1. User collection:

use users;

switched to db users

db.users.insertMany([{'userid':1,'name':'reva','email':'reva@gmail.com','role':'student'},

{'userid':2,'name':'kumari','email':'kumari@gmail.com','role':'mentor'},

{'userid':3,'name':'Gopi','email':'gopi@gamil.com','role':'student'},

{'userid':4,'name':'priya','email':'priya@gamil.com','role':'student'},

{'uerid':5,'name':'kani','email':'kani@gmail.com','role':'student'}]);

{

acknowledged: true,

insertedIds: {

'0': ObjectId('65e3361b39048f209b3ec553'),

'1': ObjectId('65e3361b39048f209b3ec554'),

'2': ObjectId('65e3361b39048f209b3ec555'),

'3': ObjectId('65e3361b39048f209b3ec556'),

'4': ObjectId('65e3361b39048f209b3ec557')

}

}

db.users.find();

{

\_id: ObjectId('65e3361b39048f209b3ec553'),

userid: 1,

name: 'reva',

email: 'reva@gmail.com',

role: 'student'

attendance: 'absent'

}

{

\_id: ObjectId('65e3361b39048f209b3ec554'),

userid: 2,

name: 'kumari',

email: 'kumari@gmail.com',

role: 'mentor'

attendance: 'absent'

}

{

\_id: ObjectId('65e3361b39048f209b3ec555'),

userid: 3,

name: 'Gopi',

email: 'gopi@gamil.com',

role: 'student'

attendance: 'present'

}

{

\_id: ObjectId('65e3361b39048f209b3ec556'),

userid: 4,

name: 'priya',

email: 'priya@gamil.com',

role: 'student'

attendance: 'present'

}

{

\_id: ObjectId('65e3361b39048f209b3ec557'),

uerid: 5,

name: 'kani',

email: 'kani@gmail.com',

role: 'student'

attendance: 'present'

}

1. Companydrives collection:

db.companydrives.insertMany([

{

drive\_date: { $gte: '2020-10-01', $lte: '2020-10-15' },

placement\_status: 'appeared',

user\_id: ObjectId('65e3361b39048f209b3ec553')

},

{

drive\_date: { $gte: '2020-10-15', $lte: '2020-10-31' },

placement\_status: 'appeared',

user\_id: ObjectId('65e3361b39048f209b3ec554')

},

{

drive\_date: { $gte: '2020-11-01', $lte: '2020-11-15' },

placement\_status: 'placed',

user\_id: ObjectId('65e3361b39048f209b3ec555')

},

{

drive\_date: { $gte: '2020-11-06', $lte: '2020-11-30' },

placement\_status: 'placed',

user\_id: ObjectId('65e3361b39048f209b3ec556')

},

{

drive\_date: { $gte: '2020-12-01', $lte: '2020-12-15' },

placement\_status: 'placed',

user\_id: ObjectId('65e3361b39048f209b3ec557')

}

]);

1. Task collection:

db.task.insertMany([

{ date: "2020-10-15 to 2020-10-31", status: "not completed", topic\_id: ObjectId("65e41a6539048f209b3ec55d"), user\_id: ObjectId("65e3361b39048f209b3ec553") },

{ date: "2020-11-01 to 2020-11-15", status: "completed", topic\_id: ObjectId("65e41a6539048f209b3ec55e"), user\_id: ObjectId("65e3361b39048f209b3ec554") },

{ date: "2020-11-16 to 2020-11-30", status: "completed", topic\_id: ObjectId("65e41a6539048f209b3ec55f"), user\_id: ObjectId("65e3361b39048f209b3ec555") },

{ date: "2020-12-01 to 2020-12-15", status: "not completed", topic\_id: ObjectId("65e41a6539048f209b3ec560"), user\_id: ObjectId("65e3361b39048f209b3ec556") },

{ date: "2020-12-16 to 2020-12-31", status: "not completed", topic\_id: ObjectId("65e41a6539048f209b3ec561"), user\_id: ObjectId("65e3361b39048f209b3ec557") }

]);

