

```
Atlas atlas-13uu4t-shard-0 [primary] university> db.Books.insertMany([
    {
      Title: "Sea Change",
      Author: "Gina Chung",
      Genres: ["Fiction", "Fantasy"],
      Pages: 288,
      Rating: 3
    },
    {
      Title: "Flowerheart",
      Author: "Catherine Bakewell",
      Genres: ["Fantasy", "Romance", "Fiction"],
      Pages: 352,
      Rating: 3
    },
    {
      Title: "Batman",
      Author: "Mark Wait",
      Genres: ["Comics", "Superheroes"],
      Pages: 160,
      Rating: 4
    },
    {
      Title: "Wearhering",
      Author: "Arline Geronimus",
      Genres: ["Science", "History"],
      Pages: 368,
      Rating: 4
    }
  ]
)
```

```

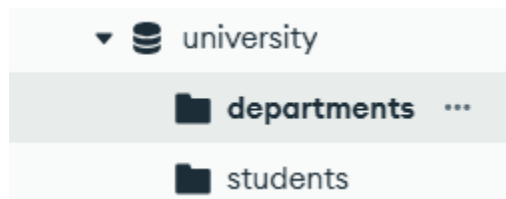
      Rating: 4
    },
    {
      Title: "What a Bee Knows",
      Author: "Stephen Buchmann",
      Genres: ["Science", "Animal", "Biology"],
      Pages: 363,
      Rating: 5
    },
    {
      Title: "Daredevil",
      Author: "Stephan Buchmann",
      Genres: ["Comics"],
      Pages: 120,
      Rating: 3
    }
  ]
)
```

```
> db.Books.find()
< {
  _id: ObjectId('68947d1d2f7d5092e0ac9954'),
  Title: 'Sea Change',
  Author: 'Gina Chung',
  Genres: [
    'Fiction',
    'Fantasy'
  ],
  Pages: 288,
  Rating: 3
}
{
  _id: ObjectId('68947d1d2f7d5092e0ac9955'),
  Title: 'Flowerheart',
  Author: 'Catherine Bakewell',
  Genres: [
    'Fantasy',
    'Romance',
    'Fiction'
  ],
  Pages: 352,
  Rating: 3
}
{
  _id: ObjectId('68947d1d2f7d5092e0ac9956'),
  Title: 'Batman',
  Author: 'Mark Wait',
```




















```
    Genres: [  
      'Comics',  
      'Superheroes'  
    ],  
    Pages: 160,  
    Rating: 4  
  }  
  {  
    _id: ObjectId('68947d1d2f7d5092e0ac9957'),  
    Title: 'Wearhering',  
    Author: 'Arline Geronimus',  
    Genres: [  
      'Science',  
      'History'  
    ],  
    Pages: 368,  
    Rating: 4  
  }  
  {  
    _id: ObjectId('68947d1d2f7d5092e0ac9958'),  
    Title: 'What a Bee Knows',  
    Author: 'Stephen Buchmann',  
    Genres: [  
      'Science',  
      'Animal',  
      'Biology'  
    ],  
    Pages: 363,  
    Rating: 5
```

```
    Rating: 5
  }
  {
    _id: ObjectId('68947d1d2f7d5092e0ac9959'),
    Title: 'Daredevil',
    Author: 'Stephan Buchmann',
    Genres: [
      'Comics'
    ],
    Pages: 120,
    Rating: 3
  }
}
```














































ไฟล์ 2



🏠 departments

	_id ObjectId	deptNo String	deptName String	cont
1	ObjectId('68947fd3b92dcb8...	"d01"	"Computer Science"	"085"   
2	ObjectId('68947fd3b92dcb8...	"d02"	"Business Administration"	"096"   
3	ObjectId('68947fd3b92dcb8...	"d03"	"Electrical Engineering"	"086"   
4	ObjectId('68947fd3b92dcb8...	"d04"	"Mechanical Engineering"	"097"   
5	ObjectId('68947fd3b92dcb8...	"d05"	"Civil Engineering"	"089"   
6	ObjectId('68947fd3b92dcb8...	"d06"	"Chemical Engineering"	"081"   
7	ObjectId('68947fd3b92dcb8...	"d07"	"Biotechnology"	"082"   
8	ObjectId('68947fd3b92dcb8...	"d08"	"Information Technology"	"083"   

🏠 students

	_id ObjectId	studentID String	studentName String	emai
1	ObjectId('68947fc0b92dcb8...	"s0001"	"Smith Loy"	"smi"   
2	ObjectId('68947fc0b92dcb8...	"s0002"	"Mary Jane"	"mar"   
3	ObjectId('68947fc0b92dcb8...	"s0003"	"Wiily Mac"	"wil"   
4	ObjectId('68947fc0b92dcb8...	"s0004"	"John Doe"	"joh"   
5	ObjectId('68947fc0b92dcb8...	"s0005"	"Alice Green"	"ali"   
6	ObjectId('68947fc0b92dcb8...	"s0006"	"Robert Brown"	"rob"   
7	ObjectId('68947fc0b92dcb8...	"s0007"	"Linda White"	"lin"   
8	ObjectId('68947fc0b92dcb8...	"s0008"	"James Black"	"jam"   
9	ObjectId('68947fc0b92dcb8...	"s0009"	"Patricia Yellow"	"pat"   
10	ObjectId('68947fc0b92dcb8...	"s0010"	"Michael Blue"	"mic"   
11	ObjectId('68947fc0b92dcb8...	"s0011"	"Barbara Violet"	"bar"   
12	ObjectId('68947fc0b92dcb8...	"s0012"	"David Gray"	"dav"   
13	ObjectId('68947fc0b92dcb8...	"s0013"	"Susan Orange"	"sus"   
14	ObjectId('68947fc0b92dcb8...	"s0014"	"Charles Purple"	"cha"   
15	ObjectId('68947fc0b92dcb8...	"s0015"	"Jennifer Brown"	"jen"   

```
> db.students.updateOne(
  {studentID:"s0003"},
  {$set: {email: "willy@gmail.com"}}
)

< {
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 0,
  upsertedCount: 0
}
```

A)

```
  {
    "_id": {...},
    "studentID": "s0003",
    "studentName": "Willy Mac",
    "email": "willy@gmail.com",
    "deptNo": "d02"
  }
```

```
> db.students.aggregate([{$match: {deptNo: "d01"}}])
< {
  _id: ObjectId('68947fc0b92dcb81c0899a25'),
  studentID: 's0001',
  studentName: 'Smith Loy',
  email: 'smith@gmail.com',
  deptNo: 'd01'
}
{
  _id: ObjectId('68947fc0b92dcb81c0899a26'),
  studentID: 's0002',
  studentName: 'Mary Jane',
  email: 'mar@hotmail.com',
  deptNo: 'd01'
}
{
  _id: ObjectId('68947fc0b92dcb81c0899a2d'),
  studentID: 's0009',
  studentName: 'Patricia Yellow',
  email: 'patricia@gmail.com',
  deptNo: 'd01'
}
```

B)

```
> db.students.find({
  $or: [
    { deptNo: "d02" },
    { email: "jennifer@gmail.com"}
  ]
})
< {
  _id: ObjectId('68947fc0b92dcb81c0899a27'),
  studentID: 's0003',
  studentName: 'Wily Mac',
  email: 'willy@gmail.com',
  deptNo: 'd02'
}
{
  _id: ObjectId('68947fc0b92dcb81c0899a2c'),
  studentID: 's0008',
  studentName: 'James Black',
  email: 'james@gmail.com',
  deptNo: 'd02'
}
{
  _id: ObjectId('68947fc0b92dcb81c0899a33'),
  studentID: 's0015',
  studentName: 'Jennifer Brown',
  email: 'jennifer@gmail.com',
  deptNo: 'd07'
}
```

c)


```
> db.students.aggregate([
  {
    $group: {
      _id: "$deptNo",
      totalStudents: {$sum: 1}
    }
  }
])
< {
  _id: 'd08',
  totalStudents: 1
}
{
  _id: 'd02',
  totalStudents: 2
}
{
  _id: 'd03',
  totalStudents: 1
}
{
  _id: 'd04',
  totalStudents: 2
}
{
  _id: 'd01',
  totalStudents: 3
}
```

D)

```
{
  _id: 'd07',
  totalStudents: 2
}
{
  _id: 'd06',
  totalStudents: 2
}
{
  _id: 'd05',
  totalStudents: 2
}
```