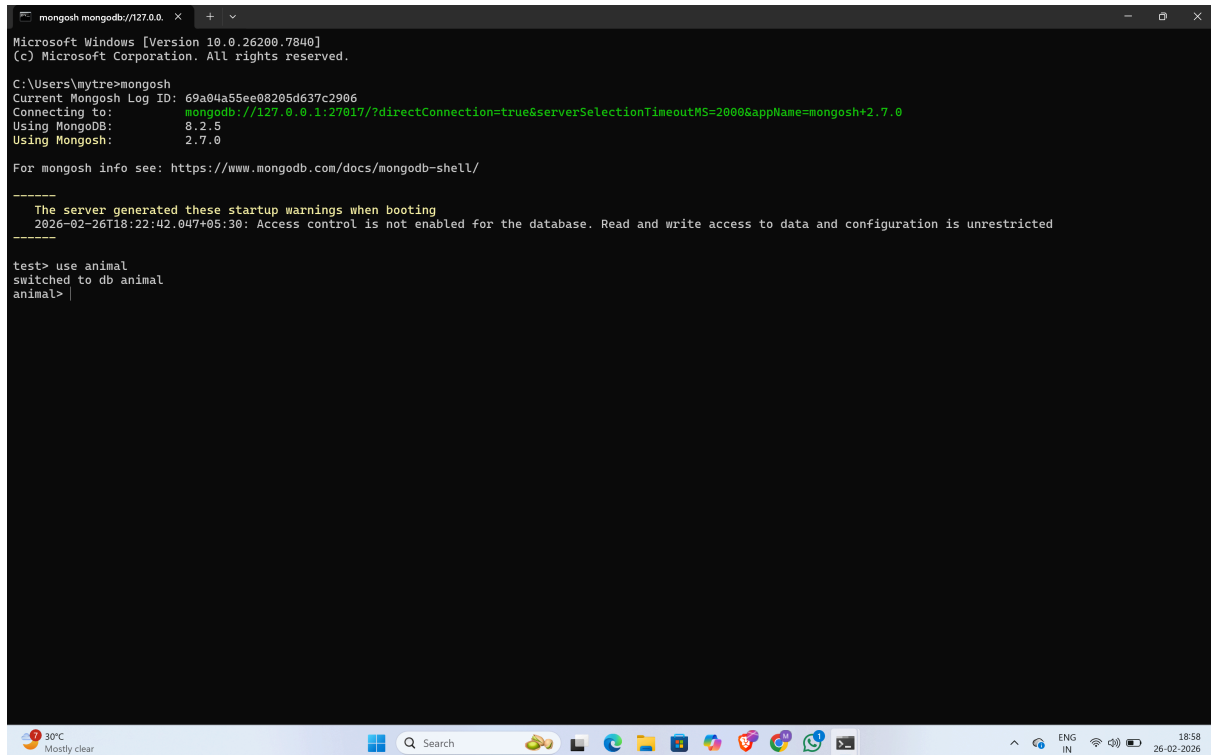


MONGODB - COMMANDS

Animals

2. Use MongoDB to implement the following DB operations for a Zoo

- Create a database called 'animal' and write a MongoDB query to select database as 'animal'.



```
mongosh mongodb://127.0.0.1:27017
Microsoft Windows [Version 10.0.26200.7840]
(c) Microsoft Corporation. All rights reserved.

C:\Users\mytre>mongosh
Current Mongosh Log ID: 69a04a55ee08205d637c2906
Connecting to:  mongodb://127.0.0.1:27017/?directConnection=true&serverSelectionTimeoutMS=2000&appName=mongosh+2.7.0
Using MongoDB:  8.2.5
Using Mongosh:  2.7.0

For mongosh info see: https://www.mongodb.com/docs/mongodb-shell/

-----
The server generated these startup warnings when booting
2026-02-26T18:22:42.047+05:30: Access control is not enabled for the database. Read and write access to data and configuration is unrestricted
-----

test> use animal
switched to db animal
animal>
```

