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

Ans :

db.topics.aggregate([{

$lookup: {

from: "tasks",

localField: "TOPIC\_ID",

foreignField: "TOPIC\_ID",

as: "tasks"

}

},

{

$match: { "$expr": { "$eq": [{ "$month": "$CLASS\_DATE" }, 10] } }

}])

**Find all the company drives which appeared between 15 oct-2022 and 31-oct-2022**

db.company\_drives.find({DRIVE\_DATA:{$gte: ISODate("2022-10-15T00:00:00.000Z"),$lt: ISODate("2022-10-31T00:00:00.000Z")}});

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

db.users.aggregate([{

$lookup: {

from: "company\_drives",

localField: "ID",

foreignField: "USER\_ID",

as: "Drives"

}

}])

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

db.codekata.aggregate([{

$lookup:

{

from: "users",

localField: "USER\_ID",

foreignField: "ID",

as: "user"

}

}

,{$group:{\_id : "$user.STUDENT\_NAME", problemsCompleted:{$sum: '$COMPLETED'} }},

{$project :{\_id:0,studentName: "$\_id", problemsCompleted:1} }])

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

db.mentors.find({MENTEE\_COUNT:{$gt:15}});

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

db.attendance.find({"CLASS\_DATE":{$gte: ISODate("2022-10-15T00:00:00.000Z"),$lt: ISODate("2022-10-31T00:00:00.000Z")},"STATUS":"No","TASK\_COMPLETED": "No"});

**Design database for Zen class programme**

**users**

**codekata**

**attendance**

**topics**

**tasks**

**company\_drives**

**mentors**

use Students

db.tasks.insertMany([

{

"TOPIC\_ID": 1,

"TASK\_ID": 1,

"TASK\_DETAIL": "Create API",

"CLASS\_DATE": "09-01-22"

},

{

"TOPIC\_ID": 2,

"TASK\_ID": 2,

"TASK\_DETAIL": "Host API in Heroku",

"CLASS\_DATE": "10-10-22"

},

{

"TOPIC\_ID": 3,

"TASK\_ID": 3,

"TASK\_DETAIL": "Create a Expres app",

"CLASS\_DATE": "11-10-21"

}

]);

db.topics.insertMany([

{

"TOPIC\_ID": 1,

"CLASS\_TOPIC": "Nodejs & Expressjs",

"CLASS\_DATE": new Date("2022-01-09"),

"CLASS\_CONTENT": "What is express,API methods",

"CLASS\_PREREAD": "https://expressjs.com"

},

{

"TOPIC\_ID": 2,

"CLASS\_TOPIC": "Node & mongo DB connectivity",

"CLASS\_DATE": new Date("2021-10-10"),

"CLASS\_CONTENT": "Connection to MongoDB(local & atlas)",

"CLASS\_PREREAD": ""

},

{

"TOPIC\_ID": 3,

"CLASS\_TOPIC": "Nodejs deployment",

"CLASS\_DATE": new Date("2021-10-11"),

"CLASS\_CONTENT": "dotenv,Deployment",

"CLASS\_PREREAD": "https://www.npmjs.com/package/dotenv"

}

]);

