

# ASSIGNMENT

**Name:** Saransh Varshney

**University Roll Number:** 2315001986

**Assignment Number:** 1 (Mongo DB)

## Find / Query Operations

1. `db.students.find({ department: "IT" }, { name: 1, cgpa: 1, _id: 0 });`
2. `db.students.find(  
 { cgpa: { $gte: 8.5 } },  
 { name: 1, roll_no: 1, department: 1, _id: 0 }  
);`
3. `db.students.find(  
 { department: { $in: ["ECE", "ME"] } }  
);`
4. `db.students.find(  
 { year: 4, cgpa: { $gt: 8.0 } },  
 { name: 1, cgpa: 1, _id: 0 }  
);`
5. `db.students.find(  
 {  
 $and: [  
 { department: { $ne: "CSE" } },  
 { cgpa: { $lte: 7.5 } }  
 ]  
 }  
);`

## Sort / Pagination

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

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

## Update Operations

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

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

10.  
`db.students.updateMany(  
 { department: "ME" },  
 { $unset: { email: "" } }  
);`

## Bonus (Advanced)

11.  
`db.students.updateMany(  
 {},`

```
    { $rename: { "cgpa": "gpa" } }  
  );
```

12.

```
db.students.replaceOne(  
  { roll_no: "CSE2104" },  
  {  
    roll_no: "CSE2104",  
    name: "Simran Kaur",  
    year: 3,  
    department: "CSE",  
    cgpa: 9.4,  
    email: "simran.kaur@univ.edu"  
  }  
);
```