- Write a MongoDB query to display all the databases.

```
mongosh mongodb://127.0.0.1:27017/7directConnection=true&serverSelectionTimeoutMS=2000&appName=mongosh+2.7.0
Microsoft Windows [Version 10.0.26200.7840]
(c) Microsoft Corporation. All rights reserved.

C:\Users\mytre>mongosh
Current Mongosh Log ID: 69a04a55ee08205d637c2906
Connecting to:  mongodb://127.0.0.1:27017/7directConnection=true&serverSelectionTimeoutMS=2000&appName=mongosh+2.7.0
Using MongoDB:  8.2.5
Using Mongosh:  2.7.0

For mongosh info see: https://www.mongodb.com/docs/mongodb-shell/

-----
The server generated these startup warnings when booting
2026-02-26T18:22:42.047+05:30: Access control is not enabled for the database. Read and write access to data and configuration is unrestricted
-----

test> use animal
switched to db animal
animal> show dbs
admin      40.00 KiB
config     100.00 KiB
local      40.00 KiB
vehicles   80.00 KiB
animal> |
```

- Create a collection called 'wild_animals'.(use capping) and Create a collection called 'domestic_animals'.

```
mongosh mongodb://127.0.0.1:27017/7directConnection=true&serverSelectionTimeoutMS=2000&appName=mongosh+2.7.0
Microsoft Windows [Version 10.0.26200.7840]
(c) Microsoft Corporation. All rights reserved.

C:\Users\mytre>mongosh
Current Mongosh Log ID: 69a04a55ee08205d637c2906
Connecting to:  mongodb://127.0.0.1:27017/7directConnection=true&serverSelectionTimeoutMS=2000&appName=mongosh+2.7.0
Using MongoDB:  8.2.5
Using Mongosh:  2.7.0

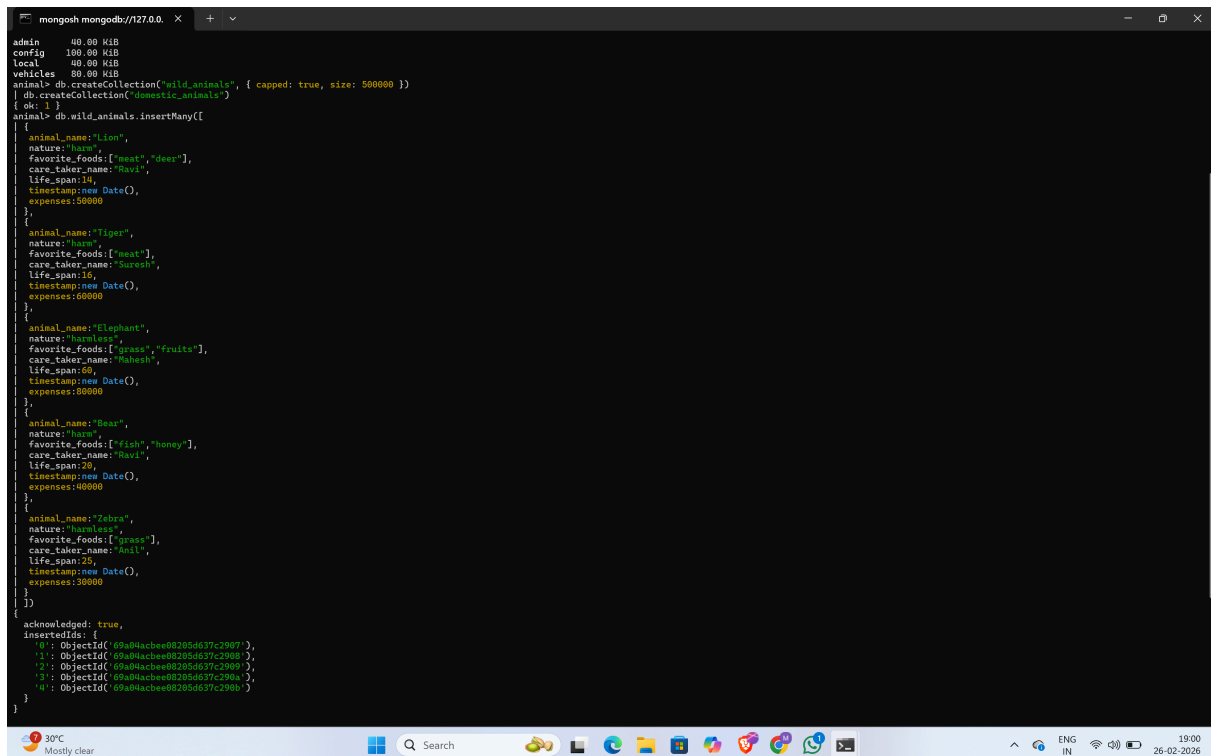
For mongosh info see: https://www.mongodb.com/docs/mongodb-shell/

-----
The server generated these startup warnings when booting
2026-02-26T18:22:42.047+05:30: Access control is not enabled for the database. Read and write access to data and configuration is unrestricted
-----

test> use animal
switched to db animal
animal> show dbs
admin      40.00 KiB
config     100.00 KiB
local      40.00 KiB
vehicles   80.00 KiB
animal> db.createCollection("wild_animals", { capped: true, size: 500000 })
| db.createCollection("domestic_animals")
{ ok: 1 }
animal> |
```

