VIT-AP UNIVERSITY, ANDHRA PRADESH

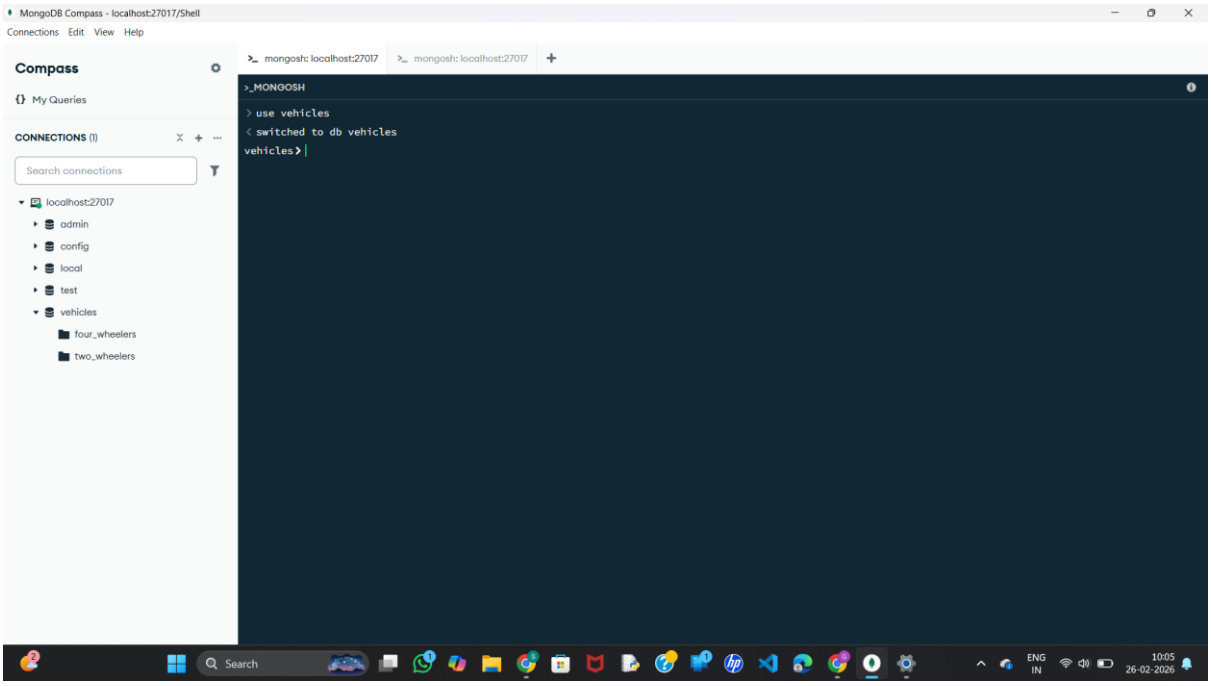
Lab Sheet 6: MongoDB Basic commands

Branch/ Class: B.Tech/M.Tech **Date:26-02-2026**
Faculty Name: Prof. S.Gopikrishnan **School:** SCOPE
Student name: G Sai Siva Mani **Reg. no.: 23BCE9808**

1. Use MongoDB to implement the following DB operations

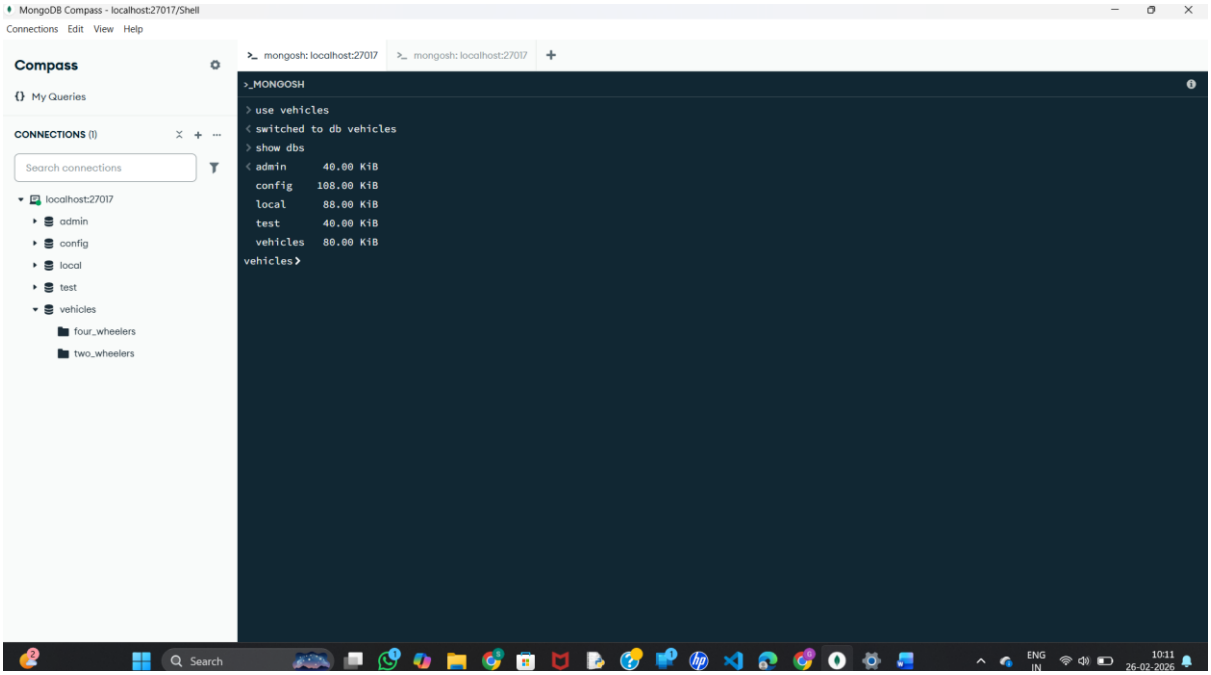
1. Create a database called 'vehicles' and *write* a MongoDB query to select database as "vehicles".

   Code:



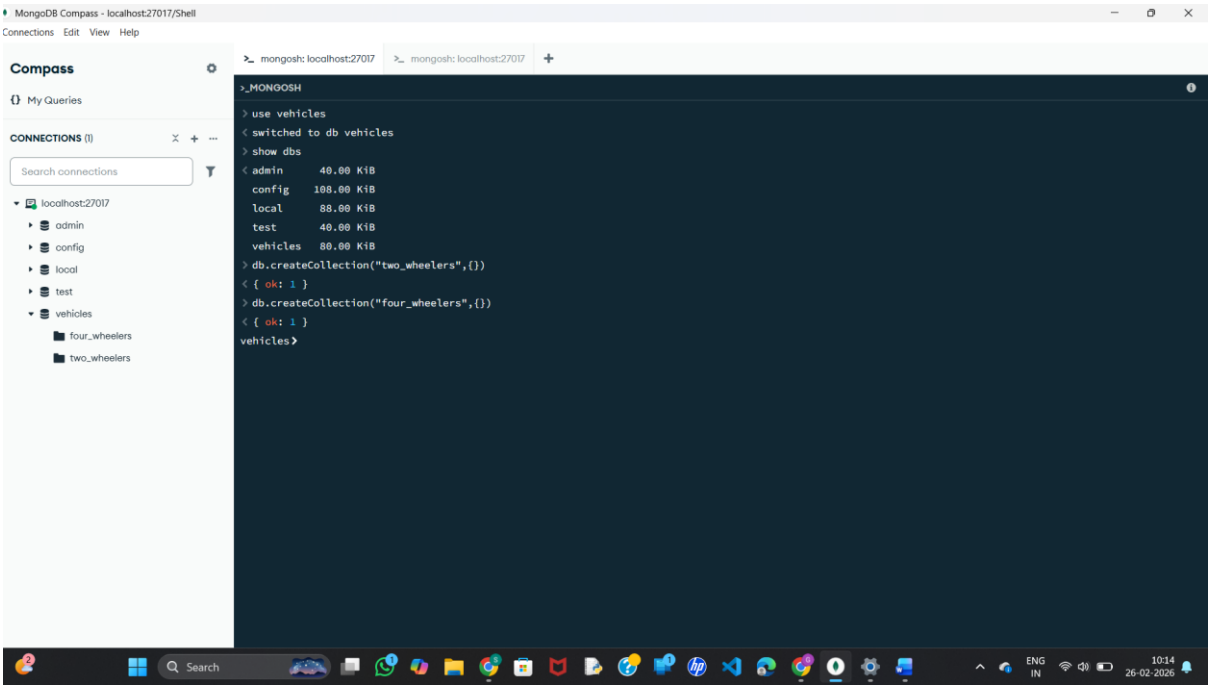
2. Write a MongoDB query to display all the databases.

   Code:



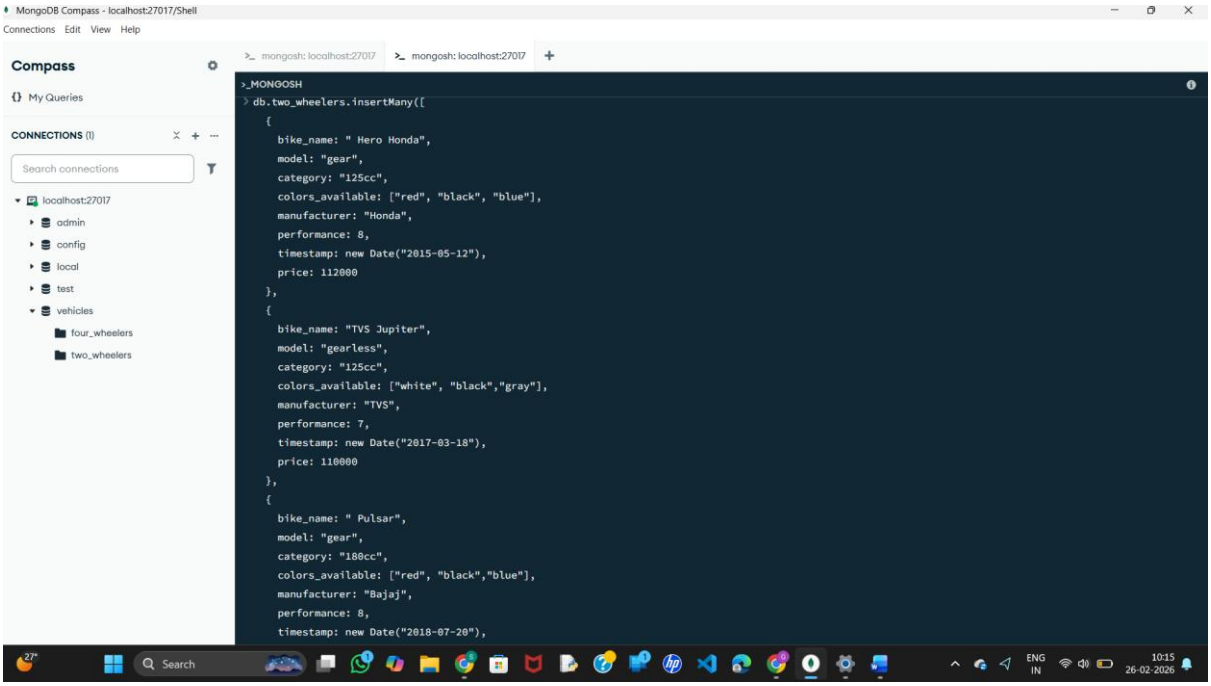
3. Create a collection called 'two_wheelers'. (use capping) and Create a collection called 'four_wheelers'.

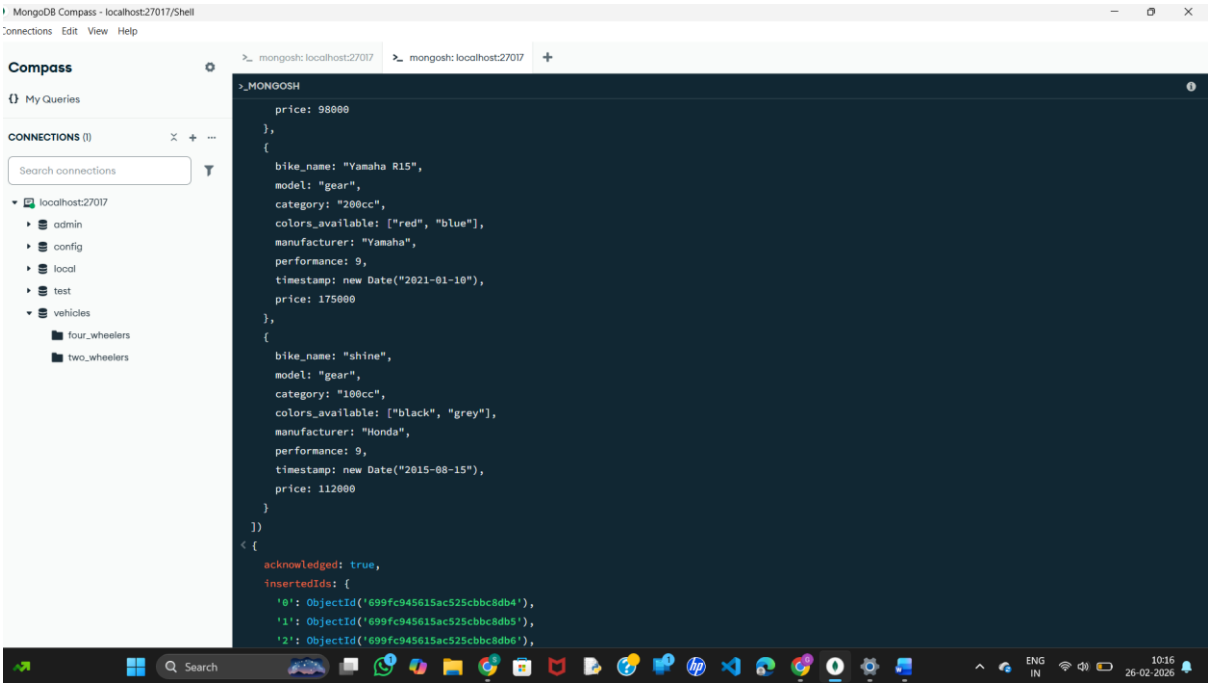
   Code:

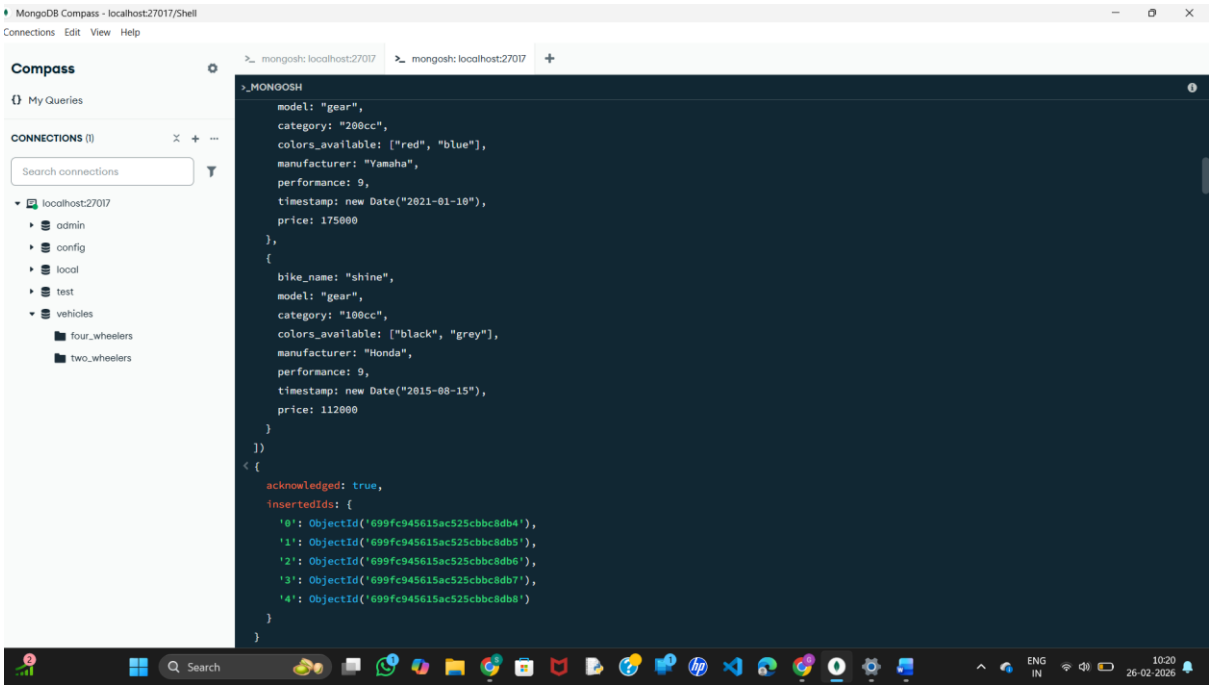


4. Add 5 four-wheeler details to the collection named 'four_wheelers'. Each document consists of following fields as vehicle_name, model (commercial or own), category (car, lorry, bus, mini truck, heavy truck, containers), variants (vxi, zxi, petrol, diesel etc) as array, manufacturer, performance (out of 10), timestamp (date and year release) and price.

   Code:


MongoDB Compass - localhost:27017/Shell
Connections Edit View Help
Compass
My Queries
CONNECTIONS (1)
Search connections
localhost:27017
admin
config
local
test
vehicles
four_wheelers
two_wheelers
mongosh: localhost:27017
mongosh: localhost:27017
>_MONGOSH
> db.two_wheelers.insertMany([
{
bike_name: " Hero Honda",
model: "gear",
category: "125cc",
colors_available: ["red", "black", "blue"],
manufacturer: "Honda",
performance: 8,
timestamp: new Date("2015-05-12"),
price: 112000
},
{
bike_name: "TVS Jupiter",
model: "gearless",
category: "125cc",
colors_available: ["white", "black","gray"],
manufacturer: "TVS",
performance: 7,
timestamp: new Date("2017-03-18"),
price: 110000
},
{
bike_name: " Pulsar",
model: "gear",
category: "180cc",
colors_available: ["red", "black","blue"],
manufacturer: "Bajaj",
performance: 8,
timestamp: new Date("2018-07-20"),
Search
ENG
IN
10:15
26-02-2026

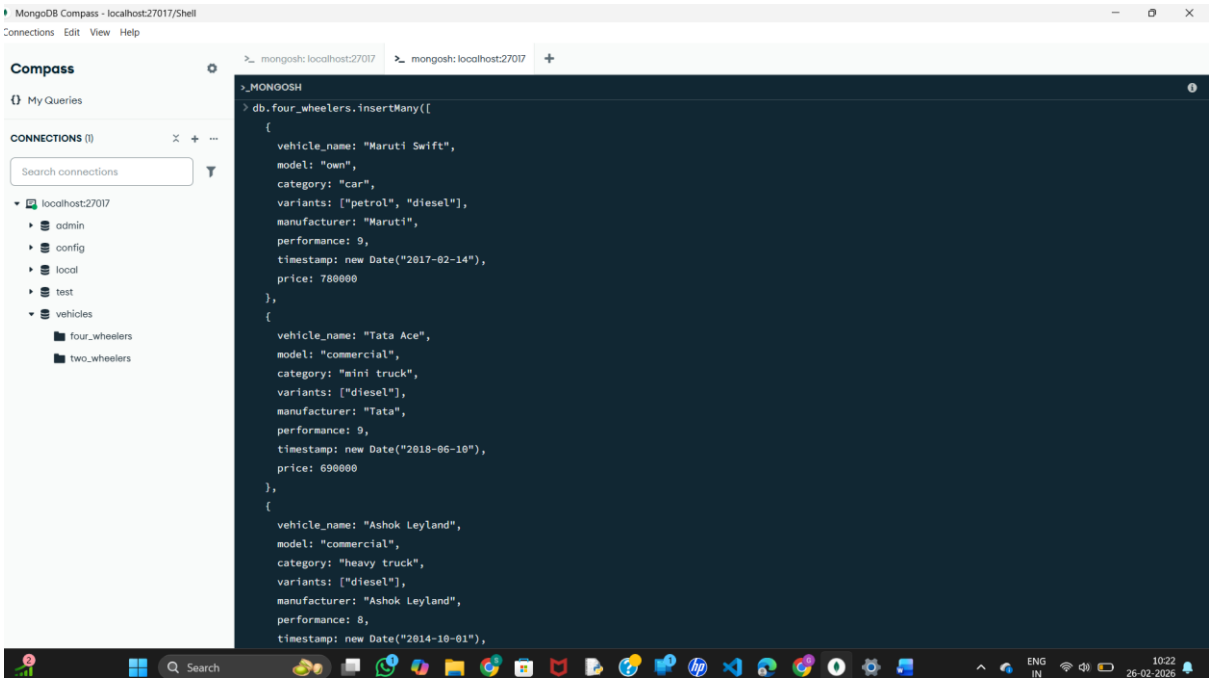

MongoDB Compass - localhost:27017/Shell
Connections Edit View Help
Compass
My Queries
CONNECTIONS (1)
Search connections
localhost:27017
admin
config
local
test
vehicles
four_wheelers
two_wheelers
mongosh: localhost:27017
mongosh: localhost:27017
>_MONGOSH
price: 98000
},
{
bike_name: "Yamaha R15",
model: "gear",
category: "200cc",
colors_available: ["red", "blue"],
manufacturer: "Yamaha",
performance: 9,
timestamp: new Date("2021-01-10"),
price: 175000
},
{
bike_name: "shine",
model: "gear",
category: "100cc",
colors_available: ["black", "grey"],
manufacturer: "Honda",
performance: 9,
timestamp: new Date("2015-08-15"),
price: 112000
}
])
{
acknowledged: true,
insertedIds: {
'0': ObjectId('699fc945615ac525cbbc8db4'),
'1': ObjectId('699fc945615ac525cbbc8db5'),
'2': ObjectId('699fc945615ac525cbbc8db6'),
Search
ENG
IN
10:16
26-02-2026

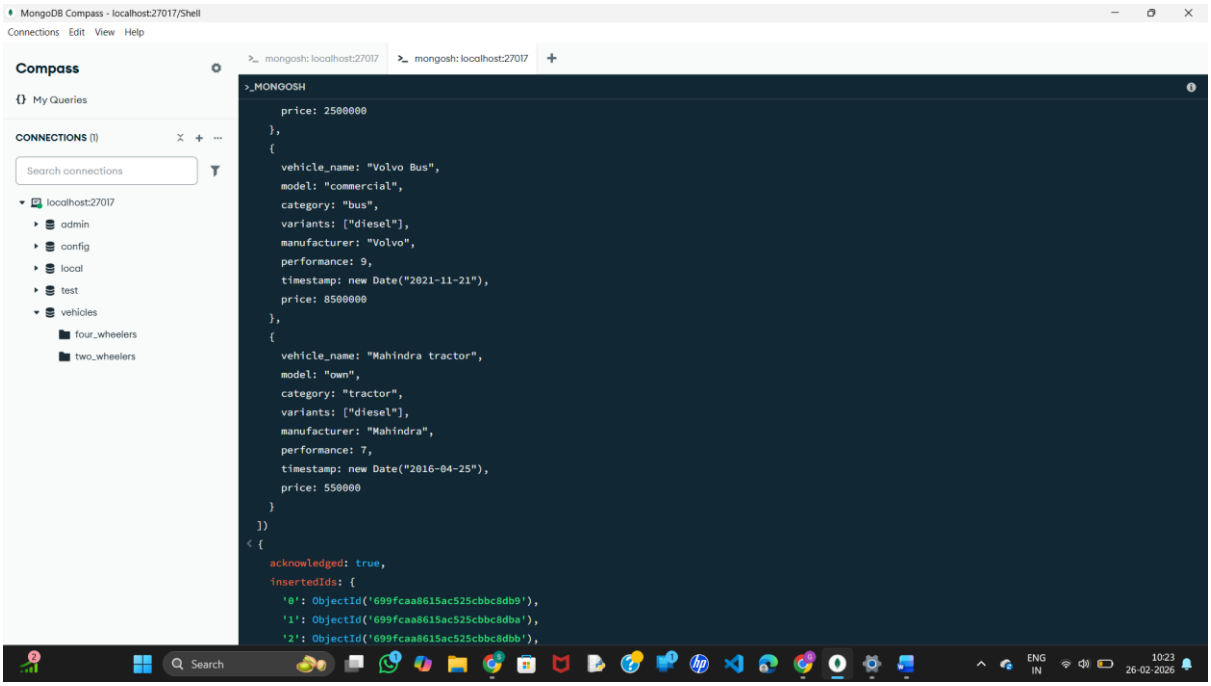


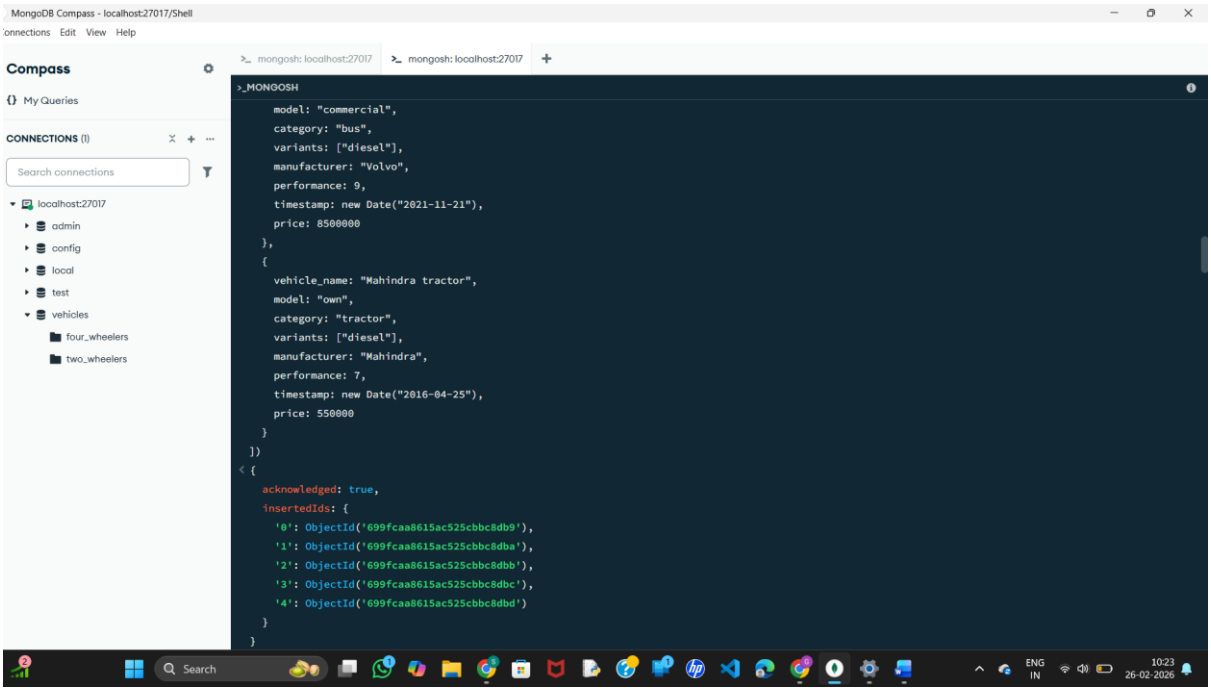
5. Add 5 four-wheeler details to the collection named 'four_wheelers'. Each document consists of following fields as vehicle_name, model (commercial or own), category (car, lorry, bus, mini truck, heavy truck, containers), variants (vxi, zxi, petrol, diesel etc) as array, manufacturer, performance (out of 10), timestamp (date and year release) and price.

   Code:

Code:

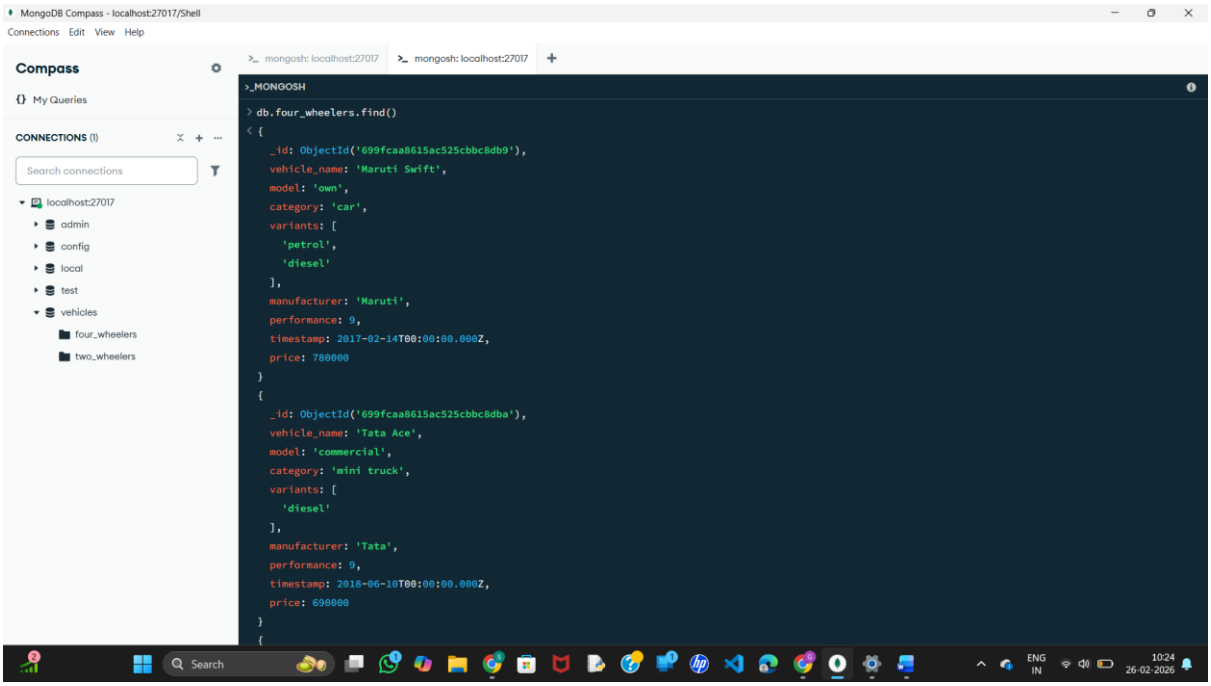


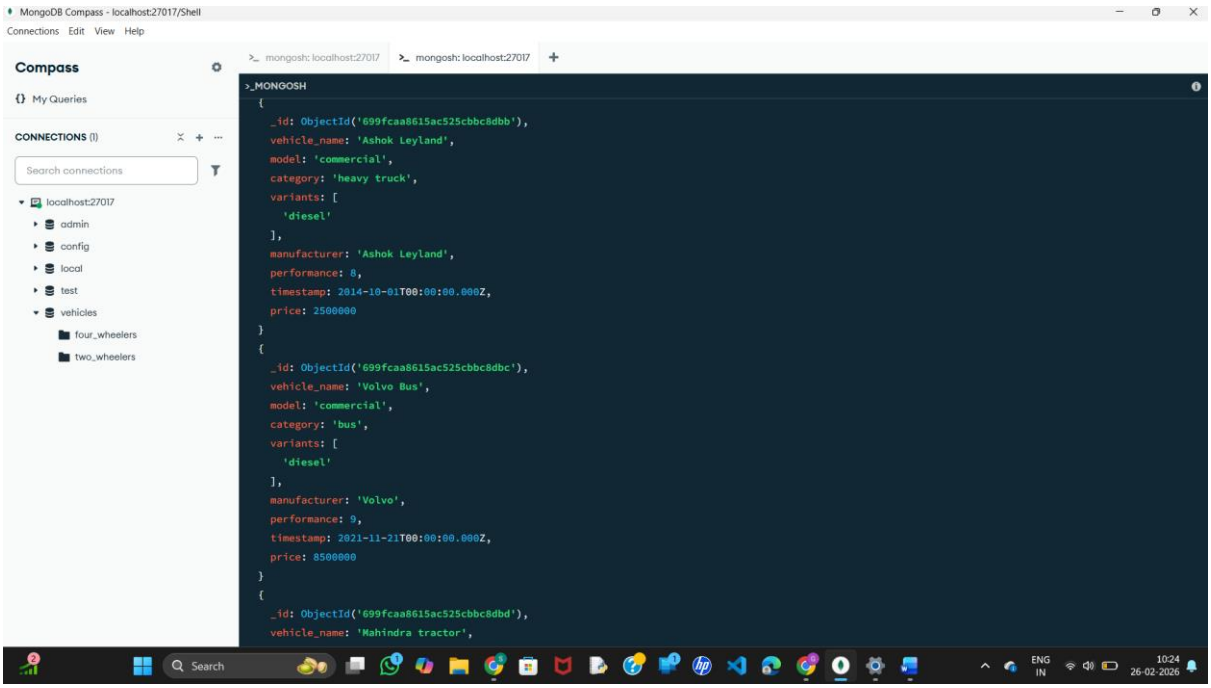




6. Write a MongoDB query to display all documents available in two_wheelers and four_wheelers.

   Code:


MongoDB Compass - localhost:27017/Shell
Connections Edit View Help
Compass
My Queries
CONNECTIONS (1)
Search connections
localhost:27017
admin
config
local
test
vehicles
four_wheelers
two_wheelers
mongosh: localhost:27017
mongosh: localhost:27017
>_MONGOSH
> db.four_wheelers.find()
{
_id: ObjectId('699fcaa8615ac525cbbc8db9'),
vehicle_name: 'Maruti Swift',
model: 'own',
category: 'car',
variants: [
'petrol',
'diesel'
],
manufacturer: 'Maruti',
performance: 9,
timestamp: 2017-02-14T00:00:00.000Z,
price: 780000
}
{
_id: ObjectId('699fcaa8615ac525cbbc8dba'),
vehicle_name: 'Tata Ace',
model: 'commercial',
category: 'mini truck',
variants: [
'diesel'
],
manufacturer: 'Tata',
performance: 9,
timestamp: 2018-06-10T00:00:00.000Z,
price: 690000
}
{
Search
ENG
IN
10:24
26-02-2026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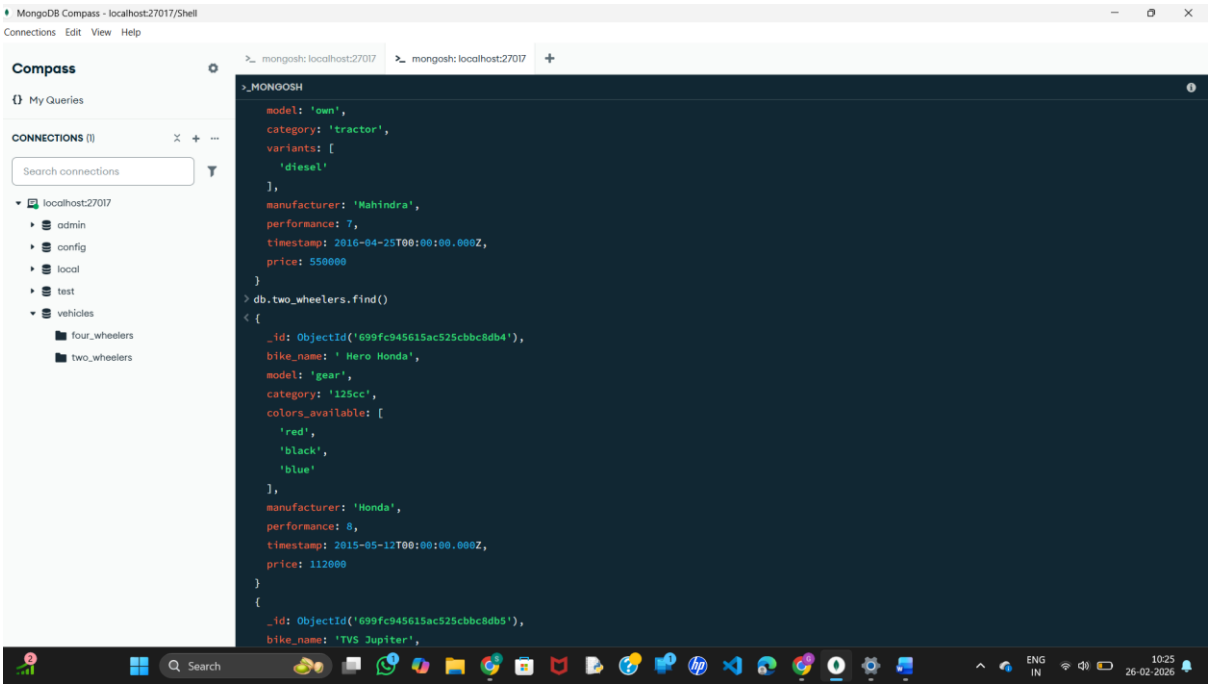
Connections Edit View Help
Compass
My Queries
CONNECTIONS (1)
Search connections
localhost:27017
admin
config
local
test
vehicles
four_wheelers
two_wheelers
mongosh: localhost:27017
mongosh: localhost:27017
>_MONGOSH
{
_id: ObjectId('699fcaa8615ac525cbbc8dbb'),
vehicle_name: 'Ashok Leyland',
model: 'commercial',
category: 'heavy truck',
variants: [
'diesel'
],
manufacturer: 'Ashok Leyland',
performance: 8,
timestamp: 2014-10-01T00:00:00.000Z,
price: 2500000
}
{
_id: ObjectId('699fcaa8615ac525cbbc8dbc'),
vehicle_name: 'Volvo Bus',
model: 'commercial',
category: 'bus',
variants: [
'diesel'
],
manufacturer: 'Volvo',
performance: 9,
timestamp: 2021-11-21T00:00:00.000Z,
price: 8500000
}
{
_id: ObjectId('699fcaa8615ac525cbbc8dbd'),
vehicle_name: 'Mahindra tractor',
Search
ENG
IN
10:24
26-02-2026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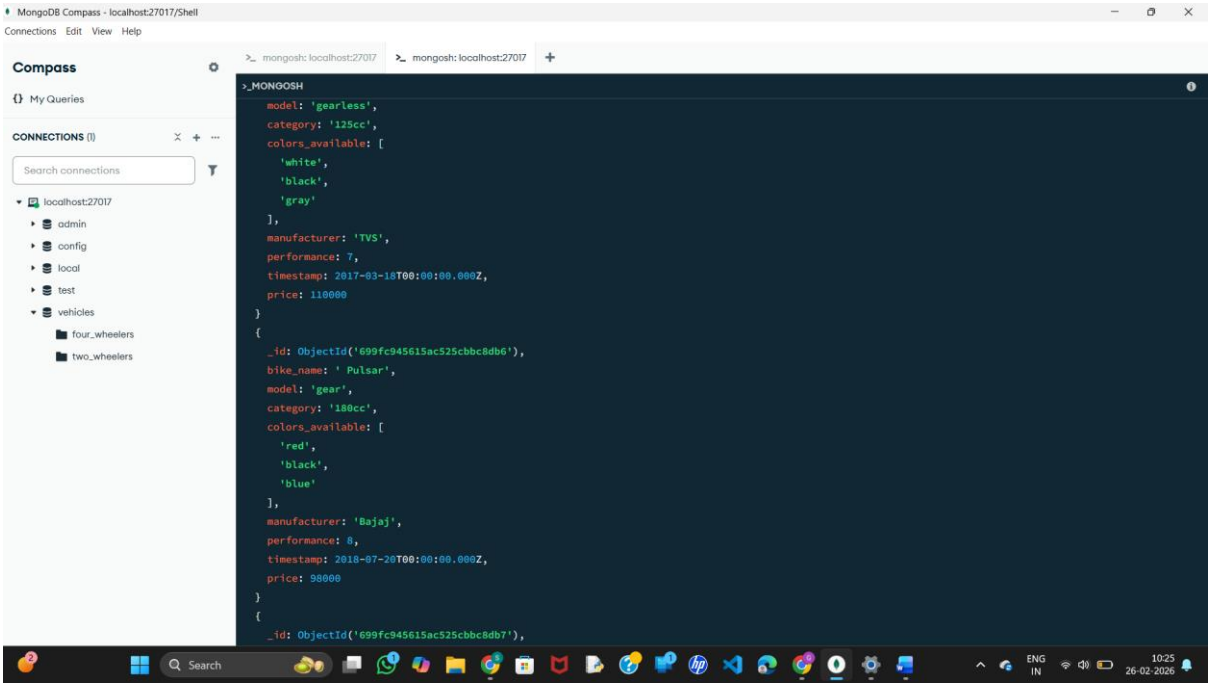
Compass
My Queries
CONNECTIONS (1)
Search connections
localhost:27017
admin
config
local
test
vehicles
four_wheelers
two_wheelers
mongosh: localhost:27017
mongosh: localhost:27017
>_MONGOSH
model: 'own',
category: 'tractor',
variants: [
'diesel'
],
manufacturer: 'Mahindra',
performance: 7,
timestamp: 2016-04-25T00:00:00.000Z,
price: 550000
}
> db.two_wheelers.find()
{
_id: ObjectId('699fc945615ac525cbbc8db4'),
bike_name: ' Hero Honda',
model: 'gear',
category: '125cc',
colors_available: [
'red',
'black',
'blue'
],
manufacturer: 'Honda',
performance: 8,
timestamp: 2015-05-12T00:00:00.000Z,
price: 112000
}
{
_id: ObjectId('699fc945615ac525cbbc8db5'),
bike_name: 'TVS Jupiter',
Search
ENG
IN
10:25
26-02-2026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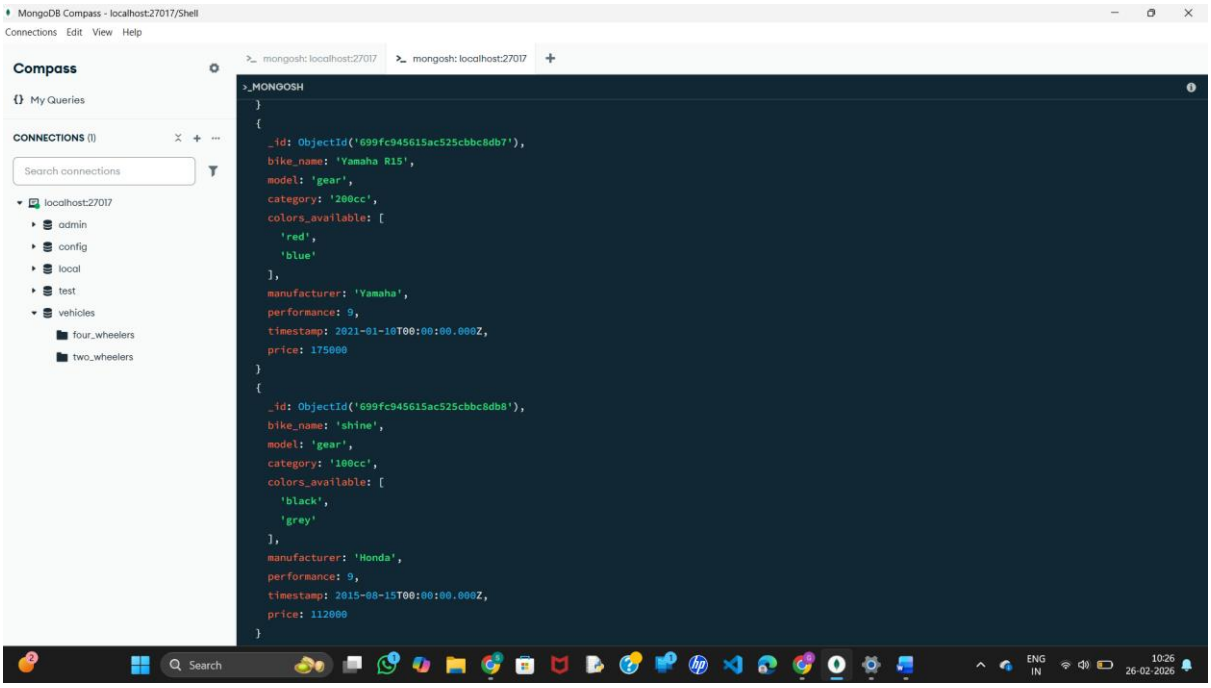
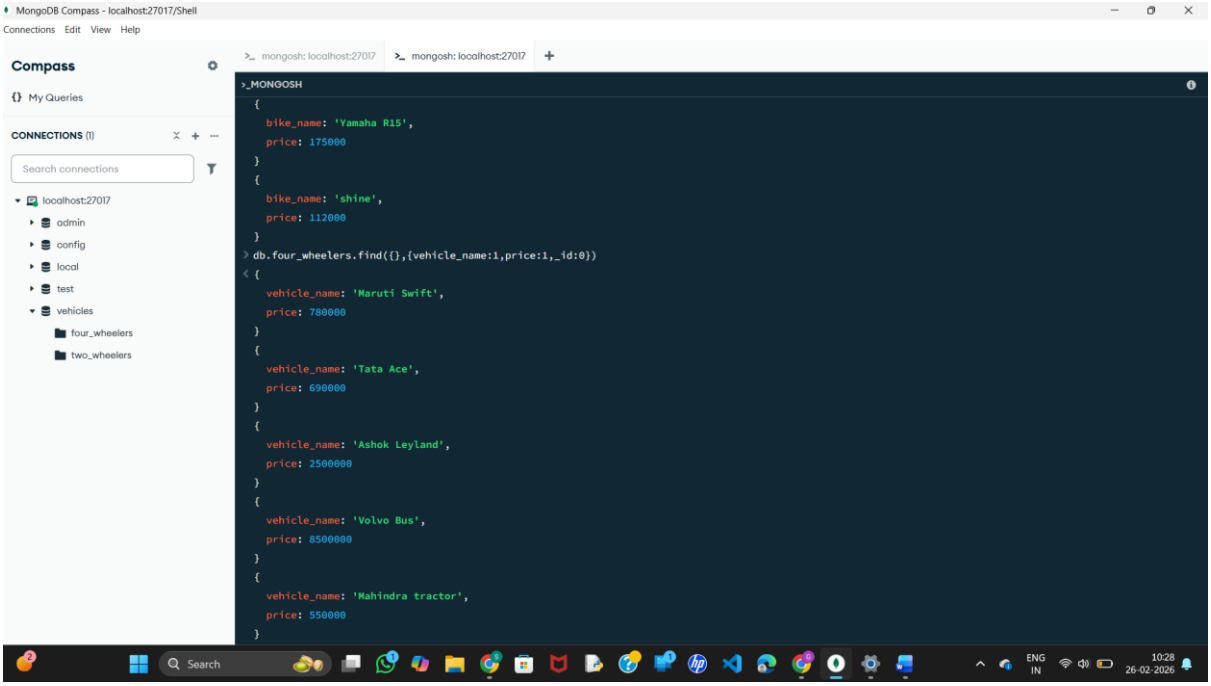
My Queries
CONNECTIONS (1)
Search connections
localhost:27017
admin
config
local
test
vehicles
four_wheelers
two_wheelers
mongosh: localhost:27017
mongosh: localhost:27017
>_MONGOSH
model: 'gearless',
category: '125cc',
colors_available: [
'white',
'black',
'gray'
],
manufacturer: 'TVS',
performance: 7,
timestamp: 2017-03-18T00:00:00.000Z,
price: 110000
}
{
_id: ObjectId('699fc945615ac525cbbc8db6'),
bike_name: ' Pulsar',
model: 'gear',
category: '180cc',
colors_available: [
'red',
'black',
'blue'
],
manufacturer: 'Bajaj',
performance: 8,
timestamp: 2018-07-20T00:00:00.000Z,
price: 98000
}
{
_id: ObjectId('699fc945615ac525cbbc8db7'),
Search
ENG
IN
10:25
26-02-2026



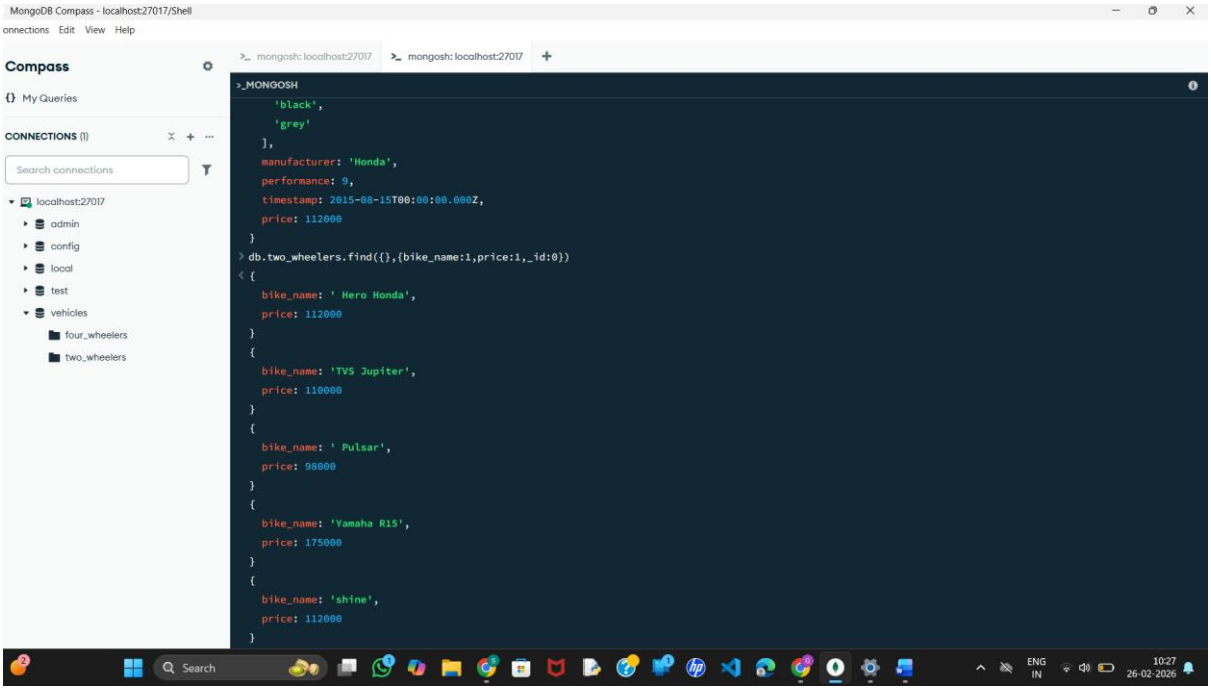
7. Write a MongoDB query to display only vehicle name and price in all the collection of the database

