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Task:

1. Create a database sms in mongodb

Solution:
     Use sms

2. Create collection student with fields name,dateofbirth,city,qualification,email,phone

Solution:
     In mongoDB fields can be created while inserting the records

3. Insert one student document

Solution:
```
db.student.insertOne({
_id:"s001",
name:"rajesh",
dateofbirth:new Date(1980-12-17),
city:"kolkata",
qualification:"graduate",
email:"rajesh@gmail.com",
phone:09830978900
})
```

4. Insert these values into student collection.
's001','rajesh','1980-12-17','kolkata','graduate','rajesh@gmail.com','09830978900'

's002','john','1949-1-7','hyderabad','postgraduate','john@yahoo.com','9833978933'

's003','kunal','1967-2-3','pune','postgraduate','kunal@gmail.com','09830922900'

's004','maya','1990-12-17','kolkata','graduate','maya.com','09830765900'

's005','jadeja','1940-1-23','kolkata','postgraduate','jadeja@yahoo.com','09837865432'

Solution:

```
db.student.insertMany([
 {
   _id: 's002',
   name: 'john',
   dateofbirth: new Date('1949-01-07'),
   city: 'hyderabad',
   qualification: 'postgraduate',
   email: 'john@yahoo.com',
   phone: '9833978933'
 },
 {
   _id: 's003',
   name: 'kunal',
   dateofbirth: new Date('1967-02-03'),
   city: 'pune',
   qualification: 'postgraduate',
   email: 'kunal@gmail.com',
   phone: '09830922900'
 },
 {
   _id: 's004',
   name: 'maya',
   dateofbirth: new Date('1990-12-17'),
   city: 'kolkata',
   qualification: 'graduate',
   email: 'maya.com',
   phone: '09830765900'
 },
 {
   _id: 's005',
   name: 'jadeja',
   dateofbirth: new Date('1940-01-23'),
   city: 'kolkata',
   qualification: 'postgraduate',
   email: 'jadeja@yahoo.com',
   phone: '09837865432'
 }
])
```

5. Use query operators to find
i) Students from city kolkata

Solution:
    db.student.find({city:"kolkata"})

Output:

```
    _id: 's001',
    name: 'rajesh',
    dateofbirth: 1970-01-01T00:00:01.951Z,
    city: 'kolkata',
    qualification: 'graduate',
    email: 'rajesh@gmail.com',
    phone: 9830978900
  }
  {
    _id: 's004',
    name: 'maya',
    dateofbirth: 1990-12-17T00:00:00.000Z,
    city: 'kolkata',
    qualification: 'graduate',
    email: 'maya.com',
    phone: '09830765900'
  }
  {
    _id: 's005',
    name: 'jadeja',
    dateofbirth: 1940-01-23T00:00:00.000Z,
    city: 'kolkata',
    qualification: 'postgraduate',
    email: 'jadeja@yahoo.com',
    phone: '09837865432'
```

ii) Postgraduate students

Solution:
     db.student.find({qualification:"postgraduate"})

Output:

```
 _id: 's002',
 name: 'john',
 dateofbirth: 1949-01-07T00:00:00.000Z,
 city: 'hyderabad',
 qualification: 'postgraduate',
 email: 'john@yahoo.com',
 phone: '9833978933'
}
{

 _id: 's003',
 name: 'kunal',
 dateofbirth: 1967-02-03T00:00:00.000Z,
 city: 'pune',
 qualification: 'postgraduate',
 email: 'kunal@gmail.com',
 phone: '09830922900'
}
{

 _id: 's005',
 name: 'jadeja',
 dateofbirth: 1940-01-23T00:00:00.000Z,
 city: 'kolkata',
 qualification: 'postgraduate',
 email: 'jadeja@yahoo.com',
 phone: '09837865432'
```
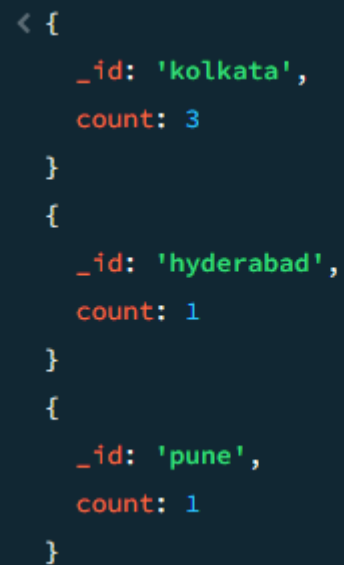
iii)Find number of students in each city

Solution:

```
db.student.aggregate({
 $group:{
   _id:"$city",
    count:{$sum:1}
  }
})
```
Output:

```
< {
    _id: 'kolkata',
    count: 3
  }
  {
    _id: 'hyderabad',
    count: 1
  }
  {
    _id: 'pune',
    count: 1
  }
```

iv) Sort students based on name

Solution:
```
db.student.find().sort({name:1})
```

Output:

```
< {
    _id: 's005',
    name: 'jadeja',
    dateofbirth: 1940-01-23T00:00:00.000Z,
    city: 'kolkata',
    qualification: 'postgraduate',
    email: 'jadeja@yahoo.com',
    phone: '09837865432'
}
```

```
{
  _id: 's002',
  name: 'john',
  dateofbirth: 1949-01-07T00:00:00.000Z,
  city: 'hyderabad',
  qualification: 'postgraduate',
  email: 'john@yahoo.com',
  phone: '9833978933'
}
{
  _id: 's003',
  name: 'kunal',
  dateofbirth: 1967-02-03T00:00:00.000Z,
  city: 'pune',
  qualification: 'postgraduate',
  email: 'kunal@gmail.com',
  phone: '09830922900'
}
{
  _id: 's004',
  name: 'maya',
  dateofbirth: 1990-12-17T00:00:00.000Z,
  city: 'kolkata',
  qualification: 'graduate',
  email: 'maya.com',
```

```
    phone: '09830765900'
  }
  {
    _id: 's001',
    name: 'rajesh',
    dateofbirth: 1970-01-01T00:00:01.951Z,
    city: 'kolkata',
    qualification: 'graduate',
    email: 'rajesh@gmail.com',
    phone: 9830978900
  }
```