Mongo 3

1.Create database named college,collection named s2mca

use college

db.createCollection("stud")

with fields roll,name,age,division,subject,gender

2.Insert data

db.s2mca.insert({roll:1,name:'ram',age:20,div:'A',sub:['phy','che']})

db.s2mca.insert({roll:2,name:'sam',age:21,div:'b',sub:['phy','mat']})

db.s2mca.insert({roll:3,name:'june',age:21,div:'c',sub:['phy','eng']})

db.s2mca.find()

3. Display total number of students in one section

db.s2mca.aggregate([{$match:{div:'A'}},{$count:'total stud in A'}]);

4. **Displaying the total number of students in both the sections and maximum age from both section**

db.s2mca.aggregate([{$group:{_id:'$div',total_st:{$sum:1},max_age:{$max:'$age'}}}])

[

{ _id: 'A', total_st: 2, max_age: 21 },

{ _id: 'b', total_st: 1, max_age: 21 },

{ _id: 'c', total_st: 1, max_age: 21 }

5. **Displaying details of students whose age is greater than 30 using match stage**

db.s2mca.aggregate([{$match:{age:{$gt:20}}}])

6. **Sorting the students on the basis of age**

db.s2mca.aggregate([{'$sort':{'age':1}}])

7. **Sorting the students on the basis of age in descending order**

db.s2mca.aggregate([{'$sort':{'age':-1}}])

8. **Displaying details of a student having the largest age in the section – B**

db.s2mca.aggregate([{$match:{div:"A"}},{'$sort':{'age':-1}},{$limit:1}])

9. **Unwinding students on the basis of subject**

db.s2mca.aggregate([{$unwind:'$sub'}])

10.Calculate average age of students

db.s2mca.aggregate([{$group:{_id:'roll',averageAge:{$avg:'$age'}}}]);

11. // Count the number of male and female students

db.s2mca.aggregate([{$group:{_id:'$gender',count:{$sum:1}}}]);

12.Find courses with highest number of credit

db.s2mca.aggregate([{$sort:{credit:-1}},{$limit:1}])

Regular expression

1. Find students that names start with j

db.s2mca.find({name:/^j/});

2. Find course which contain subject ‘chemistry’

db.s2mca.find({sub:/che/});

3. db.students.find({ name: /^J/ });

// Find courses with codes containing "ENG"

db.course.find({ code: /ENG/ });

4.// Case-insensitive search for students with "june" in their name

db.s2mca.find({name:/june/i});

problem

1.create database named univ and collection named s1mca

2.List all female students

3.List all male students

4.Find total number of students in each department

5.display dpmt name and sum of all male employees in each department

6.display dpmt name and avg marks in each department

AGGEGATE PIPELINE COMMANDS

1. db.s2mca.aggregate([{$match:{gender:'female'}}])
2. db.s2mca.aggregate([{$group:{_id:'$dpmt',tota
   stud:{$sum:1}}}])
   [
    { _id: 'cse', totastud: 2 },
    { _id: 'ce', totastud: 1 },
    { _id: 'it', totastud: 2 }
   ]

3.