

Name-Mahesh Goyal

University Roll No. – 2315001292

Sec - C

- Find the names and CGPAs of all students from the "IT" department

- `db.students.find({department:"IT"},{_id:0, name: 1, cgpa: 1 })`

- List all students whose CGPA is greater than or equal to 8.5. Show only their name, roll number, and department.

- `db.students.find({cgpa: { $gte: 8.5 } },{_id:0,name:1, roll_no:1, department: 1 })`

- Find students who are in either the "ECE" or "ME" department using \$in.

- `db.students.find(`
- `{ department: { $in: ["ECE", "ME"] } }`
- `)`

- Get the name and CGPA of students who are in the 4th year and have a CGPA greater than 8.0.

- `db.students.find(`
- `{ year: 4, cgpa: { $gt: 8.0 } },`
- `{ _id: 0, name: 1, cgpa: 1 }`
- `)`

- Find all students who are not in the "CSE" department and have a CGPA less than or equal to 7.5 using \$and and \$ne.

- `db.students.find({$and:[{department:{$ne:"CSE"}},{cgpa:{$lte:7.5}}]})`
- Display the top 3 students with the highest CGPA across all departments.

- `db.students.find().sort({cgpa:-1}).limit(3)`

- Show the next 3 students after skipping the top 3 based on CGPA (pagination).

- `db.students.find().sort({cgpa:-1}).skip(3).limit(3)`

- Increase the CGPA by 0.2 for all students in the "CSE" department

- `db.students.updateMany({department:"CSE"},{$inc:{cgpa:0.2}})`

- Set the department to "Probation" for all students with CGPA less than 7.0.

- `db.students.updateMany({cgpa:{$lt:7.0}},{$set:{department:"Probation"}})`

- Remove the email field from all students in the "ME" department.

- `db.students.updateMany({department:"ME"},{$unset:{email:""}})`

- Rename the field cgpa to gpa for all students.

- `db.students.updateMany({},{$rename:{"cgpa":"gpa"}})`

- Replace the entire document of a student with roll number "CSE2104" with a new record containing updated values.

```
• db.students.replaceOne(  
•   {roll_number:"CSE2104"},  
•   {  
•     roll_number:"CSE2104",  
•     name:"Updated Name",  
•     department:"CSE",  
•     year:4,  
•     gpa:9.1  
•   }  
• )
```