Assessment on CRUD Operations in MongoDB (Group-2)

Name : **Movva Venkatesh**

Regd.No : **211FA04084**

Section : **CSE-4G**

Create Operation

1) Create a new database named school

```
>_MONGOSH

> use school
< switched to db school
> db.createCollection('students')
< { ok: 1 }
```

2) insert 5 documents into a collection called students with fields: name, age, grade[from 5-10], subject, and attendance.

```
> db.students.insertMany([{Name:"Venkat",Age:8,Grade:9,Subject:"Maths",Attendance:95},
  {Name:"Mastan",Age:9,Grade:8,Subject:"Science",Attendance:90},
  {Name:"Khaja",Age:7,Grade:7,Subject:"Physics",Attendance:80},
  {Name:"Sai",Age:8,Grade:6,Subject:"Telugu",Attendance:75},
  {Name:"Surya",Age:8,Grade:6,Subject:"Hindi",Attendance:70}]);
< {
    acknowledged: true,
    insertedIds: {
      '0': ObjectId('66ece42e377e2efa59c776e2'),
      '1': ObjectId('66ece42e377e2efa59c776e3'),
      '2': ObjectId('66ece42e377e2efa59c776e4'),
      '3': ObjectId('66ece42e377e2efa59c776e5'),
      '4': ObjectId('66ece42e377e2efa59c776e6')
    }
  }
```

Read Operation

3) Retrieve all documents from the students collection

```
>_MONGOSH
> db.students.find()
< {
    _id: ObjectId('66ece5688c0579a0508f79f2'),
    Name: 'Venkat',
    Age: 8,
    Grade: 9,
    Subject: 'Maths',
    Attendance: 95
  }
  {
    _id: ObjectId('66ece5688c0579a0508f79f3'),
    Name: 'Mastan',
    Age: 9,
    Grade: 8,
    Subject: 'Science',
    Attendance: 90
  }
  {
    _id: ObjectId('66ece5688c0579a0508f79f4'),
    Name: 'Khaja',
    Age: 7,
    Grade: 7,
    Subject: 'Physics',
    Attendance: 80
  }
  {
    _id: ObjectId('66ece5688c0579a0508f79f5'),
    Name: 'Sai',
    Age: 8,
    Grade: 6,
    Subject: 'Telugu',
    Attendance: 75
  }
  {
    _id: ObjectId('66ece5688c0579a0508f79f6'),
    Name: 'Surya',
    Age: 8,
    Grade: 6,
    Subject: 'Hindi',
    Attendance: 70
  }
```

4) Write a query to find all students whose grade is greater than 8).

```
> db.students.find({Grade:{$gt:8}});
< {
    _id: ObjectId('66ece5688c0579a0508f79f2'),
    Name: 'Venkat',
    Age: 8,
    Grade: 9,
    Subject: 'Maths',
    Attendance: 95
  }
```

5) Retrieve students who have Maths subject.

```
> db.students.find({Subject:"Maths"})
< {
    _id: ObjectId('66ece5688c0579a0508f79f2'),
    Name: 'Venkat',
    Age: 8,
    Grade: 9,
    Subject: 'Maths',
    Attendance: 95
  }
```

Update Operation

6) Update the attendance of a student based on their name

```
> db.students.updateOne({Name:"Mastan"},{$set:{Attendance:85}})
< {
    acknowledged: true,
    insertedId: null,
    matchedCount: 1,
    modifiedCount: 1,
    upsertedCount: 0
  }
```

```
    _id: ObjectId('66ece42e377e2efa59c776e3')
    Name : "Mastan"
    Age : 9
    Grade : 8
    Subject : "Science"
    Attendance : 85
```

- **7) Write a query to increase the grade of students to 9 who are studying English subject.**

```
> db.students.insertOne({Name:"Tofique",Age:7,Grade:8,Subject:"English",Attendance:85});
< {
    acknowledged: true,
    insertedId: ObjectId('66ece8748c0579a0508f79f8')
  }
```
-

```
> db.students.updateMany({Subject:"English"},{$set:{Grade:9}})
< {
    acknowledged: true,
    insertedId: null,
    matchedCount: 1,
    modifiedCount: 1,
    upsertedCount: 0
  }
```

```
_id: ObjectId('66ece8748c0579a0508f79f8')
Name : "Tofique"
Age : 7
Grade : 9
Subject : "English"
Attendance : 85
```

Delete Operation

- **8) Write a query to delete a student by their name.**

```
> db.students.deleteOne({Name:"Surya"})
< {
    acknowledged: true,
    deletedCount: 1
  }
```

9) Remove all students with attendance less than 75%.

```
> db.students.deleteMany({Attendance:{$lt:75}})
< {
    acknowledged: true,
    deletedCount: 1
  }
```