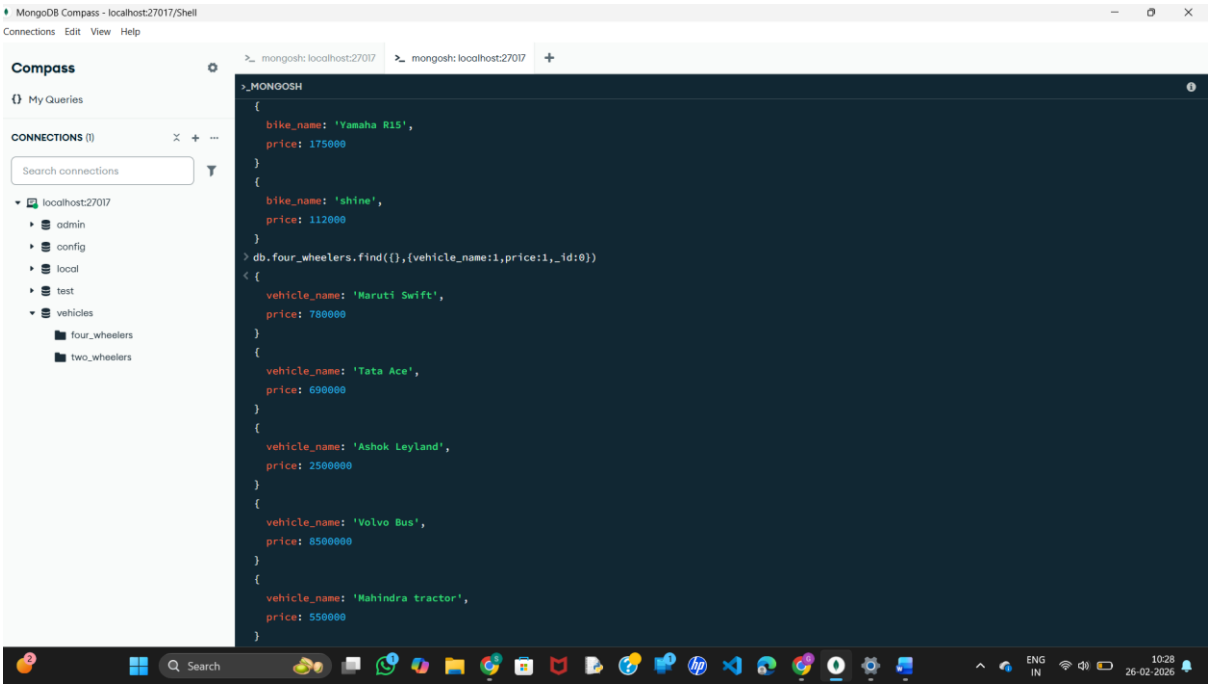
   Code:



8. Write a MongoDB query to display two_wheelers from a particular company

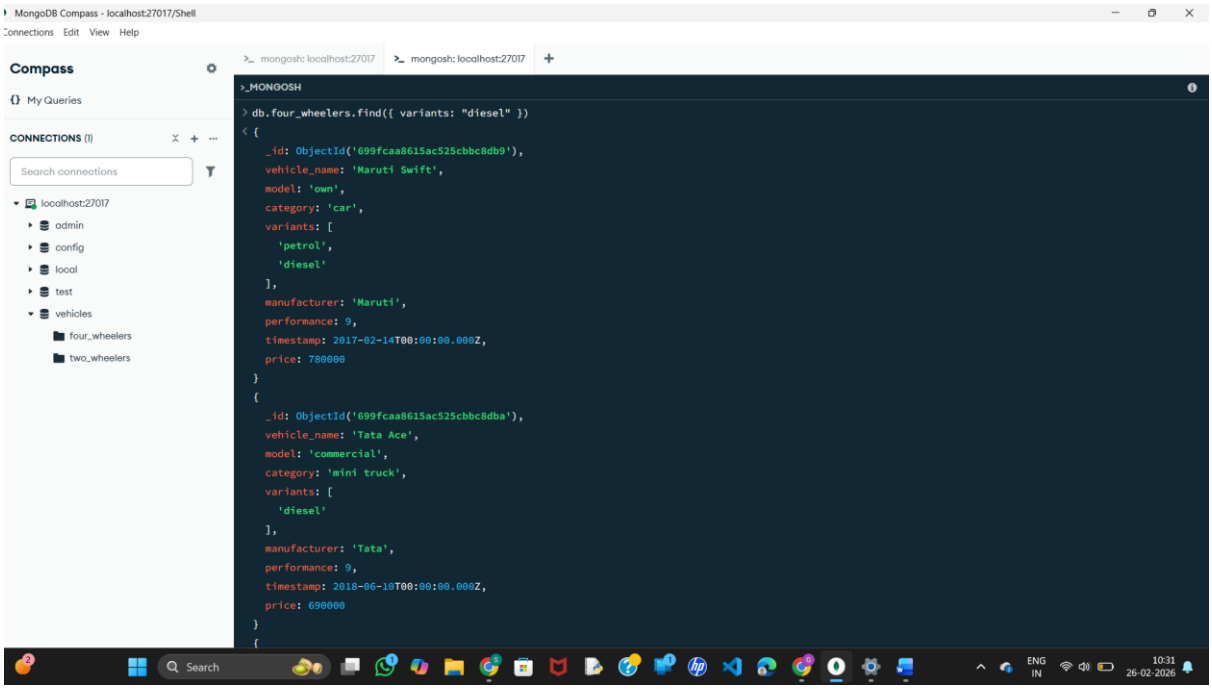
   Code:





9. Write a MongoDB query to display four_wheelers available in diesel variants

Code: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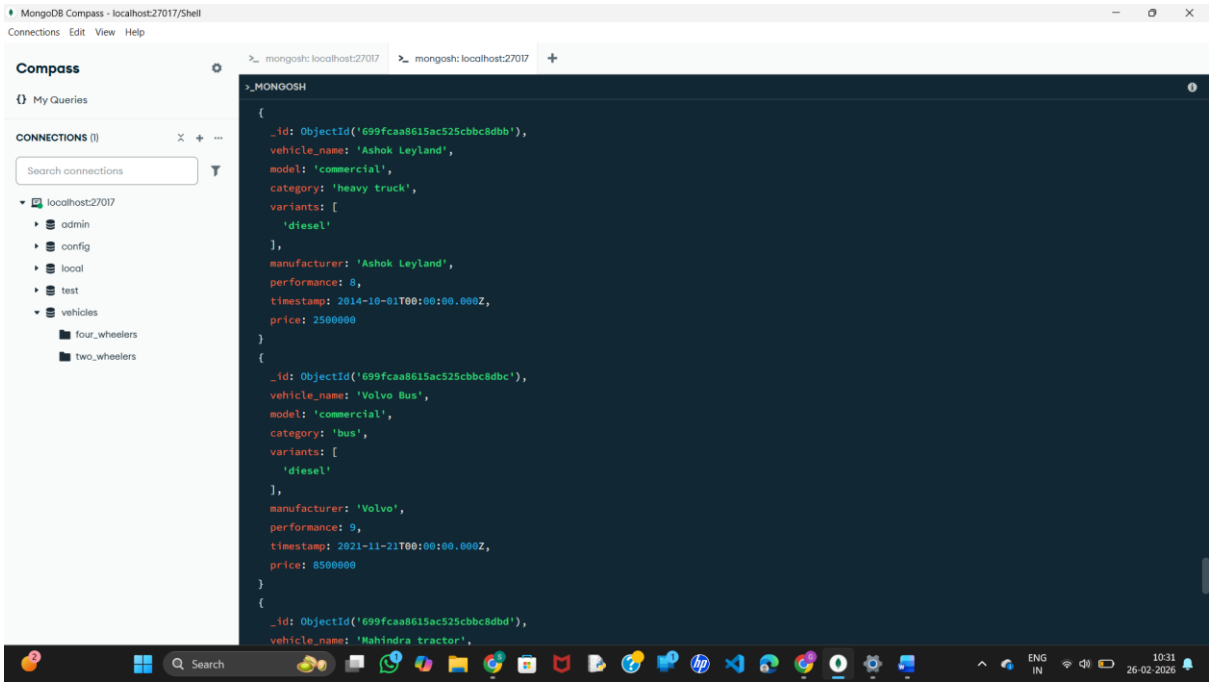
CONNECTIONS (1)
Search connections
localhost:27017
admin
config
local
test
vehicles
four_wheelers
two_wheelers
mongosh: localhost:27017
mongosh: localhost:27017
>_MONGOSH
> db.four_wheelers.find({ variants: "diesel" })
{
_id: ObjectId('699fcaa8615ac525cbbc8db9'),
vehicle_name: 'Maruti Swift',
model: 'own',
category: 'car',
variants: [
'petrol',
'diesel'
],
manufacturer: 'Maruti',
performance: 9,
timestamp: 2017-02-14T00:00:00.000Z,
price: 780000
}
{
_id: ObjectId('699fcaa8615ac525cbbc8dba'),
vehicle_name: 'Tata Ace',
model: 'commercial',
category: 'mini truck',
variants: [
'diesel'
],
manufacturer: 'Tata',
performance: 9,
timestamp: 2018-06-10T00:00:00.000Z,
price: 690000
}
{
Search
ENG
IN
10:31
26-02-2026


