Assignment No.8

Name : Shailesh Pawar

PRN : 123B1B230

1. Create Database PCCOE

Code :

use PCCOE_230

2.. Create Collections: Teachers_230 and Students_230

Code :

db.createCollection("Teachers_234")

 db.createCollection("Students_234")

Output :

```
pccoe_230>  db.createCollection("Teachers_230")
{ ok: 1 }
pccoe_230>  db.createCollection("Students_230")
{ ok: 1 }
```

3.Insert sample data into Teachers

Code :

db.Teachers_230.insertMany([

 {

  Tname: "Praveen",

  dno: 101,

  dname: "COMP",

  experience: 5,

  salary: 12000,

  date_of_joining: new Date("2019-06-01")

 },

 {

  Tname: "Anita",

dno: 102,

dname: "IT",

experience: 7,

salary: 9500,

date_of_joining: new Date("2018-08-15")

},

{

Tname: "Ravi",

dno: 103,

dname: "E&TC",

experience: 6,

salary: 11000,

date_of_joining: new Date("2020-01-10")

}

])

Output :

```
{
  acknowledged: true,
  insertedIds: {
    '0': ObjectId('67f958ae2acd157378b71236'),
    '1': ObjectId('67f958ae2acd157378b71237'),
    '2': ObjectId('67f958ae2acd157378b71238')
  }
}
```

4.Insert data into Students

Code :

```
db.Students_230.insertMany([
{ Sname: "Rahul", roll_no: 1, class: "SE" },
{ Sname: "xyz", roll_no: 2, class: "TE" }
])
```

Output :

```
{
  acknowledged: true,
  insertedIds: {
    '0': ObjectId('67f95f852acd157378b71239'),
    '1': ObjectId('67f95f852acd157378b7123a')
  }
}
```

5. Find all teachers

Code :

db.Teachers_230.find()

Output :

```
pccoe_230> db.Teachers_230.find()
[
  {
    _id: ObjectId('67f958ae2acd157378b71236'),
    Tname: 'Praveen',
    dno: 101,
    dname: 'COMP',
    experience: 5,
    salary: 12000,
    date_of_joining: ISODate('2019-06-01T00:00:00.000Z')
  },
  {
    _id: ObjectId('67f958ae2acd157378b71237'),
    Tname: 'Anita',
    dno: 102,
    dname: 'IT',
    experience: 7,
    salary: 9500,
    date_of_joining: ISODate('2018-08-15T00:00:00.000Z')
  },
  {
    _id: ObjectId('67f958ae2acd157378b71238'),
    Tname: 'Ravi',
    dno: 103,
    dname: 'E&TC',
    experience: 6,
    salary: 11000,
    date_of_joining: ISODate('2020-01-10T00:00:00.000Z')
  }
]
```

6. Teachers from Computer Dept

Code :

db.Teachers_230.find({ dname: "COMP" })

Output :

```
pccoe_230> db.Teachers_230.find({ dname: "COMP" })
[
  {
    _id: ObjectId('67f958ae2acd157378b71236'),
    Tname: 'Praveen',
    dno: 101,
    dname: 'COMP',
    experience: 5,
    salary: 12000,
    date_of_joining: ISODate('2019-06-01T00:00:00.000Z')
  }
]
```

7.Teachers from COMP, IT, and E&TC

Code :

db.Teachers_230.find({ dname: { $in: ["COMP", "IT", "E&TC"] } })

Output :

```
pccoe_230> db.Teachers_230.find({ dname: { $in: ["COMP", "IT", "E&TC"] } })
[
  {
    _id: ObjectId('67f958ae2acd157378b71236'),
    Tname: 'Praveen',
    dno: 101,
    dname: 'COMP',
    experience: 5,
    salary: 12000,
    date_of_joining: ISODate('2019-06-01T00:00:00.000Z')
  },
  {
    _id: ObjectId('67f958ae2acd157378b71237'),
    Tname: 'Anita',
    dno: 102,
    dname: 'IT',
    experience: 7,
    salary: 9500,
    date_of_joining: ISODate('2018-08-15T00:00:00.000Z')
  },
  {
    _id: ObjectId('67f958ae2acd157378b71238'),
    Tname: 'Ravi',
    dno: 103,
    dname: 'E&TC',
    experience: 6,
    salary: 11000,
    date_of_joining: ISODate('2020-01-10T00:00:00.000Z')
  }
]
```

8.From COMP, IT, and E&TC with salary ≥ 10000

Code :

```
db.Teachers_230.find({
  dname: { $in: ["COMP", "IT", "E&TC"] },
  salary: { $gte: 10000 }
})
```

