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

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

2. 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})
```

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

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

4. 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})
```

5. 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}}]})
```

6. Display the top 3 students with the highest CGPA across all departments.

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

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

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

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

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

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

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

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

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

11. Rename the field cgpa to gpa for all students.

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