**MongoDB Task**

**Design database for Zen class** **programme:**

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

**Solution:**

db.topics.aggregate([

    {$match: {class\_date: {$gte: ISODate("2020-10-01"),$lt: ISODate("2020-11-01")}}},

    {$lookup: {from: "tasks", let: { topic: "$topic", class\_date: "$class\_date" }, pipeline: [

          {

            $match: {$expr: {$and: [{ $eq: ["$topic", "$$topic"] },{ $gte: ["$task\_date", "$$class\_date"] },

             { $lt: ["$task\_date", { $add: ["$$class\_date", 1 \* 24 \* 60 \* 60 \* 1000] }] }]}}

          }

        ],

        as: "tasks"}

    }

  ]);

**Rusult:**

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

**Solution:**

db.companydrives.find(

    {drive\_date: {$gte: ISODate("2020-10-15"), $lte: ISODate("2020-10-31")}},

    {\_id:0, company:1, drive\_date: 1}

    )

**Result:**



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

**Solution: Result:**

db.companydrives.aggregate([

    {$lookup: {from: "users", localField: "user\_id", foreignField: "\_id", as: "studentInfo"}},

    {$unwind: "$studentInfo"},

    {$project: {\_id: 0, drive\_date: 1, company: 1,   student\_name: "$studentInfo.name",

            student\_email: "$studentInfo.email",

            student\_mobile: "$studentInfo.mobile",

            student\_batch: "$studentInfo.batch"

        }

    }

])

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

**Solution:**

db.codekata.aggregate([

  { $group: {\_id: "$user\_id",  totalProblemsSolved: { $sum: "$Total\_solved" } } },

  { $lookup: {from: "users", localField: "\_id", foreignField: "\_id", as: "userDetails"} },

  { $unwind: "$userDetails" },

  { $project: {\_id: 0, userName: "$userDetails.name", totalProblemsSolved: 1}

  }

]);

**Result:**



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

**Solution:**

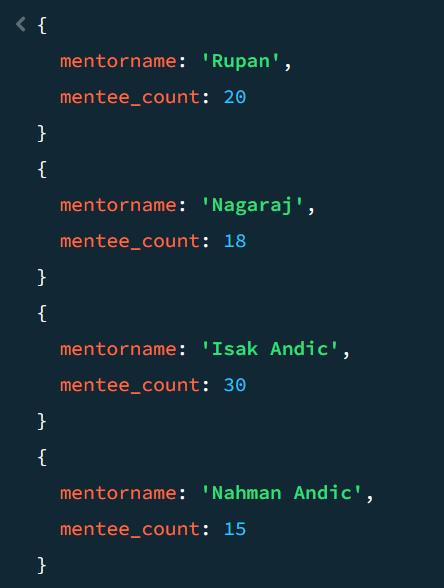
db.mentors.find(

  { mentee\_count: { $gte: 15 } },

  { \_id: 0, mentorname: 1, mentee\_count: 1 }­­­

);

**Result:**

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1. 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([

    {$match: {date: {$gte: ISODate("2020-10-15"), $lte: ISODate("2020-10-31")}, status: false}},

    {$lookup: {from: "tasks", localField: "user\_id", foreignField: "user\_id", as: "taskInfo"}},

    {$match: {"taskInfo": { $elemMatch: {task\_date: {$gte: ISODate("2020-10-15"), $lte: ISODate("2020-10-31")},

    Submission\_status: false}}}},

    {$group: {\_id: null, count: { $sum: 1 }}}

  ])

**Result:**

{

\_id: null,

count: 3

}