**ANSWERS:**

**1.** db.topics.aggregate([

{$project :{'topic\_name': 1,'date': '$date','month' : {$month: '$date'},

'year': {$year: '$date'},}},

{$match:{'month': 10,'year': 2020}},

{$project:{'topic\_name': 1,'date': 1}}])

**2.** db.drives.aggregate([

{$project:{'drive\_name': '$dirve\_name','date': 1,

'day': { $dayOfMonth : '$date'},

'month': {$month : '$date'},

'year': {$year: '$date'}}},

{$match: {'year':{$eq : 2020}, 'month':{$eq : 10},

'day': {$gte: 15,$lte:31}}},

{$project: {'drive\_name': 1,'date': 1}}])

**3.** db.drives.aggregate([

{$lookup: {from: 'users',

localField: 'user\_ids',

foreignField: 'userdId',

as: 'res'}}])

**4.** db.codekata.aggregate([

{ $lookup:{

from: 'users',

localField: 'userId',

foreignField: 'userdId',

as: 'user\_details'}},

{ $project: {

'name' : '$user\_details.name',

'problems\_solved': '$problemsSolved'}}])

**5.** db.mentors.aggregate([

{ $lookup: {

from: 'users',

localField: 'mentor\_id',

foreignField: 'userdId',

as: 'mentor\_details'}},

{ $project: {

'mentor\_name': '$mentor\_details.name',

'mentees\_count': {$size: '$mentee\_ids'}}},

{ $match: {'mentees\_count': {$gte: 15}}}])

**6.** db.attendance.aggregate([

{ $lookup:{

from: 'tasks',

localField: 'userId',

foreignField: 'user\_id',

as: 'userTasks'}},

{ $match: {

'userTasks.submission\_date': {

$gte: ISODate("2020-10-15T00:00:00Z"),

$lte: ISODate("2020-11-01T00:00:00Z"),},

'status': 'absent'}},

{ $lookup: {

from: 'users',

localField: 'userId',

foreignField: 'userdId',

as: 'userDetails'}},

{ $project: {

'userDetails': {$arrayElemAt: ["$userDetails", 0]},

'taskDetails': {$arrayElemAt: ["$userTasks", 0]},

'status': 1}},

{ $project: {

'Name': "$userDetails.name",

'Task Name': '$taskDetails.task\_name',

'status': 1,

'Submission date': '$taskDetails.submission\_date',}}])

**1.Users Collection:**

db.users.insertMany([{

'userId': 1,

'name': 'Abishek',

'email': 'abi@gmail.com',

'mobile': '000-000-0000',

'password':'abi@1234'

},

{

'userId': 2,

'name': 'Jessie',

'email': 'jessie@gmail.com',

'mobile': '000-000-0000',

'password':'abi@1234'

},

{

'userId': 3,

'name': 'Ramkumar',

'email': 'ram@gmail.com',

'mobile': '000-000-0000',

'password':'abi@1234'

},

{

'userId': 4,

'name': 'Abisha',

'email': 'sha@gmail.com',

'mobile': '000-000-0000',

'password': 'abi@1234'

},

{

'userId': 5,

'name': 'Gilbert',

'email': 'gilli@gmail.com',

'mobile': '000-000-0000',

'password': 'abi@1234'

}

])

**2. Codekata Collection:**

db.codekata.insertMany([{

'userId': 1,

'problemSolved' :120,

'rank': 3000,

'geekoins':2500

},

{

'userId': 2,

'problemSolved' :220,

'rank': 2000,

'geekoins':4500

},

{

'userId': 3,

'problemSolved' :320,

'rank': 1000,

'geekoins':7500

},

{

'userId': 4,

'problemSolved' :520,

'rank': 400,

'geekoins':11500

},

{

'userId': 5,

'problemSolved' :720,

'rank': 100,

'geekoins':16500

}

])

**3.Attendance Collection:**

db.attendance.insertMany([{

'userId': 1,

'date' : new Date("2020-10-15"),

'status': 'absent',

},

{

'userId': 2,

'date' : new Date("2020-10-15"),

'status': 'present',

},

{

'userId': 3,

'date' : new Date("2020-10-15"),

'status': 'absent',

},

{

'userId': 4,

'date' : new Date("2020-10-15"),

'status': 'prsent',

},

{

'userId': 5,

'date' : new Date("2020-10-15"),

'status': 'present',

}

])

4.**Mentors Collection:**

db.mentors.insertMany([{

'mentor\_id': 5,

'mentee\_ids':[1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16]

},

{

'mentor\_id': 6,

'mentee\_ids':[1,2,3,4]

},

{

'mentor\_id': 7,

'mentee\_ids':[1]

},

{

'mentor\_id': 8,

'mentee\_ids':[1,2,3]

},

{

'mentor\_id': 9,

'mentee\_ids':[1,2,3,4,5,6,7,8]

}

])

**5.Tasks Collection:**

db.tasks.insertMany([{

'user\_id': 1,

'task\_name' : 'TV application design',

'date' : new Date("2020-10-15"),

'submission\_date' : new Date("2020-10-21")

},

{

'user\_id': 2,

'task\_name' : 'TV application design',

'date' : new Date("2020-10-15"),

'submission\_date' : new Date("2020-10-15")

},

{

'user\_id': 3,

'task\_name' : 'TV application design',

'date' : new Date("2020-10-15"),

'submission\_date' : new Date("2020-10-15")

},

{

'user\_id': 4,

'task\_name' : 'TV application design',

'date' : new Date("2020-10-15"),

'submission\_date' : new Date("2020-10-15")

},

{

'user\_id': 5,

'task\_name' : 'TV application design',

'date' : new Date("2020-10-15"),

'submission\_date' : new Date("2020-10-15")

}

])

**6.Company Drive Collection:**

db.company\_drives.insertMany([

{

'drive\_id': 1,

'drive\_name' : 'google',

'users\_ids': [1,2,3,4],

'date' : new Date("2020-10-15")

},

{

'drive\_id': 2,

'drive\_name' : 'hotstar',

'users\_ids': [1,2],

'date' : new Date("2020-10-15")

},

{

'drive\_id': 3,

'drive\_name' : 'microsoft',

'users\_ids': [1,2,3],

'date' : new Date("2020-10-15")

},

{

'drive\_id': 4,

'drive\_name' : 'amazon',

'users\_ids': [4,5],

'date' : new Date("2020-10-15")

},

{

'drive\_id': 5,

'drive\_name' : 'redbus',

'users\_ids': [1,2,3,4],

'date' : new Date("2020-10-15")

}

])

**7.Topics Collection:**

db.topics.insertMany([{

'topic\_id': 1,

'topic\_name' : 'Javascript-functions',

'tasks': ['arrow-functions','inline-functions','IIFE'],

'date' : new Date("2020-10-15")

},

{

'topic\_id': 2,

'topic\_name' : 'Javascript-variables',

'tasks': ['var','let'],

'date' : new Date("2020-10-15")

},

{

'topic\_id': 3,

'topic\_name' : 'Javascript-events',

'tasks': ['event-bubbling','event-listeners'],

'date' : new Date("2020-10-15")

},

{

'topic\_id': 4,

'topic\_name' : 'mysql-crud',

'tasks': ['create-table','update-table','insert-table'],

'date' : new Date("2020-10-15")

},

{

'topic\_id': 5,

'topic\_name' : 'mongo',

'tasks': ['find','aggregate'],

'date' : new Date("2020-10-15")

}

])