:00.000Z,
  company: 'APPLE'
}
zenclass>
```

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

```
db.companyDrives.aggregate([
  {
    $lookup:{
      from: "user",
      localField:"user_id",
      foreignField:"user_id",
      as:"userInfo"
    }
  },
  {
    $project: {
      _id:0,
      company:1,
      drive_date:1,
      students:"$userInfo"
    }
  }
]);
```

```

< {
  drive_date: 2020-10-19T18:30:00.000Z,
  company: 'Zoho',
  students: [
    {
      _id: ObjectId('65f489f7b16e62b13f8aa2b1'),
      user_id: 1,
      name: 'Janani',
      email: 'janani@gmail.com'
    }
  ]
}
{
  drive_date: 2020-10-21T18:30:00.000Z,
  company: 'TCS',
  students: [
    {
      _id: ObjectId('65f489f7b16e62b13f8aa2b1'),
      user_id: 1,
      name: 'Janani',
      email: 'janani@gmail.com'
    }
  ]
}

```

```

{
  drive_date: 2020-10-24T18:30:00.000Z,
  company: 'WIPRO',
  students: [
    {
      _id: ObjectId('65f489f7b16e62b13f8aa2b2'),
      user_id: 2,
      name: 'Veerakumar',
      email: 'veera@gmail.com'
    }
  ]
}
{
  drive_date: 2020-10-29T18:30:00.000Z,
  company: 'AMAZON',
  students: [
    {
      _id: ObjectId('65f489f7b16e62b13f8aa2b3'),
      user_id: 3,
      name: 'Priyanka',
      email: 'priyanka@gmail.com'
    }
  ]
}

```

```

company: 'AMAZON',
students: [
  {
    _id: ObjectId('65f489f7b16e62b13f8aa2b3'),
    user_id: 3,
    name: 'Priyanka',
    email: 'priyanka@gmail.com'
  }
]
}
{
  drive_date: 2020-11-04T18:30:00.000Z,
  company: 'APPLE',
  students: [
    {
      _id: ObjectId('65f489f7b16e62b13f8aa2b4'),
      user_id: 4,
      name: 'Syed',
      email: 'syed@gmail.com'
    }
  ]
}
}
zenclass> |

```

#### 4) Find the Number of problems solved by the user in codekata.

```

db.codekata.aggregate([
{
  $lookup: {
    from: "user",
    localField: "user_id",
    foreignField: "user_id",
    as: "userInfo"
  },
{
  $group: {

```

```

    _id:{
      user_id: "$user_id",
      username: "$userInfo.name"
    },
    total_problems_solved: {$sum: "$problems"}
  }
},
{
  $project: {
    _id:0,
    user_id: "$_id.user_id",
    user_name: "$_id.username",
    Total_problems_solved: 1
  }
}
]);

```

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

```

db.user.aggregate([
  {
    $match:{mentor_id:{$exists: 'true'}}
  },
  {
    $group:{
      _id:"$mentor_id",
      mentor_name: {$first: "mentor_name"},
      mentee_count:{$sum:1}
    }
  },

```



```

{
  $match:{mentee_count: {$gt:15}}
},
{
  $project: {
    _id:0,
    mentor_id:"$_id",
    mentor_name:1,
    mentee_count:1
  }
}
]);

```

```

> db.user.aggregate([
  {
    $match:{mentor_id:{$exists: true}}
  },
  {
    $group:{
      _id:"$mentor_id",
      mentor_name: {$first: "mentor_name"},
      mentee_count:{$sum:1}
    }
  },
  {
    $match:{mentee_count: {$gt:15}}
  },
  {
    $project: {
      _id:0,
      mentor_id:"$_id",
      mentor_name:1,
      mentee_count:1
    }
  }
]

```

**6) Find the Number of user who are absent task is not submitted between 15-Oct-2020 and 31-Oct-2020**

```

db.attendance.aggregate([
  $lookup:{
    from:"topics",
    localField:"topic_id",
    foreignField:"topic_id",
    as: "topics"
  },
  {
    $lookup:{
      from: "tasks",
      localField:"topic_id",
      foreignField:"topic_id",
      as:"tasks"
    }
  },
  {
    $match:{
      attended: 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"
  }
]);

```

```
{
  _id: ObjectId('65f53aed3d53dd401af13ae8'),
  topic_id: 2,
  topic_name: 'CSS',
  topic_date: 2020-10-27T18:30:00.000Z,
  taskInfo: [
    {
      _id: ObjectId('65f53d533d53dd401af13aed'),
      task_id: 2,
      topic_id: 2,
      user_id: 2,
      task: 'CSS Task',
      Due_Date: 2020-10-27T18:30:00.000Z,
      submitted: false
    }
  ]
}
```