- Add 5 wild_animal details to the collection named 'wild_animals'. Each document consists of following fields as animal_name, nature (harm or harmless),

favorite_foods (meat, rabbits, deer etc) as array, care_taker_name, life span (in years), timestamp (when the animal registered at the Zoo) and expenses.



```
mongosh mongodb://127.0.0.1
admin 40.00 KiB
config 180.00 KiB
local 40.00 KiB
vehicles 80.00 KiB
animal> db.createCollection('wild_animals', { capped: true, size: 500000 })
{ ok: 1 }
animal> db.wild_animals.insertMany([
  {
    animal_name: "Lion",
    nature: "herbivore",
    favorite_foods: ["meat", "deer"],
    care_taker_name: "Ravi",
    life_span: 14,
    timestamp: new Date(),
    expenses: 50000
  },
  {
    animal_name: "Tiger",
    nature: "herbivore",
    favorite_foods: ["meat"],
    care_taker_name: "Suresh",
    life_span: 16,
    timestamp: new Date(),
    expenses: 60000
  },
  {
    animal_name: "Elephant",
    nature: "herbivore",
    favorite_foods: ["grass", "fruits"],
    care_taker_name: "Mahesh",
    life_span: 60,
    timestamp: new Date(),
    expenses: 80000
  },
  {
    animal_name: "Bear",
    nature: "herbivore",
    favorite_foods: ["fish", "honey"],
    care_taker_name: "Ravi",
    life_span: 20,
    timestamp: new Date(),
    expenses: 40000
  },
  {
    animal_name: "Zebra",
    nature: "herbivore",
    favorite_foods: ["grass"],
    care_taker_name: "Anil",
    life_span: 25,
    timestamp: new Date(),
    expenses: 30000
  }
])
{
  acknowledged: true,
  insertedIds: {
    '0': ObjectId('69a04acbee082054637c2907'),
    '1': ObjectId('69a04acbee082054637c2908'),
    '2': ObjectId('69a04acbee082054637c2909'),
    '3': ObjectId('69a04acbee082054637c290a'),
    '4': ObjectId('69a04acbee082054637c290b')
  }
}
```

