Exercise: Student Enrollments System

Database: campusdb

Collection: enrollments

Tasks (Do not include solutions)

1) **Use a new database called campusdb**

   use campusdb

2) **Create a collection enrollments and insert 4 student documents. Each document should include:**

name (string)
studentId (number)
courses (array of strings)
address (sub-document with city , state)
feesPaid (boolean)
Ensure:
At least 1 student is from "Delhi"
At least 2 students are enrolled in "Python"
At least 1 student has feesPaid: false

db.enrollments.insertMany([
... {
... name: "Ananya Verma",
... studentId: 101,
... courses: ["Python", "Java"],
... address: { city: "Delhi", state: "Delhi" },
... feesPaid: true
... },
... {
... name: "Rohan Mehta",
... studentId: 102,
... courses: ["Python", "AI"],
... address: { city: "Bangalore", state: "Karnataka" },
... feesPaid: false
... },
... {
... name: "Sneha Kapoor",
... studentId: 103,

```
... courses: [],
... address: { city: "Hyderabad", state: "Telangana" },
... feesPaid: true
... },
... {
... name: "Imran Shaikh",
... studentId: 104,
... courses: ["Data Science", "Java"],
... address: { city: "Delhi", state: "Delhi" },
... feesPaid: false
... }
... ])
```

3) **Display all student records**

```
db.enrollments.find()
```

4) **Find all students enrolled in "Python"**

```
db.enrollments.find({ courses: "Python" })
```

5) **Find students from Delhi who have not paid fees**

```
campusdb> db.enrollments.find({
... "address.city": "Delhi",
... feesPaid:false})
```

6) **Add a new course "AI Fundamentals" to a specific student's courses array**

```
db.enrollments.updateOne( { studentID:104 }, { $push: { courses: "AI Fundamentals" } } )
```

7) **Update the city of a specific student to "Mumbai"**

```
db.enrollments.updateOne( { name: "Ananya Verma"},
... {$set: {"address.city":"Mumbai"}})
```

8) **Set feesPaid to true for all students from "Delhi"**

```
db.enrollments.updateMany(
...   { "address.city": "Delhi" },
...   { $set: { feesPaid: true } }
... )
```

9) **Remove "Java" course from any student who has it**

```
db.enrollments.updateMany(
...   { courses: "Java" },
...   { $pull: { courses: "Java" } }
... )
```

10) **Delete all students who have no courses enrolled (i.e., courses: [])**

```
db.enrollments.deleteMany({ courses: [] })
```