db.company\_drives.insertMany([

{

"DRIVE\_ID": 1,

"COMPANY\_NAME": "Zoho",

"DRIVE\_DATA": new Date("2022-01-09"),

"USER\_ID": 1

},

{

"DRIVE\_ID": 1,

"COMPANY\_NAME": "Zoho",

"DRIVE\_DATA": new Date("2022-01-09"),

"USER\_ID": 2

},

{

"DRIVE\_ID": 1,

"COMPANY\_NAME": "Zoho",

"DRIVE\_DATA": new Date("2022-01-09"),

"USER\_ID": 3

},

{

"DRIVE\_ID": 2,

"COMPANY\_NAME": "TCS",

"DRIVE\_DATA": new Date("2022-01-10"),

"USER\_ID": 4

},

{

"DRIVE\_ID": 2,

"COMPANY\_NAME": "TCS",

"DRIVE\_DATA": new Date("2022-01-10"),

"USER\_ID": 5

},

{

"DRIVE\_ID": 3,

"COMPANY\_NAME": "CTS",

"DRIVE\_DATA": new Date("2022-10-15"),

"USER\_ID": 3

},

{

"DRIVE\_ID": 3,

"COMPANY\_NAME": "CTS",

"DRIVE\_DATA": new Date("2022-10-15"),

"USER\_ID": 4

},

{

"DRIVE\_ID": 4,

"COMPANY\_NAME": "Accenture",

"DRIVE\_DATA": new Date("2022-10-20"),

"USER\_ID": 1

},

{

"DRIVE\_ID": 5,

"COMPANY\_NAME": "Freshwork",

"DRIVE\_DATA": new Date("2022-10-30"),

"USER\_ID": 2

},

{

"DRIVE\_ID": 5,

"COMPANY\_NAME": "Freshwork",

"DRIVE\_DATA": new Date("2022-10-30"),

"USER\_ID": 4

}

]);

db.users.insertMany([

{

"ID": 1,

"STUDENT\_NAME": "Vivek",

"STUDENT\_EMAIL": "vivek@gmail.com",

"GENDER": "Male"

},

{

"ID": 2,

"STUDENT\_NAME": "Balaji",

"STUDENT\_EMAIL": "balaji@gmail.com",

"GENDER": "Male"

},

{

"ID": 3,

"STUDENT\_NAME": "Shivani",

"STUDENT\_EMAIL": "shivani@gmail.com",

"GENDER": "Female"

},

{

"ID": 4,

"STUDENT\_NAME": "Megha",

"STUDENT\_EMAIL": "megha@gmail.com",

"GENDER": "Female"

},

{

"ID": 5,

"STUDENT\_NAME": "Vignesh",

"STUDENT\_EMAIL": "vignesh@gmail.com",

"GENDER": "Male"

}

]);

db.codekata.insertMany([

{

"USER\_ID": 1,

"PROBLEM\_ID": 1,

"PROBLEM\_NAME": "Numbers",

"COMPLETED": 20,

"TOTAL": 50

},

{

"USER\_ID": 1,

"PROBLEM\_ID": 2,

"PROBLEM\_NAME": "Array",

"COMPLETED": 2,

"TOTAL": 30

},

{

"USER\_ID": 1,

"PROBLEM\_ID": 3,

"PROBLEM\_NAME": "Strings",

"COMPLETED": 25,

"TOTAL": 60

},

{

"USER\_ID": 2,

"PROBLEM\_ID": 1,

"PROBLEM\_NAME": "Numbers",

"COMPLETED": 2,

"TOTAL": 50

},

{

"USER\_ID": 2,

"PROBLEM\_ID": 2,

"PROBLEM\_NAME": "Array",

"COMPLETED": 20,

"TOTAL": 30

},

{

"USER\_ID": 2,

"PROBLEM\_ID": 3,

"PROBLEM\_NAME": "Strings",

"COMPLETED": 5,

"TOTAL": 60

},

{

"USER\_ID": 3,

"PROBLEM\_ID": 1,

"PROBLEM\_NAME": "Numbers",

"COMPLETED": 9,

"TOTAL": 50

},

{

"USER\_ID": 3,

"PROBLEM\_ID": 2,

"PROBLEM\_NAME": "Array",

"COMPLETED": 8,

"TOTAL": 30

},

{

"USER\_ID": 3,

"PROBLEM\_ID": 3,

"PROBLEM\_NAME": "Strings",

"COMPLETED": 7,

"TOTAL": 60

},

{

"USER\_ID": 4,

"PROBLEM\_ID": 1,

"PROBLEM\_NAME": "Numbers",

"COMPLETED": 2,

"TOTAL": 50

},

{

"USER\_ID": 4,

"PROBLEM\_ID": 2,

"PROBLEM\_NAME": "Array",

"COMPLETED": 29,

"TOTAL": 30

},

{

"USER\_ID": 4,

"PROBLEM\_ID": 3,

"PROBLEM\_NAME": "Strings",

"COMPLETED": 60,

"TOTAL": 60

},

{

"USER\_ID": 5,

"PROBLEM\_ID": 1,

"PROBLEM\_NAME": "Numbers",

"COMPLETED": 50,

"TOTAL": 50

},

{

"USER\_ID": 5,

"PROBLEM\_ID": 2,

"PROBLEM\_NAME": "Array",

"COMPLETED": 30,

"TOTAL": 30

},

{

"USER\_ID": 5,

"PROBLEM\_ID": 3,

"PROBLEM\_NAME": "Strings",

"COMPLETED": 60,

"TOTAL": 60

}

]);