- Add 5 domestic-animal details to the collection named 'domestic_animals'. Each document consists of following fields as animal_name, gender (male or female), favorite_foods (meat, rabbits, deer etc) as array, animal_petname, life span (in years), timestamp (when the animal registered at the Zoo) and expenses.

```
mongosh mongodb://127.0.0.1:27017/
> use animals
> db.domestic_animals.insertMany([
  {
    animal_name: "Dog",
    gender: "male",
    favorite_foods: ["meat", "biscuits"],
    animal_petname: "Tommy",
    life_span: 12,
    timestamp: new Date(),
    expenses: 10000
  },
  {
    animal_name: "Cat",
    gender: "female",
    favorite_foods: ["milk", "fish"],
    animal_petname: "Kitty",
    life_span: 15,
    timestamp: new Date(),
    expenses: 8000
  },
  {
    animal_name: "Cow",
    gender: "female",
    favorite_foods: ["grass"],
    animal_petname: "Ganga",
    life_span: 20,
    timestamp: new Date(),
    expenses: 15000
  },
  {
    animal_name: "Goat",
    gender: "male",
    favorite_foods: ["leaves"],
    animal_petname: "Ramu",
    life_span: 10,
    timestamp: new Date(),
    expenses: 7000
  },
  {
    animal_name: "Rabbit",
    gender: "female",
    favorite_foods: ["carrot"],
    animal_petname: "Bunny",
    life_span: 8,
    timestamp: new Date(),
    expenses: 5000
  }
])
> db.domestic_animals.find()
{
  acknowledged: true,
  insertedIds: {
    '0': ObjectId('69a04afdee82854637c2980c'),
    '1': ObjectId('69a04afdee82854637c2980d'),
    '2': ObjectId('69a04afdee82854637c2980e'),
    '3': ObjectId('69a04afdee82854637c2980f'),
    '4': ObjectId('69a04afdee82854637c29810')
  }
}
> animal>
```

- Write a MongoDB query to display all documents available in wild_animals and domestic_animals.

```
mongosh mongodb://127.0.0.1:27017/
> use animals
> db.wild_animals.find()
{
  acknowledged: true,
  insertedIds: {
    '0': ObjectId('69a04afdee82854637c2980c'),
    '1': ObjectId('69a04afdee82854637c2980d'),
    '2': ObjectId('69a04afdee82854637c2980e'),
    '3': ObjectId('69a04afdee82854637c2980f'),
    '4': ObjectId('69a04afdee82854637c29810')
  }
}
> db.domestic_animals.find()
{
  _id: ObjectId('69a04afdee82854637c2980c'),
  animal_name: 'Dog',
  gender: 'male',
  favorite_foods: [ 'meat', 'biscuits' ],
  animal_petname: 'Tommy',
  life_span: 12,
  timestamp: ISODate('2026-02-26T13:30:37.2912Z'),
  expenses: 10000
},
{
  _id: ObjectId('69a04afdee82854637c2980d'),
  animal_name: 'Cat',
  gender: 'female',
  favorite_foods: [ 'milk', 'fish' ],
  animal_petname: 'Kitty',
  life_span: 15,
  timestamp: ISODate('2026-02-26T13:30:37.2912Z'),
  expenses: 8000
},
{
  _id: ObjectId('69a04afdee82854637c2980e'),
  animal_name: 'Cow',
  gender: 'female',
  favorite_foods: [ 'grass' ],
  animal_petname: 'Ganga',
  life_span: 20,
  timestamp: ISODate('2026-02-26T13:30:37.2912Z'),
  expenses: 15000
},
{
  _id: ObjectId('69a04afdee82854637c2980f'),
  animal_name: 'Goat',
  gender: 'male',
  favorite_foods: [ 'leaves' ],
  animal_petname: 'Ramu',
  life_span: 10,
  timestamp: ISODate('2026-02-26T13:30:37.2912Z'),
  expenses: 7000
},
{
  _id: ObjectId('69a04afdee82854637c29810'),
  animal_name: 'Rabbit',
  gender: 'female',
  favorite_foods: [ 'carrot' ],
  animal_petname: 'Bunny',
  life_span: 8,
  timestamp: ISODate('2026-02-26T13:30:37.2912Z'),
  expenses: 5000
}
> animal>
```

