

DAY 5

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DATE: 11-07-2025

Tasks:

1. Create a database sms in mongodb.

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

3. Insert one student document.

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'

5. Use query operators to find

i) Students from city kolkata

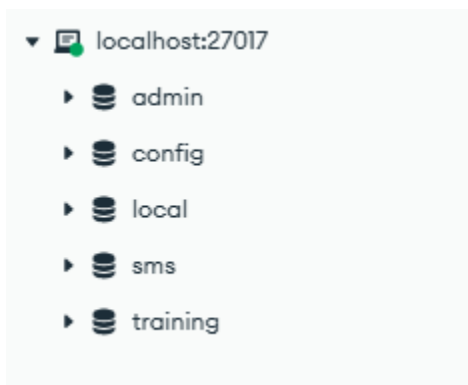
ii) Postgraduate students

iii) Find number of students in each city

iv) Sort students based on name.

Solution:

1.Output:



2 & 3.Query:

```
db.student.insertOne({
  _id:'s006',
  name:'sai',
  dob:'1988-02-07',
  city:'hyderabad',
  qualification:'graduate',
  email:'sai@gmail.com',
  phone:'9653773290'});
```

```
db.student.find();
```

Output:

```
< {
  acknowledged: true,
  insertedId: 's006'
}
```

```
< {
  _id: 's006',
  name: 'sai',
  dob: '1988-02-07',
  city: 'hyderabad',
  qualification: 'graduate',
  email: 'sai@gmail.com',
  phone: '9653773290'
}
```

4.Query:

```
db.student.insertMany([
  {
    _id: 's001',
    name: 'rajesh',
    dob: '1980-12-17',
    city: 'kolkata',
    qualification: 'graduate',
    email: 'rajesh@gmail.com',
    phone: '09830978900'
  },

  {
    _id: 's002',
    name: 'john',
    dob: '1949-01-07',
    city: 'hyderabad',
    qualification: 'postgraduate',
    email: 'john@yahoo.com',
    phone: '9833978933'
  },

  {
    _id: 's003',
    name: 'kunal',
    dob: '1967-02-03',
    city: 'pune',
    qualification: 'postgraduate',
    email: 'kunal@gmail.com',
    phone: '09830922900'
  },
])
```

```
{
  _id: 's004',
  name: 'maya',
  dob: '1990-12-17',
  city: 'kolkata',
  qualification: 'graduate',
  email: 'maya@gmail.com',
  phone: '09830765900'
},

{
  _id: 's005',
  name: 'jadeja',
  dob: '1940-01-23',
  city: 'kolkata',
  qualification: 'postgraduate',
  email: 'jadeja@yahoo.com',
  phone: '09837865432'
}
]);
```

Output:

```
< {
  acknowledged: true,
  insertedIds: {
    '0': 's001',
    '1': 's002',
    '2': 's003',
    '3': 's004',
    '4': 's005'
  }
}
```

5(i).Query:

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

Output:

```
< {
  _id: 's001',
  name: 'rajesh',
  dob: '1980-12-17',
  city: 'kolkata',
  qualification: 'graduate',
  email: 'rajesh@gmail.com',
  phone: '09830978900'
}
{
  _id: 's004',
  name: 'maya',
  dob: '1990-12-17',
  city: 'kolkata',
  qualification: 'graduate',
  email: 'maya@gmail.com',
  phone: '09830765900'
}
{
  _id: 's005',
  name: 'jadeja',
  dob: '1940-01-23',
  city: 'kolkata',
  qualification: 'postgraduate',
  email: 'jadeja@yahoo.com',
  phone: '09837865432'
}
```

5(ii).Query:

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

Output:

```
< {
  _id: 's002',
  name: 'john',
  dob: '1949-01-07',
  city: 'hyderabad',
  qualification: 'postgraduate',
  email: 'john@yahoo.com',
  phone: '9833978933'
}
{
  _id: 's003',
  name: 'kunal',
  dob: '1967-02-03',
  city: 'pune',
  qualification: 'postgraduate',
  email: 'kunal@gmail.com',
  phone: '09830922900'
}
{
  _id: 's005',
  name: 'jadeja',
  dob: '1940-01-23',
  city: 'kolkata',
  qualification: 'postgraduate',
  email: 'jadeja@yahoo.com',
  phone: '09837865432'
}
```

5(iii).Query:

```
db.student.aggregate({$group:{_id:"$city",no_of_students:{$count:{}}}},{$project:{city:"$_id",  
no_of_students:1,_id:0}});
```

Output:

```
< {  
  no_of_students: 1,  
  city: 'pune'  
}  
{  
  no_of_students: 2,  
  city: 'hyderabad'  
}  
{  
  no_of_students: 3,  
  city: 'kolkata'  
}
```

5(iv).Query:

```
db.student.aggregate({$sort:{"name":1}},{$project:{_id:1,name:1}});
```

Output:

```
< {
  _id: 's005',
  name: 'jadeja'
}
{
  _id: 's002',
  name: 'john'
}
{
  _id: 's003',
  name: 'kunal'
}
{
  _id: 's004',
  name: 'maya'
}
{
  _id: 's001',
  name: 'rajesh'
}
{
  _id: 's006',
  name: 'sai'
}
```