db.mentors.insertMany([

{

"MENTOR\_ID": 1,

"MENTOR\_NAME": "Ragav",

"MENTOR\_SKILL": "React.js",

"MENTEE\_COUNT": 20

},

{

"MENTOR\_ID": 2,

"MENTOR\_NAME": "lavish",

"MENTOR\_SKILL": "Js,HTML,CSS",

"MENTEE\_COUNT": 15

},

{

"MENTOR\_ID": 3,

"MENTOR\_NAME": "Kanan",

"MENTOR\_SKILL": "JS",

"MENTEE\_COUNT": 30

},

{

"MENTOR\_ID": 4,

"MENTOR\_NAME": "Ramya",

"MENTOR\_SKILL": "Anguar",

"MENTEE\_COUNT": 7

},

{

"MENTOR\_ID": 5,

"MENTOR\_NAME": "Teju",

"MENTOR\_SKILL": "Mongo",

"MENTEE\_COUNT": 50

}

]);

db.attendance.insertMany([

{

"USER\_ID": 1,

"CLASS\_DATE": new Date("2022-01-09"),

"STATUS": "Yes",

"TASK\_COMPLETED": "Yes"

},

{

"USER\_ID": 1,

"CLASS\_DATE": new Date("2022-10-16"),

"STATUS": "No",

"TASK\_COMPLETED": "No"

},

{

"USER\_ID": 1,

"CLASS\_DATE": new Date("2022-10-30"),

"STATUS": "Yes",

"TASK\_COMPLETED": "No"

},

{

"USER\_ID": 2,

"CLASS\_DATE": new Date("2022-01-09"),

"STATUS": "No",

"TASK\_COMPLETED": "No"

},

{

"USER\_ID": 2,

"CLASS\_DATE": new Date("2022-10-16"),

"STATUS": "No",

"TASK\_COMPLETED": "Yes"

},

{

"USER\_ID": 2,

"CLASS\_DATE": new Date("2022-10-30"),

"STATUS": "Yes",

"TASK\_COMPLETED": "No"

},

{

"USER\_ID": 3,

"CLASS\_DATE": new Date("2022-01-09"),

"STATUS": "Yes",

"TASK\_COMPLETED": "Yes"

},

{

"USER\_ID": 3,

"CLASS\_DATE": new Date("2022-10-16"),

"STATUS": "Yes",

"TASK\_COMPLETED": "Yes"

},

{

"USER\_ID": 3,

"CLASS\_DATE": new Date("2022-10-30"),

"STATUS": "Yes",

"TASK\_COMPLETED": "Yes"

},

{

"USER\_ID": 4,

"CLASS\_DATE": new Date("2022-01-09"),

"STATUS": "No",

"TASK\_COMPLETED": "No"

},

{

"USER\_ID": 4,

"CLASS\_DATE": new Date("2022-10-16"),

"STATUS": "No",

"TASK\_COMPLETED": "No"

},

{

"USER\_ID": 4,

"CLASS\_DATE": new Date("2022-10-30"),

"STATUS": "No",

"TASK\_COMPLETED": "Yes"

},

{

"USER\_ID": 5,

"CLASS\_DATE": new Date("2022-01-09"),

"STATUS": "No",

"TASK\_COMPLETED": "No"

},

{

"USER\_ID": 5,

"CLASS\_DATE": new Date("2022-10-16"),

"STATUS": "No",

"TASK\_COMPLETED": "Yes"

},

{

"USER\_ID": 5,

"CLASS\_DATE": new Date("2022-10-30"),

"STATUS": "Yes",

"TASK\_COMPLETED": "Yes"

}

])