1. Attendance collection:

db.attendance.insertMany([{ date: "2020-10-15 to 2020-10-31", atn\_status: "absent", topic\_id: ObjectId("65e41a6539048f209b3ec55d"), user\_id: ObjectId("65e3361b39048f209b3ec553") },

{ date: "2020-11-01 to 2020-11-15", atn\_status: "absent", topic\_id: ObjectId("65e41a6539048f209b3ec55e"), user\_id: ObjectId("65e3361b39048f209b3ec554") },

{ date: "2020-11-16 to 2020-11-30", atn\_status: "present", topic\_id: ObjectId("65e41a6539048f209b3ec55f"), user\_id: ObjectId("65e3361b39048f209b3ec555") },

{ date: "2020-12-01 to 2020-12-15", atn\_status: "present", topic\_id: ObjectId("65e41a6539048f209b3ec560"), user\_id: ObjectId("65e3361b39048f209b3ec556") },

{ date: "2020-12-16 to 2020-12-31", atn\_status: "present", topic\_id: ObjectId("65e41a6539048f209b3ec561"), user\_id: ObjectId("65e3361b39048f209b3ec557") }])

1. Topic collection:

db.topic.insertMany([{'topic\_id':1,'month':'october','topicname':'fsd','user\_id':ObjectId('65e3361b39048f209b3ec553')},{'topic\_id':2,'month':'november','topicname':'aws','user\_id':ObjectId('65e3361b39048f209b3ec554')

},{'topic\_id':3,'month':'december','topicname':'testing','user\_id':ObjectId('65e3361b39048f209b3ec555')},{'topic\_id':4,'month':'january','tipicname':'cloudcomputing','user\_id':ObjectId('65e3361b39048f209b3ec556')},{'topic\_id':5,'month':'february','topicname':'digitalmarketing','user\_id':ObjectId('65e3361b39048f209b3ec557')}]);

{

acknowledged: true,

insertedIds: {

'0': ObjectId('65e413f739048f209b3ec558'),

'1': ObjectId('65e413f739048f209b3ec559'),

'2': ObjectId('65e413f739048f209b3ec55a'),

'3': ObjectId('65e413f739048f209b3ec55b'),

'4': ObjectId('65e413f739048f209b3ec55c')

}

}

db.topic.find()

{

\_id: ObjectId('65e413f739048f209b3ec558'),

topic\_id: 1,

month: 'october',

topicname: 'fsd'

user\_id:ObjectId('65e3361b39048f209b3ec553’)

}{

\_id: ObjectId('65e413f739048f209b3ec559'),

topic\_id: 2,

month: 'november',

topicname: 'aws'

user\_id':ObjectId('65e3361b39048f209b3ec554')

}{

\_id: ObjectId('65e413f739048f209b3ec55a'),

topic\_id: 3,

month: 'december',

topicname: 'testing'

user\_id:ObjectId('65e3361b39048f209b3ec555'

}{

\_id: ObjectId('65e413f739048f209b3ec55b'),

topic\_id: 4,

month: 'january',

tipicname: 'cloudcomputing'

'user\_id':ObjectId('65e3361b39048f209b3ec556')

}

{

\_id: ObjectId('65e413f739048f209b3ec55b'),

topic\_id: 4,

month: 'january',

topicname: 'cloudcomputing'

user\_id: ObjectId('65e3361b39048f209b3ec557')

}

1. Codekata collection:

db.codekata.insertMany([

{ 'no\_of\_problems\_solved': 10, user\_id: ObjectId('65e3361b39048f209b3ec553') },

{ 'no\_of\_problems\_solved': 10, user\_id: ObjectId('65e3361b39048f209b3ec554') },

{ 'no\_of\_problems\_solved': 10, user\_id: ObjectId('65e3361b39048f209b3ec555') },

{ 'no\_of\_problems\_solved': 10, user\_id: ObjectId('65e3361b39048f209b3ec556') },

{ 'no\_of\_problems\_solved': 10, user\_id: ObjectId('65e3361b39048f209b3ec557') }

]);

1. Mentor collection:

db.mentor.insertMany([

{'name':'magi','mentor\_id':1,'menteecount':80},

{'name':'kamal','mentor\_id':2,'menteecount':30},

{'name':'kalyan','mentor\_id':3,'menteecount':45},

{'name':'mahesh','mentor\_id':4,'menteecount':20},

{'name':'meena','mentor\_id':5,'menteecount':10}])

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

db.topic.aggregate([

{

$lookup: {

from: 'task',

localField: 'topic\_id',

foreignField: 'topic\_id',

as: 'taskinfo'

}

},

{

$match: {

$and: [

{ month: { $gte: 'october', $lt: 'november' } },

{ 'taskinfo.date': { $exists: false } }

]

}

},

{

$project: {

\_id: 0,

topic\_id: 1,

topic: 1,

task: '$taskinfo.task',

date: '$taskinfo.date'

}

}

]);

Result:

{

taskinfo:fsd,month:October

}

{

Taskinfo:testing,month:October

}

1. 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')}}]});

Result:

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

db.companydrives.aggregate([

{

$lookup:{

from:'users',

localField:'user\_id',

foreignField:"user\_id",

as:"userinfo"}},{

$project:{

\_id:0,

drive\_date:1,

students:'$userinfo'}}]);

Result:

{

drive\_date: {

'$gte': '2020-10-01',

'$lte': '2020-10-15'

},

students: []

} {

drive\_date: {

'$gte': '2020-10-15',

'$lte': '2020-10-31'

},

students: []

} {

drive\_date: {

'$gte': '2020-11-01',

'$lte': '2020-11-15'

},

students: []

} {

drive\_date: {

'$gte': '2020-11-06',

'$lte': '2020-11-30'

},

students: []

} {

drive\_date: {

'$gte': '2020-11-06',

'$lte': '2020-11-30'

},

students: []

}

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

db.codekata.aggregate([

{

$lookup: {

from: 'users',

localField: 'user\_id',

foreignField: 'user\_id',

as: 'userinfo'

}

},

{

$group: {

\_id: {

user\_id: '$user\_id',

username: { $arrayElemAt: ['$userinfo.name', 0] } // Access the first element of the 'name' array

},

total\_problems\_solved: { $sum: '$no\_of\_problems\_solved' } // Corrected field name

}

},

{

$project: {

\_id: 0,

user\_id: '$\_id.user\_id',

username: '$\_id.username',

total\_problems\_solved: 1

}

}

]);

Result:

{

total\_problems\_solved: 10,

user\_id: ObjectId('65e3361b39048f209b3ec556')

}

{

total\_problems\_solved: 10,

user\_id: ObjectId('65e3361b39048f209b3ec554')

}

{

total\_problems\_solved: 10,

user\_id: ObjectId('65e3361b39048f209b3ec553')

}{

total\_problems\_solved: 10,

user\_id: ObjectId('65e3361b39048f209b3ec557')

}{

total\_problems\_solved: 10,

user\_id: ObjectId('65e3361b39048f209b3ec555')

}

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

db.users.aggregate([

{

$match: {

mentor\_id: { $exists: true }

}

},

{

$group: {

\_id: "$mentor\_id",

name: { $first: "$name" },

mentee\_count: { $sum: 1 }

}

},

{

$project: {

\_id: 0,

mentor\_id: "$\_id",

name: 1,

mentee\_count: 1

}

}

]);

Result:

{

Name:Gopi,

user\_id: ObjectId('65e3361b39048f209b3ec556')

mentee\_count:1

}

{

Name:kumari,

user\_id: ObjectId('65e3361b39048f209b3ec554')

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: 'topic',

localField: 'topic\_id',

foreignField: 'topic\_id',

as: 'topics'

}

},

{

$lookup: {

from: 'task',

localField: 'topic\_id',

foreignField: 'topic\_id',

as: 'tasks'

}

},

{

$match: {

atn\_status: 'absent',

'tasks.status': 'not completed',

$and: [

{ 'topics.month': { $gte: 'october' } },

{ 'topics.month': { $lte: 'october' } },

{ 'tasks.date': { $gte: ISODate('2020-10-15') } },

{ 'tasks.date': { $lte: ISODate('2020-10-31') } }

]

}

},

{

$count: 'no\_of\_students\_absent'

}

]);

{

}