Practical-02

Title: - Write a program to implement CRUD operations on MongoDB.

Programs:

1. **Create Database:**
   use   post

```
> use post
switched to db post
>
```

2. **Create Collection:**
   db.createCollection("post")

```
> db.createCollection("post")
{ "ok" : 1 }
>
```

3. **Insert document using insertOne( )**
   db.post.insertOne({
     title: "AAD",
     body: "MongoDB",
     category: "Software",
     likes: 10,
     date: Date()
   })

```
> db.post.insertOne({
...    title: "AAD",
...    body: "MongoDB",
...    category: "Technology",
...    likes: 10,
...    date: Date()
... })
{
        "acknowledged" : true,
        "insertedId" : ObjectId("639d61dafaa89a812f901408")
}
>
```

4. **Insert document using insertMany( )**
   db.post.insertMany([
   {
     title: "Android",
     body: "Flutter",
     category: "Software",
     likes: 20,
     date: Date()
   },
   {
     title: "Computer Network",
     body: "Cisco Packet Tracer",
     category: "Networking",
     likes: 14,

```
  date: Date()
},
{
 title: "Microprocessor",
 body: "Instruction Set",
 category: "Hardware",
 likes: 16,
 date: Date()
},
{
 title: "MEAN Stack",
 body: "Angular JS",
 category: "Software",
 likes: 33,
 date: Date()
}
])
```

```
> db.post.insertMany([
... {
...    title: "Android",
...    body: "Flutter",
...    category: "Software",
...    likes: 20,
...    date: Date()
... },
... {
...    title: "Computer Network",
...    body: "Cisco Packet Tracer",
...    category: "Networking",
...    likes: 14,
...    date: Date()
... },
... {
...    title: "Microprocessor",
...    body: "Instruction Set",
...    category: "Hardware",
...    likes: 16,
...    date: Date()
... },
... {
...    title: "MEAN Stack",
...    body: "Angular JS",
...    category: "Software",
...    likes: 33,
...    date: Date()
... }
... ])
{
        "acknowledged" : true,
        "insertedIds" : [
                ObjectId("639d6446faa89a812f901409"),
                ObjectId("639d6446faa89a812f90140a"),
                ObjectId("639d6446faa89a812f90140b"),
                ObjectId("639d6446faa89a812f90140c")
        ]
}
>
```

5. **find( ) and findOne( )**

db.post.find()

```
> db.post.find()
{ "_id" : ObjectId("639d61dafaa89a812f901408"), "title" : "AAD", "body" : "MongoDB", "
category" : "Technology", "likes" : 10, "date" : "Sat Dec 17 2022 11:59:46 GMT+0530 (I
ndia Standard Time)" }
{ "_id" : ObjectId("639d6446faa89a812f901409"), "title" : "Android", "body" : "Flutter
", "category" : "Software", "likes" : 20, "date" : "Sat Dec 17 2022 12:10:06 GMT+0530
(India Standard Time)" }
{ "_id" : ObjectId("639d6446faa89a812f90140a"), "title" : "Computer Network", "body" :
 "Cisco Packet Tracer", "category" : "Networking", "likes" : 14, "date" : "Sat Dec 17
2022 12:10:06 GMT+0530 (India Standard Time)" }
{ "_id" : ObjectId("639d6446faa89a812f90140b"), "title" : "Microprocessor", "body" : "
Instruction Set", "category" : "Hardware", "likes" : 16, "date" : "Sat Dec 17 2022 12:
10:06 GMT+0530 (India Standard Time)" }
{ "_id" : ObjectId("639d6446faa89a812f90140c"), "title" : "MEAN Stack", "body" : "Angu
lar JS", "category" : "Software", "likes" : 33, "date" : "Sat Dec 17 2022 12:10:06 GMT
+0530 (India Standard Time)" }
>
```

db.post.find({category: "Software"})

```
> db.post.find({category: "Software"})
{ "_id" : ObjectId("639d6446faa89a812f901409"), "title" : "Android", "body" : "Flutter
", "category" : "Software", "likes" : 20, "date" : "Sat Dec 17 2022 12:10:06 GMT+0530
(India Standard Time)" }
{ "_id" : ObjectId("639d6446faa89a812f90140c"), "title" : "MEAN Stack", "body" : "Angu
lar JS", "category" : "Software", "likes" : 33, "date" : "Sat Dec 17 2022 12:10:06 GMT
+0530 (India Standard Time)" }
>
```

db.post.findOne({category: "Software"})

```
> db.post.findOne({category: "Software"})
{
        "_id" : ObjectId("639d6446faa89a812f901409"),
        "title" : "Android",
        "body" : "Flutter",
        "category" : "Software",
        "likes" : 20,
        "date" : "Sat Dec 17 2022 12:10:06 GMT+0530 (India Standard Time)"
}
>
```

db.post.find({}, {title: 1, date: 1})

```
> db.post.find({}, {title: 1, date: 1})
{ "_id" : ObjectId("639d61dafaa89a812f901408"), "title" : "AAD", "date" : "Sat Dec 17
2022 11:59:46 GMT+0530 (India Standard Time)" }
{ "_id" : ObjectId("639d6446faa89a812f901409"), "title" : "Android", "date" : "Sat Dec
 17 2022 12:10:06 GMT+0530 (India Standard Time)" }
{ "_id" : ObjectId("639d6446faa89a812f90140a"), "title" : "Computer Network", "date" :
 "Sat Dec 17 2022 12:10:06 GMT+0530 (India Standard Time)" }
{ "_id" : ObjectId("639d6446faa89a812f90140b"), "title" : "Microprocessor", "date" : "
Sat Dec 17 2022 12:10:06 GMT+0530 (India Standard Time)" }
{ "_id" : ObjectId("639d6446faa89a812f90140c"), "title" : "MEAN Stack", "date" : "Sat
Dec 17 2022 12:10:06 GMT+0530 (India Standard Time)" }
>
```

