

## PG-DBDA September 2023 C-DAC THIRUVANANTHAPURAM

### MongoDB – LAB 1

1. a) Create a database named **pets** in MongoDB Shell.

Ans:

use pets

- b) Create a collection named **mammals**.

Ans:

db.createCollection("mammals")

- c) Insert some documents to the mammals collection with fields

**petid, name and species**. (Using insertOne())

Ans:

1. pets> db.mammals.insertOne({petid:101,name:"abc",species:"dog"})

2. pets> db.mammals.insertOne({petid:102,name:"def",species:"cat"})

3. pets> db.mammals.insertOne({petid:103,name:"ghi",species:"goat"})

```
test> use pets
switched to db pets
pets> db.createCollection("mammals")
{ ok: 1 }
pets> db.mammals.insertOne({petid:101,name:"abc",species:"dog"})
{
  acknowledged: true,
  insertedId: ObjectId("6516a0fe5f4dbe9575d5b770")
}
pets> db.mammals.insertOne({petid:102,name:"def",species:"cat"})
{
  acknowledged: true,
  insertedId: ObjectId("6516a12a5f4dbe9575d5b771")
}
pets> db.mammals.insertOne({petid:103,name:"ghi",species:"goat"})
{
  acknowledged: true,
  insertedId: ObjectId("6516a13b5f4dbe9575d5b772")
}
```

- d) Find all the mammals

Ans:

pets> db.mammals.find()

```

pets> db.mammals.find()
[
  {
    _id: ObjectId("6516a0fe5f4dbe9575d5b770"),
    petid: 101,
    name: 'abc',
    species: 'dog'
  },
  {
    _id: ObjectId("6516a12a5f4dbe9575d5b771"),
    petid: 102,
    name: 'def',
    species: 'cat'
  },
  {
    _id: ObjectId("6516a13b5f4dbe9575d5b772"),
    petid: 103,
    name: 'ghi',
    species: 'goat'
  }
]
pets>

```

e) Find all the mammals with "dog" as their species.

Ans:

```

pets> db.mammals.find({species:"dog"})

```

```

pets> db.mammals.find({species:"dog"})
[
  {
    _id: ObjectId("6516a0fe5f4dbe9575d5b770"),
    petid: 101,
    name: 'abc',
    species: 'dog'
  }
]

```

f) Create another capped collection named **owner** with maximum 10 documents.

Ans:

```

pets> db.createCollection("owner",{capped:true,size:1048576,max:10})

```

```

pets> db.createCollection("owner",{capped:true,max:10})
MongoServerError: the 'size' field is required when 'capped' is true
pets> db.createCollection("owner",{capped:true,size:1048576,max:10})
{ ok: 1 }
pets>

```

g) Insert some documents to the owner collection with fields **ownerid**, **name**, **city**, **state** and **contact** where contact is an embedded document containing fields **email** and **mobile**. (Using insertMany()).

Ans:

```

1. db.owener.insertMany([
  {owenerid:1,name:"john",city:"pune",state:"MH",contact:
    {email:"john@j.com",phone:1234567890}},
  {owenerid:2,name:"james",city:"mumbai",state:"MH",contact:
    {email:"james@j.com",phone:0987654321}}
])

```

})

```
pets> db.owener.insertMany([{ownerid:1,name:"john",city:"pune",state:"MH",contact:{email:"john@j.com",phone:12345678}},
{ownerid:2,name:"james",city:"mumbai",state:"MH",contact:{email:"james@j.com",phone:0987654321}}])
{
  acknowledged: true,
  insertedIds: {
    '0': ObjectId("6516a5a85f4dbe9575d5b773"),
    '1': ObjectId("6516a5a85f4dbe9575d5b774")
  }
}
pets>
```

h) Find all owners residing in a particular city and state.

Ans:

```
pets> db.owener.find({city:"mumbai",state:"MH"})
```

```
pets> db.owener.find({city:"mumbai",state:"MH"})
[
  {
    _id: ObjectId("6516a5a85f4dbe9575d5b774"),
    ownerid: 2,
    name: 'james',
    city: 'mumbai',
    state: 'MH',
    contact: { email: 'james@j.com', phone: 987654321 }
  }
]
pets>
```

i) Find a particular owner whose mobile is given.

Ans:

```
pets> db.owener.find({"contact.phone":987654321})
```

```
pets> db.owener.find({"contact.phone":9876543210})
pets> db.owener.find({"contact.phone":987654321})
[
  {
    _id: ObjectId("6516a5a85f4dbe9575d5b774"),
    ownerid: 2,
    name: 'james',
    city: 'mumbai',
    state: 'MH',
    contact: { email: 'james@j.com', phone: 987654321 }
  }
]
pets>
```

j) Find owners whose email or mobile is given.

```
Ans: db.owener.find({$or:[{"contact.phone":987654321},{ "contact.email":"john@j.com"}]})
```

```
pets> db.owener.find({$or:[{"contact.phone":987654321},{"contact.email":"john@j.com"}]})
[
  {
    _id: ObjectId("6516a5a85f4dbe9575d5b773"),
    owenerid: 1,
    name: 'john',
    city: 'pune',
    state: 'MH',
    contact: { email: 'john@j.com', phone: 1234567890 }
  },
  {
    _id: ObjectId("6516a5a85f4dbe9575d5b774"),
    owenerid: 2,
    name: 'james',
    city: 'mumbai',
    state: 'MH',
    contact: { email: 'james@j.com', phone: 987654321 }
  }
]
pets>
```