

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: [
      { 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?

```
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?

```
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?

```

db.codekata.aggregate([
{
  $lookup: {
    from: "users",
    localField: "userid",
    foreignField: "userid",
    as: "userinfo"
  }
},
{
  $group: {
    _id: {
      userid: "$userid",
      username: "$userinfo.name"
    },
    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?

```

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
  }
}
])

```

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: {
    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"}
])
```