6. **updateOne( ) and updateMany( )**

db.post.updateOne({ title: "Microprocessor" }, { $set: { likes: 40 } })

db.post.find({ title: "Microprocessor" })

```
> db.post.updateOne( { title: "Microprocessor" }, { $set: { likes: 40 } } )
{ "acknowledged" : true, "matchedCount" : 1, "modifiedCount" : 0 }
> db.post.find({ title: "Microprocessor" })
{ "_id" : ObjectId("639d6446faa89a812f90140b"), "title" : "Microprocessor", "body" : "
Instruction Set", "category" : "Hardware", "likes" : 40, "date" : "Sat Dec 17 2022 12:
10:06 GMT+0530 (India Standard Time)" }
>
```

```
db.post.updateOne(
  { title: "Android" },
  {
    $set:
      {
        title: "Cloud Computing",
        body: "SAAS",
        category: "Software",
        likes: 12,
        date: Date()
      }
  },
  { upsert: true }
)
db.post.find({title: "Cloud Computing"})
```

```
> db.post.updateOne(
...    { title: "Android" },
...    {
...       $set:
...          {
...             title: "Cloud Computing",
...             body: "SAAS",
...             category: "Software",
...             likes: 12,
...             date: Date()
...          }
...    },
...    { upsert: true }
... )
{ "acknowledged" : true, "matchedCount" : 1, "modifiedCount" : 1 }
> db.post.find({title: "Cloud Computing"})
{ "_id" : ObjectId("639d6446faa89a812f901409"), "title" : "Cloud Computing", "body" :
"SAAS", "category" : "Software", "likes" : 12, "date" : "Sat Dec 17 2022 12:25:20 GMT+
0530 (India Standard Time)" }
>
```

db.post.updateMany({}, { $inc: { likes: 10 } })

db.post.find()

```
> db.post.updateMany({}, { $inc: { likes: 10 } })
{ "acknowledged" : true, "matchedCount" : 5, "modifiedCount" : 5 }
> db.post.find()
{ "_id" : ObjectId("639d61dafaa89a812f901408"), "title" : "AAD", "body" : "MongoDB", "
category" : "Technology", "likes" : 20, "date" : "Sat Dec 17 2022 11:59:46 GMT+0530 (I
ndia Standard Time)" }
{ "_id" : ObjectId("639d6446faa89a812f901409"), "title" : "Cloud Computing", "body" :
"SAAS", "category" : "Software", "likes" : 22, "date" : "Sat Dec 17 2022 12:25:20 GMT+
0530 (India Standard Time)" }
{ "_id" : ObjectId("639d6446faa89a812f90140a"), "title" : "Computer Network", "body" :
 "Cisco Packet Tracer", "category" : "Networking", "likes" : 24, "date" : "Sat Dec 17
2022 12:10:06 GMT+0530 (India Standard Time)" }
{ "_id" : ObjectId("639d6446faa89a812f90140b"), "title" : "Microprocessor", "body" : "
Instruction Set", "category" : "Hardware", "likes" : 50, "date" : "Sat Dec 17 2022 12:
10:06 GMT+0530 (India Standard Time)" }
{ "_id" : ObjectId("639d6446faa89a812f90140c"), "title" : "MEAN Stack", "body" : "Angu
lar JS", "category" : "Software", "likes" : 43, "date" : "Sat Dec 17 2022 12:10:06 GMT
+0530 (India Standard Time)" }
>
```

7. **deleteOne( ) and deleteMany( )**

db.post.deleteOne({ category: "Hardware" })

db.post.find()

```
> db.post.deleteOne({ category: "Hardware" })
{ "acknowledged" : true, "deletedCount" : 1 }
> db.post.find()
{ "_id" : ObjectId("639d61dafaa89a812f901408"), "title" : "AAD", "body" : "MongoDB", "
category" : "Technology", "likes" : 20, "date" : "Sat Dec 17 2022 11:59:46 GMT+0530 (I
ndia Standard Time)" }
{ "_id" : ObjectId("639d6446faa89a812f901409"), "title" : "Cloud Computing", "body" :
"SAAS", "category" : "Software", "likes" : 22, "date" : "Sat Dec 17 2022 12:25:20 GMT+
0530 (India Standard Time)" }
{ "_id" : ObjectId("639d6446faa89a812f90140a"), "title" : "Computer Network", "body" :
 "Cisco Packet Tracer", "category" : "Networking", "likes" : 24, "date" : "Sat Dec 17
2022 12:10:06 GMT+0530 (India Standard Time)" }
{ "_id" : ObjectId("639d6446faa89a812f90140c"), "title" : "MEAN Stack", "body" : "Angu
lar JS", "category" : "Software", "likes" : 43, "date" : "Sat Dec 17 2022 12:10:06 GMT
+0530 (India Standard Time)" }
>
```

db.post.deleteMany({ category: "Software" })

db.post.find()

```
> db.post.deleteMany({ category: "Software" })
{ "acknowledged" : true, "deletedCount" : 2 }
> db.post.find()
{ "_id" : ObjectId("639d61dafaa89a812f901408"), "title" : "AAD", "body" : "MongoDB", "
category" : "Technology", "likes" : 20, "date" : "Sat Dec 17 2022 11:59:46 GMT+0530 (I
ndia Standard Time)" }
{ "_id" : ObjectId("639d6446faa89a812f90140a"), "title" : "Computer Network", "body" :
 "Cisco Packet Tracer", "category" : "Networking", "likes" : 24, "date" : "Sat Dec 17
2022 12:10:06 GMT+0530 (India Standard Time)" }
>
```

Conclusion: