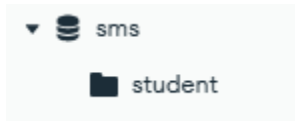**Day:5**

Name:Dharunya s
Date:11-07-2025

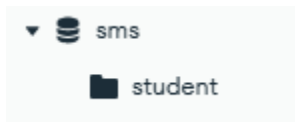**1. Create a database sms in mongodb.**

use sms

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

```
db.student.insertOne({
  sid: "s001",
  name: "ramu",
  dateofbirth: new Date("1980-12-17"),
  city: "chennai",
  qualification: "ug",
  email: "ramu@gmail.com",
  phone: "09830978900"
});
```


3. Insert one student document.

```
db.student.insertOne({
  sid: "s001",
  name: "ramu",
  dateofbirth: new Date("1980-12-17"),
  city: "chennai",
  qualification: "ug",
  email: "ramu@gmail.com",
  phone: "09830978900"
});
```

```
{
  _id: ObjectId('6870f763fd947951386c9783'),
  sid: 's001',
  name: 'ramu',
  dateofbirth: 1980-12-17T00:00:00.000Z,
  city: 'chennai',
  qualification: 'ug',
  email: 'ramu@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'

```
{
  _id: ObjectId('6870f953fd947951386c9789'),
  sid: 's006',
  name: 'rajesh',
  dateofbirth: 1980-12-17T00:00:00.000Z,
  city: 'kolkata',
  qualification: 'graduate',
  email: 'rajesh@gmail.com',
  phone: '09830978900'
}
```

```
{
  _id: ObjectId('6870f86ffd947951386c9785'),
  sid: 's002',
  name: 'john',
  dateofbirth: 1949-01-07T00:00:00.000Z,
  city: 'hyderabad',
  qualification: 'postgraduate',
  email: 'john@yahoo.com',
  phone: '9833978933'
}
{
  _id: ObjectId('6870f86ffd947951386c9786'),
  sid: 's003',
  name: 'kunal',
  dateofbirth: 1967-02-03T00:00:00.000Z,
  city: 'pune',
  qualification: 'postgraduate',
  email: 'kunal@gmail.com',
  phone: '09830922900'
}
```

```
{
  _id: ObjectId('6870f86ffd947951386c9787'),
  sid: 's004',
  name: 'maya',
  dateofbirth: 1990-12-17T00:00:00.000Z,
  city: 'kolkata',
  qualification: 'graduate',
  email: 'maya.com',
  phone: '09830765900'
}
{
  _id: ObjectId('6870f86ffd947951386c9788'),
  sid: 's005',
  name: 'jadeja',
  dateofbirth: 1940-01-23T00:00:00.000Z,
  city: 'kolkata',
  qualification: 'postgraduate',
  email: 'jadeja@yahoo.com',
  phone: '09837865432'
}
```

5. Use query operators to find
i) Students from city kolkata
db.student.find({ city: "kolkata" });

```
{
  _id: ObjectId('6870f86ffd947951386c9787'),
  sid: 's004',
  name: 'maya',
  dateofbirth: 1990-12-17T00:00:00.000Z,
  city: 'kolkata',
  qualification: 'graduate',
  email: 'maya.com',
  phone: '09830765900'
}
{
  _id: ObjectId('6870f86ffd947951386c9788'),
  sid: 's005',
  name: 'jadeja',
  dateofbirth: 1940-01-23T00:00:00.000Z,
  city: 'kolkata',
  qualification: 'postgraduate',
  email: 'jadeja@yahoo.com',
  phone: '09837865432'
}
```

```
{
  _id: ObjectId('6870f953fd947951386c9789'),
  sid: 's006',
  name: 'rajesh',
  dateofbirth: 1980-12-17T00:00:00.000Z,
  city: 'kolkata',
  qualification: 'graduate',
  email: 'rajesh@gmail.com',
  phone: '09830978900'
}
```

ii) Postgraduate students
db.student.find({ qualification: "postgraduate" });

```
{
  _id: ObjectId('6870f86ffd947951386c9785'),
  sid: 's002',
  name: 'john',
  dateofbirth: 1949-01-07T00:00:00.000Z,
  city: 'hyderabad',
  qualification: 'postgraduate',
  email: 'john@yahoo.com',
  phone: '9833978933'
}
{
  _id: ObjectId('6870f86ffd947951386c9786'),
  sid: 's003',
  name: 'kunal',
  dateofbirth: 1967-02-03T00:00:00.000Z,
  city: 'pune',
  qualification: 'postgraduate',
  email: 'kunal@gmail.com',
  phone: '09830922900'
}
```

