**Design database for Zen class programme**

1.**Users**

db.user.insertMany([{

"userId" : 1,

"name" : "Dharanish",

"email" : "dharanishsk9698@gmail.com",

"mobile" : "9876543210",

'company' : "zoho"

},{

"userId" : 2,

"name" : "Jeeva",

"email" : "jeeva9698@gmail.com",

"mobile" : "9896543210",

'company' : "wipro"

}])

2.**Codekata**

db.codekata.insertOne({

"sum" : 30,

"userId":2

"solved":23,

"unsolved" : 7

})

3.**Attendance**

db.attendance.insertOne([{

"userId":1,

attendanceId:1,

presentDays : 83,

totalDays: 90

},{

"userId":2,

attendanceId:2,

presentDays : 80,

totalDays: 10

}])

4.**Topics**

db.topics.insertMany([{

"topicId" : 1,

topic : "js",

"month" : "october"

},{

"topicId" : 2,

topic : "html"

"month" : "september"

}])

5.**Task**

db.task.insertMany([{

"taskId":1,

"task" : "apitask",

"month" : "october"

},{

"taskId":2,

"task" : "reacttask",

"month" : "september"

}])

6. **Drives**

db.drives.insertMany([{

"drivesId" : 1,

"driveName" : "zoho",

"driveDate" : "15-0ct"

},{

"drivesId" : 2,

"driveName" : "tcs",

driveDate : "31-oct"

}])

6**.Mentors**

db.mentor.insertOne({

"mentorId" : 1,

mentorName: "Arun"}

)

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

db.topics.find({ "month": "october" })

db.task.find({ "month": "october" })

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

db.drives.find($and:[{

driveDate : {$gt:15-oct},

driveDate : {$lt:31-oct)

}])

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

db.drives.aggregate([

{

$lookup: {

from: "user",

localField: "driveName",

foreignField: "company",

as: "students"

}

},

{

$unwind: "$students"

},

{

$match: {

"students.userId": { $exists: true }

}

},

{

$project: {

\_id: 0,

driveName: 1,

driveDate: 1,

students: {

userId: "$students.userId",

userName: "$students.name",

}

}

}

])

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

db.codekata.aggregate([

{

$group: {

\_id: "$userId",

totalProblemsSolved: { $sum: "$solved" }

}

},

{

$lookup: {

from: "user",

localField: "\_id",

foreignField: "userId",

as: "userDetails"

}

},

{

$unwind: "$userDetails"

},

{

$project: {

\_id: 0,

userId: "$\_id",

userName: "$userDetails.name",

totalProblemsSolved: 1

}

}

])

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

db.mentor.aggregate([

{

$lookup: {

from: "user",

localField: "mentorId",

foreignField: "mentorId",

as: "mentees"

}

},

{

$unwind: "$mentees"

},

{

$group: {

\_id: "$mentorId",

mentorName: { $first: "$mentorName" },

menteeCount: { $sum: 1 }

}

},

{

$match: {

menteeCount: { $gt: 15 }

}

},

{

$project: {

\_id: 0,

mentorId: "$\_id",

mentorName: 1,

menteeCount: 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([

{

$match: {

$and: [

{ "Date": { $gte: startDate, $lte: endDate } },

{ "Status": "absent" }

]

}

},

{

$lookup: {

from: "task",

localField: "userId",

foreignField: "userId",

as: "tasks"

}

},

{

$unwind: "$tasks"

},

{

$match: {

"tasks.Status": "not submitted"

}

},

{

$group: {

\_id: "$userId"

}

},

{

$count: "totalUsers"

}

])