

# Practical MongoDB Questions

## ♦ Find / Query Operations

- Find the names and CGPAs of all students from the "IT" department.  
`db.ques.find({department:"IT"},{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.ques.find({cgpa:{$gte:8.5}},{name:1, roll_no:1, department:1});`
  - Find students who are in either the "ECE" or "ME" department using \$in.  
`db.ques.find({cgpa:{$gte:8.5}},{name:1, roll_no:1, department:1});`
  - Get the name and CGPA of students who are in the 4th year and have a CGPA greater than 8.0.  
`db.ques.find({year:4, gpa:{$gt:8.0}},{name:1,gpa:1,_id:0});`
  - Find all students who are not in the "CSE" department and have a CGPA less than or equal to 7.5 using \$and and \$ne.  
`db.ques.find({$and:[{department: {$ne: "CSE"}}, {gpa: {$lte: 7.5}}]})`
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## ♦ Sort / Pagination

- `db.ques.find().sort({cgpa:-1}).limit(3);`
  - Display the top 3 students with the highest CGPA across all departments.
  - Show the next 3 students after skipping the top 3 based on CGPA (pagination).  
`db.ques.find().sort({cgpa:-1}).limit(3).skip(3);`
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## ♦ Update Operations

- `db.ques.updateMany({deparment:"CSE"}, {$inc:{cgpa:0.2}})`
  - Increase the CGPA by 0.2 for all students in the "CSE" department.
  - Set the department to "Probation" for all students with CGPA less than 7.0.  
`db.ques.updateMany({cgpa:{$lt:7}},{ $set:{department:"Probation"}});`
  - Remove the email field from all students in the "ME" department.  
`db.ques.updateMany({department:"ME"},{$unset:{email:""}});`
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## Bonus (Advanced)

- `db.ques.updateMany({}, { $rename: { "cgpa": "gpa" } })`
- Rename the field cgpa to gpa for all students.
- Replace the entire document of a student with roll number "CSE2104" with a new record containing updated values.  
`db.ques.replaceOne({roll_no: "CSE2104"}, {roll_no:"CSE2104", name: "Ritu Goyal", department: "EC", year: 1, gpa: 8.0})`