```
{
  _id: ObjectId('6870f86ffd947951386c9788'),
  sid: '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

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

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

iv) Sort students based on name.
db.student.find().sort({ name: 1 });
{
  _id: ObjectId('6870f86ffd947951386c9788'),
  sid: 's005',
  name: 'jadeja',
  dateofbirth: 1940-01-23T00:00:00.000Z,
  city: 'kolkata',
  qualification: 'postgraduate',
  email: 'jadeja@yahoo.com',
  phone: '09837865432'
}
{
  _id: ObjectId('6870f86ffd947951386c9785'),
  sid: 's002',
  name: 'john',
  dateofbirth: 1949-01-07T00:00:00.000Z,
  city: 'hyderabad',
  qualification: 'postgraduate',
  email: 'john@yahoo.com',
  phone: '9833978933'
}
{
  _id: ObjectId('6870f86ffd947951386c9786'),
```

```
    sid: 's003',
    name: 'kunal',
    dateofbirth: 1967-02-03T00:00:00.000Z,
    city: 'pune',
    qualification: 'postgraduate',
    email: 'kunal@gmail.com',
    phone: '09830922900'
  }
  {
    _id: ObjectId('6870f86ffd947951386c9787'),
    sid: 's004',
    name: 'maya',
    dateofbirth: 1990-12-17T00:00:00.000Z,
    city: 'kolkata',
    qualification: 'graduate',
    email: 'maya@gmail.com',
    phone: '09830765900'
  }
  {
    _id: ObjectId('6870f953fd947951386c9789'),
    sid: 's006',
    name: 'rajesh',
    dateofbirth: 1980-12-17T00:00:00.000Z,
    city: 'kolkata',
    qualification: 'graduate',
    email: 'rajesh@gmail.com',
    phone: '09830978900'
  }
  {
    _id: ObjectId('6870f834fd947951386c9784'),
    sid: 's001',
    name: 'ramu',
    dateofbirth: 1980-12-17T00:00:00.000Z,
    city: 'chennai',
    qualification: 'ug',
    email: 'ramu@gmail.com',
    phone: '09830978900'
  }
  {
    _id: ObjectId('6870f86ffd947951386c9788'),
    sid: 's005',
    name: 'jadeja',
    dateofbirth: 1940-01-23T00:00:00.000Z,
    city: 'kolkata',
```

```
  qualification: 'postgraduate',
  email: 'jadeja@yahoo.com',
  phone: '09837865432'
}
{
  _id: ObjectId('6870f86ffd947951386c9785'),
  sid: 's002',
  name: 'john',
  dateofbirth: 1949-01-07T00:00:00.000Z,
  city: 'hyderabad',
  qualification: 'postgraduate',
  email: 'john@yahoo.com',
  phone: '9833978933'
}
{
  _id: ObjectId('6870f86ffd947951386c9786'),
  sid: 's003',
  name: 'kunal',
  dateofbirth: 1967-02-03T00:00:00.000Z,
  city: 'pune',
  qualification: 'postgraduate',
  email: 'kunal@gmail.com',
  phone: '09830922900'
}
{
  _id: ObjectId('6870f86ffd947951386c9787'),
  sid: 's004',
  name: 'maya',
  dateofbirth: 1990-12-17T00:00:00.000Z,
  city: 'kolkata',
  qualification: 'graduate',
  email: 'maya@gmail.com',
  phone: '09830765900'
}
{
  _id: ObjectId('6870f953fd947951386c9789'),
  sid: 's006',
  name: 'rajesh',
  dateofbirth: 1980-12-17T00:00:00.000Z,
  city: 'kolkata',
  qualification: 'graduate',
  email: 'rajesh@gmail.com',
  phone: '09830978900'
}
```

```
{
  _id: ObjectId('6870f834fd947951386c9784'),
  sid: 's001',
  name: 'ramu',
  dateofbirth: 1980-12-17T00:00:00.000Z,
  city: 'chennai',
  qualification: 'ug',
  email: 'ramu@gmail.com',
  phone: '09830978900'
}
```