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Find the following Queries
Design a 'COLLEGE'
collection and insert required documents.

```
db.createCollection("college")
```

```
db.college.insertMany([{name:'sirisha',age:20,gender:'female',dept:"computer
science",year_of_ad:2022,courses:['data structure','operating system','english','maths'],gpa:3.7},
{name:'meena',age:30,gender:'female',dept:"mechanical engineering",year_of_ad:1999,courses:
['operating system','maths','rdbms','fluid mechanics'],gpa:3.2},
{name:'ramesht',age:16,gender:'male',dept:"business communications",year_of_ad:2024,courses:
['english','business studies','maths'],gpa:2.9},{name:'vikas',age:44,gender:'male',dept:"mechinal
engineering",year_of_ad:1994,courses:['operating system','maths','rdbms','fluid mechanics'],gpa:3.5}])
```

1. **Retrieve the names and GPAs of the top 2 students with a GPA greater than 3.0**

```
db.college.find({gpa:{$gt:3.0}},{name:1,gpa:1}).sort({gpa:-1}).limit(2)
```

2. **Find the first 3 students enrolled in the "Mechanical Engineering" department, showing only their names and admission year.**

Your text here 1

```
db.college.find({dept:"mechanicalengineering"},{name:1,year_of_ad:1}).sort({year_of_ad:1}).limit(3)
```

3. **Find the students who is taking both "Data Structures" and "Operating Systems" courses, and project their name, courses, and GPA.**

```
db.college.find({courses:{$all:['operating system','data structure']}},{name:1,courses:1,gpa:1})
```

4. **Find 2 male students who are older than 23, projecting their name, age, and gender.**

```
db.college.find({gender:'male',age:{$gt:23}},{name:1,age:1,gender:1}).limit(2)
```

5. **Find all students who are aged between 18 and 24, and project their name, age, and department.**

```
db.college.find({age:{$gte:18,$lte:24}},{name:1,age:1,dept:1})
```