- Write a MongoDB query to display only animal name and expenses in all the collection of the database

```

mongosh mongodb://127.0.0.1:27000
> use animals
> db.wild_animals.find()
[
  {
    _id: ObjectId('69a0hafdee08205d637c290d'),
    animal_name: 'Cat',
    gender: 'female',
    favorite_foods: [ 'milk', 'fish' ],
    animal_petname: 'Kitty',
    life_span: 15,
    timestamp: ISODate('2026-02-26T13:30:37.291Z'),
    expenses: 8000
  },
  {
    _id: ObjectId('69a0hafdee08205d637c290e'),
    animal_name: 'Cow',
    gender: 'female',
    favorite_foods: [ 'grass' ],
    animal_petname: 'Ganga',
    life_span: 20,
    timestamp: ISODate('2026-02-26T13:30:37.291Z'),
    expenses: 15000
  },
  {
    _id: ObjectId('69a0hafdee08205d637c290f'),
    animal_name: 'Goat',
    gender: 'male',
    favorite_foods: [ 'leaves' ],
    animal_petname: 'Ramu',
    life_span: 18,
    timestamp: ISODate('2026-02-26T13:30:37.291Z'),
    expenses: 7000
  },
  {
    _id: ObjectId('69a0hafdee08205d637c2910'),
    animal_name: 'Rabbit',
    gender: 'female',
    favorite_foods: [ 'carrot' ],
    animal_petname: 'Bunny',
    life_span: 8,
    timestamp: ISODate('2026-02-26T13:30:37.291Z'),
    expenses: 5000
  }
]
> db.domestic_animals.find()
[
  { animal_name: 'Dog', expenses: 10000 },
  { animal_name: 'Cat', expenses: 8000 },
  { animal_name: 'Cow', expenses: 15000 },
  { animal_name: 'Goat', expenses: 7000 },
  { animal_name: 'Rabbit', expenses: 5000 }
]
>

```

- Write a MongoDB query to display domestic_animals whose life is a particular year

```

> use animals
> db.wild_animals.find()
[
  {
    _id: ObjectId('69a0hafdee08205d637c290e'),
    animal_name: 'Cow',
    gender: 'female',
    favorite_foods: [ 'grass' ],
    animal_petname: 'Ganga',
    life_span: 20,
    timestamp: ISODate('2026-02-26T13:30:37.291Z'),
    expenses: 15000
  },
  {
    _id: ObjectId('69a0hafdee08205d637c290f'),
    animal_name: 'Goat',
    gender: 'male',
    favorite_foods: [ 'leaves' ],
    animal_petname: 'Ramu',
    life_span: 18,
    timestamp: ISODate('2026-02-26T13:30:37.291Z'),
    expenses: 7000
  },
  {
    _id: ObjectId('69a0hafdee08205d637c2910'),
    animal_name: 'Rabbit',
    gender: 'female',
    favorite_foods: [ 'carrot' ],
    animal_petname: 'Bunny',
    life_span: 8,
    timestamp: ISODate('2026-02-26T13:30:37.291Z'),
    expenses: 5000
  }
]
> db.domestic_animals.find()
[
  { animal_name: 'Dog', expenses: 10000 },
  { animal_name: 'Cat', expenses: 8000 },
  { animal_name: 'Cow', expenses: 15000 },
  { animal_name: 'Goat', expenses: 7000 },
  { animal_name: 'Rabbit', expenses: 5000 }
]
> db.domestic_animals.find({life_span:15})
[
  {
    _id: ObjectId('69a0hafdee08205d637c290d'),
    animal_name: 'Cat',
    gender: 'female',
    favorite_foods: [ 'milk', 'fish' ],
    animal_petname: 'Kitty',
    life_span: 15,
    timestamp: ISODate('2026-02-26T13:30:37.291Z'),
    expenses: 8000
  }
]
>

```

- Write a MongoDB query to display wild_animals available under a particular care_taker

```
mongosh mongodb://127.0.0.1:27017
> use animals
> db.favorite_foods.insertOne({
  animal_name: 'Bunny',
  favorite_foods: ['carrot'],
  expenses: 5000,
  timestamp: ISODate('2026-02-26T13:30:37.291Z')
})
> db.wild_animals.find({}, {animal_name:1, expenses:1, _id:0})
[
  { animal_name: 'Lion', expenses: 50000 },
  { animal_name: 'Bear', expenses: 40000 }
]
> db.domestic_animals.find({}, {animal_name:1, expenses:1, _id:0})
[
  { animal_name: 'Dog', expenses: 10000 },
  { animal_name: 'Cat', expenses: 8000 },
  { animal_name: 'Cow', expenses: 15000 },
  { animal_name: 'Goat', expenses: 7000 },
  { animal_name: 'Rabbit', expenses: 5000 }
]
> db.domestic_animals.find({life_span:15})
[
  {
    _id: ObjectId('69a04afdee08205d637c296d'),
    animal_name: 'Cat',
    gender: 'female',
    favorite_foods: [ 'milk', 'fish' ],
    animal_petname: 'Kitty',
    life_span: 15,
    timestamp: ISODate('2026-02-26T13:30:37.291Z'),
    expenses: 8000
  }
]
> db.wild_animals.find({care_taker_name:'Ravi'})
[
  {
    _id: ObjectId('69a04acbee08205d637c2907'),
    animal_name: 'Lion',
    nature: 'harm',
    favorite_foods: [ 'meat', 'deer' ],
    care_taker_name: 'Ravi',
    life_span: 10,
    timestamp: ISODate('2026-02-26T13:29:47.967Z'),
    expenses: 50000
  },
  {
    _id: ObjectId('69a04acbee08205d637c290a'),
    animal_name: 'Bear',
    nature: 'harm',
    favorite_foods: [ 'fish', 'honey' ],
    care_taker_name: 'Ravi',
    life_span: 20,
    timestamp: ISODate('2026-02-26T13:29:47.967Z'),
    expenses: 40000
  }
]
>
```

- Write a MongoDB query to display animal name, favorite_foods and expenses details whose lifespan is more than 5 years.

```
mongosh mongodb://127.0.0.1:27017
> use animals
> db.wild_animals.find({care_taker_name:'Ravi'})
[
  {
    _id: ObjectId('69a04acbee08205d637c2907'),
    animal_name: 'Lion',
    nature: 'harm',
    favorite_foods: [ 'meat', 'deer' ],
    care_taker_name: 'Ravi',
    life_span: 10,
    timestamp: ISODate('2026-02-26T13:29:47.967Z'),
    expenses: 50000
  },
  {
    _id: ObjectId('69a04acbee08205d637c290a'),
    animal_name: 'Bear',
    nature: 'harm',
    favorite_foods: [ 'fish', 'honey' ],
    care_taker_name: 'Ravi',
    life_span: 20,
    timestamp: ISODate('2026-02-26T13:29:47.967Z'),
    expenses: 40000
  }
]
> db.wild_animals.find(
  {life_span:{gt:5}},
  {animal_name:1, favorite_foods:1, expenses:1, _id:0}
)
[
  { animal_name: 'Lion', favorite_foods: [ 'meat', 'deer' ], expenses: 50000 },
  { animal_name: 'Bear', favorite_foods: [ 'fish', 'honey' ], expenses: 40000 }
]
> db.domestic_animals.find(
  {life_span:{gt:5}},
  {animal_name:1, favorite_foods:1, expenses:1, _id:0}
)
[
  { animal_name: 'Dog', favorite_foods: [ 'meat', 'biscuits' ], expenses: 10000 },
  { animal_name: 'Cat', favorite_foods: [ 'milk', 'fish' ], expenses: 8000 },
  { animal_name: 'Cow', favorite_foods: [ 'grass' ], expenses: 15000 },
  { animal_name: 'Goat', favorite_foods: [ 'leaves' ], expenses: 7000 },
  { animal_name: 'Rabbit', favorite_foods: [ 'carrot' ], expenses: 5000 }
]
>
```