Output :

```
pccoe_230> db.Teachers_230.find({
...    dname: { $in: ["COMP", "IT", "E&TC"] },
...    salary: { $gte: 10000 }
... })
...
[
  {
    _id: ObjectId('67f958ae2acd157378b71236'),
    Tname: 'Praveen',
    dno: 101,
    dname: 'COMP',
    experience: 5,
    salary: 12000,
    date_of_joining: ISODate('2019-06-01T00:00:00.000Z')
  },
  {
    _id: ObjectId('67f958ae2acd157378b71238'),
    Tname: 'Ravi',
    dno: 103,
    dname: 'E&TC',
    experience: 6,
    salary: 11000,
    date_of_joining: ISODate('2020-01-10T00:00:00.000Z')
  }
]
```

8.Students with roll_no = 2 or Sname = "xyz"

Code :

```
db.Students_230.find({
  $or: [{ roll_no: 2 }, { Sname: "xyz" }]
})
```

Output :

```
pccoe_230> db.Teachers_230.find({
...    dname: { $in: ["COMP", "IT", "E&TC"] },
...    salary: { $gte: 10000 }
... })
...
[
  {
    _id: ObjectId('67f958ae2acd157378b71236'),
    Tname: 'Praveen',
    dno: 101,
    dname: 'COMP',
    experience: 5,
    salary: 12000,
    date_of_joining: ISODate('2019-06-01T00:00:00.000Z')
  },
  {
    _id: ObjectId('67f958ae2acd157378b71238'),
    Tname: 'Ravi',
    dno: 103,
    dname: 'E&TC',
    experience: 6,
    salary: 11000,
    date_of_joining: ISODate('2020-01-10T00:00:00.000Z')
  }
]
pccoe_230> db.Students_230.find({
...    $or: [{ roll_no: 2 }, { Sname: "xyz" }]
... })
[
  {
    _id: ObjectId('67f95f852acd157378b7123a'),
    Sname: 'xyz',
    roll_no: 2,
    class: 'TE'
  }
]
```

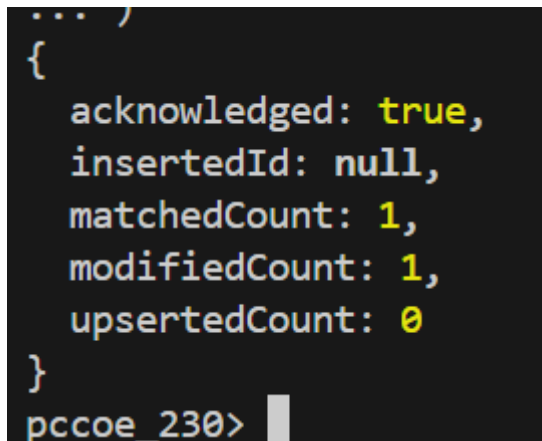9.Update Praveen experience to 10 or insert if missing

Code :

db.Teachers_230.updateOne(

```
    { Tname: "Praveen" },
    {
      $set: {
        experience: 10,
        dno: 101,
        dname: "COMP",
        salary: 12000,
        date_of_joining: new Date("2019-06-01")
      }
    },
  { upsert: true }
)
```

Output :

```
... )
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}
pccoe_230>
```

10.Update IT dept teachers to COMP

Code :

```
db.Teachers_230.updateMany(
{ dname: "IT" },
{ $set: { dname: "COMP
" } }
)
```

Output :

```
pccoe_230> db.Teachers_230.updateMany(
... { dname: "IT" },
... { $set: { dname: "COMP" } }
... )
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}
```

10.Teacher names and experience

Code :

db.Teachers_230.find({}, { Tname: 1, experience: 1, _id: 0 })

Output :

```
pccoe_230> db.Teachers_230.find({}, { Tname: 1, experience: 1, _id: 0 })
[
  { Tname: 'Praveen', experience: 10 },
  { Tname: 'Anita', experience: 7 },
  { Tname: 'Ravi', experience: 6 }
]
```

11. Delete all IT teachers

Code :

db.Teachers_230.deleteMany({ dname: "IT" })

Output :

```
pccoe_230> db.Teachers_230.deleteMany({ dname: "IT" })
{ acknowledged: true, deletedCount: 0 }
pccoe_230>
```

12. First 3 Teachers with pretty()

Code :

db.Teachers_230.find().limit(3).pretty()

Output :

```
pccoe_230> db.Teachers_230.find().limit(3).pretty()
[
  {
    _id: ObjectId('67f958ae2acd157378b71236'),
    Tname: 'Praveen',
    dno: 101,
    dname: 'COMP',
    experience: 10,
    salary: 12000,
    date_of_joining: ISODate('2019-06-01T00:00:00.000Z')
  },
  {
    _id: ObjectId('67f958ae2acd157378b71237'),
    Tname: 'Anita',
    dno: 102,
    dname: 'COMP',
    experience: 7,
    salary: 9500,
    date_of_joining: ISODate('2018-08-15T00:00:00.000Z')
  },
  {
    _id: ObjectId('67f958ae2acd157378b71238'),
    Tname: 'Ravi',
    dno: 103,
    dname: 'E&TC',
    experience: 6,
    salary: 11000,
    date_of_joining: ISODate('2020-01-10T00:00:00.000Z')
  }
]
pccoe_230>
```