MongoDB Practical Assignment Solutions

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

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

2. Students with CGPA >= 8.5 (name, roll number, department):

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

3. Students in "ECE" or "ME" department:

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

4. Students in 4th year and CGPA > 8.0 (name and CGPA):

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

5. Students not in "CSE" and CGPA <= 7.5:

db.students.find({ $and: [{ department: { $ne: "CSE" } }, { cgpa: { $lte: 7.5 } }] })

6. Top 3 students with highest CGPA:

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

7. Next 3 students after top 3 by CGPA:

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

8. Increase CGPA by 0.2 for "CSE" students:

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

9. Set department to "Probation" where CGPA < 7.0:

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

10. Remove email field from "ME" department students:

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

11. Rename field cgpa to gpa for all students:

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

12. Replace entire doc of student with roll_no "CSE2104":

```
db.students.replaceOne({ roll_no: "CSE2104" }, {

  roll_no: "CSE2104", name: "Simran Kaur", year: 3,

  department: "CSE", cgpa: 9.4, email: "simrankaur@univ.edu"

})
```

By: Saransh Sharma