**Zen Class program Database**

**User:**

db.users.insertMany([

{

user\_id: 1,

name: "apple",

email: "apple@gmail.com",

solvedCodeKataProblems: "250"

},

{

user\_id: 2,

name: "banana",

email: "banana@gmail.com",

solvedCodeKataProblems:"300"

},

{

user\_id: 3,

name: "mango",

email: "mango@gmail.com",

solvedCodeKataProblems:"350"

},

{

user\_id: 4,

name: "watermelon",

email: "wat@gmail.com",

solvedCodeKataProblems:"280"

},

{

user\_id: 5,

name: "grape",

email: "grape@gmail.com",

solvedCodeKataProblems:"290"

},

{

user\_id: 6,

name: "pineapple",

email: "paapp@gmail.com",

solvedCodeKataProblems:"310"

}

])

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**codeKata:**

db.codeKata.insertMany([

{

codeKata\_category:"inputOutput",

total\_problems:"10"

},

{

codeKata\_category:"array",

total\_problems:"300"

},

{

codeKata\_category:"string",

total\_problems:"400"

},

{

codeKata\_category:"looping",

total\_problems:"14"

}

])

**Attendance, tasks, topics**

db.attendance.insert([

{

class\_date: new Date("2020-10-11"),

topic: ["array", "string"],

students\_attended: [1, 2, 5],

task\_name: "xxx",

task\_submitted\_stud: [1, 2, 5],

},

{

class\_date: new Date("2020-10-12"),

topic: ["array", "string"],

students\_attended: [3, 4, 2],

task\_name: "yyy",

task\_submitted\_stud: [3, 4, 2],

},

{

class\_date: new Date("2020-10-15"),

topic: ["map", "redcue"],

students\_attended: [3, 4, 2],

task\_name: "zzz",

task\_submitted\_stud: [3, 4, 2],

},

{

class\_date: new Date("2020-10-16"),

topic: ["filter", "react"],

students\_attended: [3, 4, 2, 5],

task\_name: "aaa",

task\_submitted\_stud: [3, 4, 2, 5],

},

{

class\_date: new Date("2020-10-28"),

topic: ["redux", "next.js"],

students\_attended: [3, 2, 5],

task\_name: "bbb",

task\_submitted\_stud: [3, 2, 5, 1],

},

]);

**Company drives**

db.company\_drives.insertMany([

{

drive\_date: new Date("2020-09-11"),

drive\_attended\_stud: [1, 2, 3],

company\_name: "zoho",

},

{

drive\_date: new Date("2020-10-12"),

drive\_attended\_stud: [3, 4, 5],

company\_name: "infosys",

},

{

drive\_date: new Date("2020-10-15"),

drive\_attended\_stud: [3, 4, 2],

company\_name: "CTS",

},

{

drive\_date: new Date("2020-10-16"),

drive\_attended\_stud: [3, 4, 2, 5],

company\_name: "TCS",

},

{

drive\_date: new Date("2020-10-28"),

drive\_attended\_stud: [3, 2, 5],

company\_name: "HCL",

},

]);

**Mentors**

db.mentors.insertMany([

{

mentor\_name:"cat",

topics:"HTML,CSS",

mentee\_count:"20"

},

{

mentor\_name:"buffolo",

topics:"js,DOM",

mentee\_count:"10"

},

{

mentor\_name:"cow",

topics:"react.js",

mentee\_count:"50"

},

{

mentor\_name:"dog",

topics:"node.js",

mentee\_count:"30"

}

])

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

db.attendance.find(

{

$and: [

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

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

],

},

{ topic: 1, task\_name: 1 }

);

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

db.company\_drives.find({

$and: [

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

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

],

});

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

db.company\_drives.aggregate([

{

$lookup: {

from: "users",

localField: "drive\_attended\_stud",

foreignField: "user\_id",

as: "results",

},

},

]);

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

db.users.aggregate([

{

$match: {

user\_id: 3

}

},

{

$project: {

\_id: 0,

solvedCodeKataProblems: { $toInt: "$solvedCodeKataProblems" }

}

}

])

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

db.mentors.find({ mentee\_count: { $gt: "15" } })

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

db.users.aggregate([

{

$lookup: {

from: "attendance",

localField: "user\_id",

foreignField: "students\_attended",

as: "attendance"

}

},

{

$match: {

"attendance.class\_date": {

$gte: new Date("2020-10-15"),

$lte: new Date("2020-10-31")

},

"attendance.task\_submitted\_stud": { $nin: ["$user\_id"] }

}

},

{

$count: "absentUsersCount"

}

])