MongoDB Compass - localhost:27017/Shell
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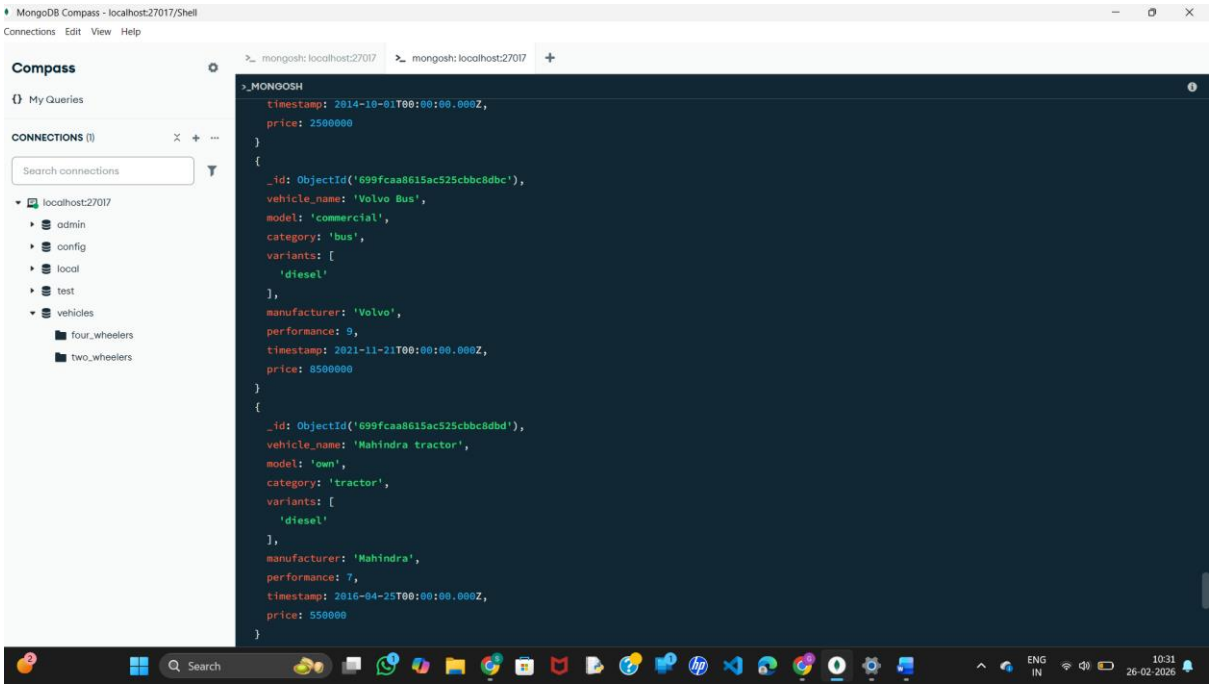
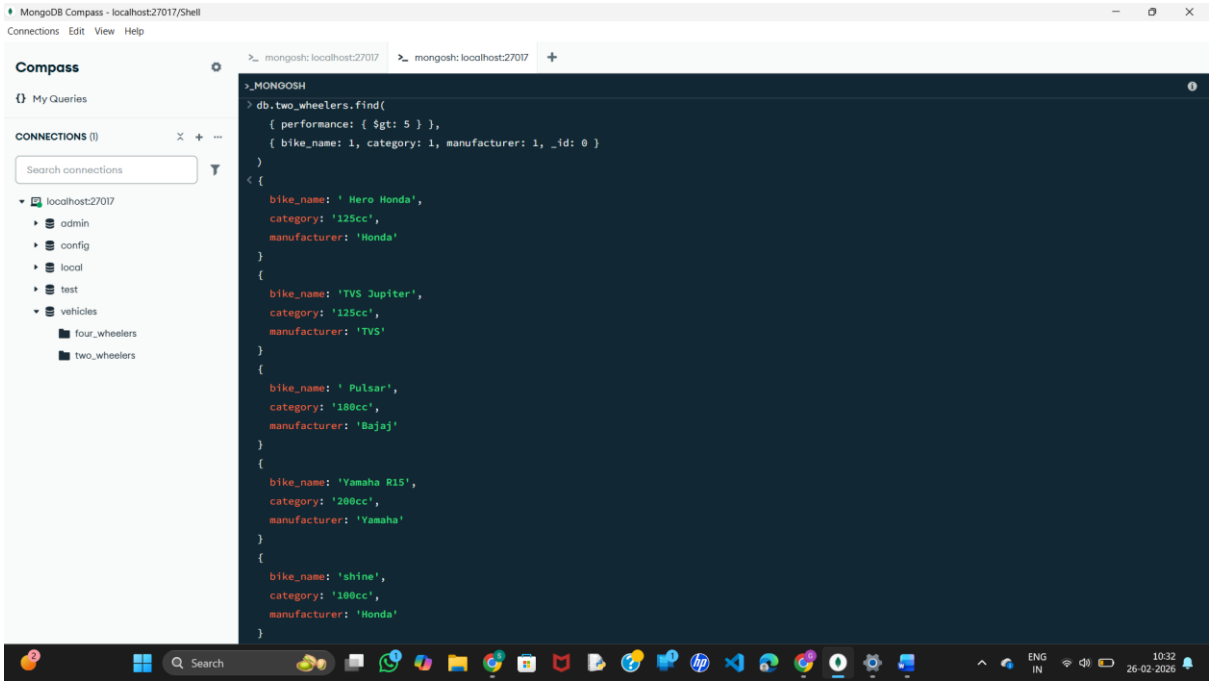
Search connections
localhost:27017
admin
config
local
test
vehicles
four_wheelers
two_wheelers
mongosh: localhost:27017
mongosh: localhost:27017
>_MONGOSH
{
_id: ObjectId('699fcaa8615ac525cbbc8dbb'),
vehicle_name: 'Ashok Leyland',
model: 'commercial',
category: 'heavy truck',
variants: [
'diesel'
],
manufacturer: 'Ashok Leyland',
performance: 8,
timestamp: 2014-10-01T00:00:00.000Z,
price: 2500000
}
{
_id: ObjectId('699fcaa8615ac525cbbc8dbc'),
vehicle_name: 'Volvo Bus',
model: 'commercial',
category: 'bus',
variants: [
'diesel'
],
manufacturer: 'Volvo',
performance: 9,
timestamp: 2021-11-21T00:00:00.000Z,
price: 8500000
}
{
_id: ObjectId('699fcaa8615ac525cbbc8dbd'),
vehicle_name: 'Mahindra tractor',
Search
ENG
IN
10:31
26-02-2026



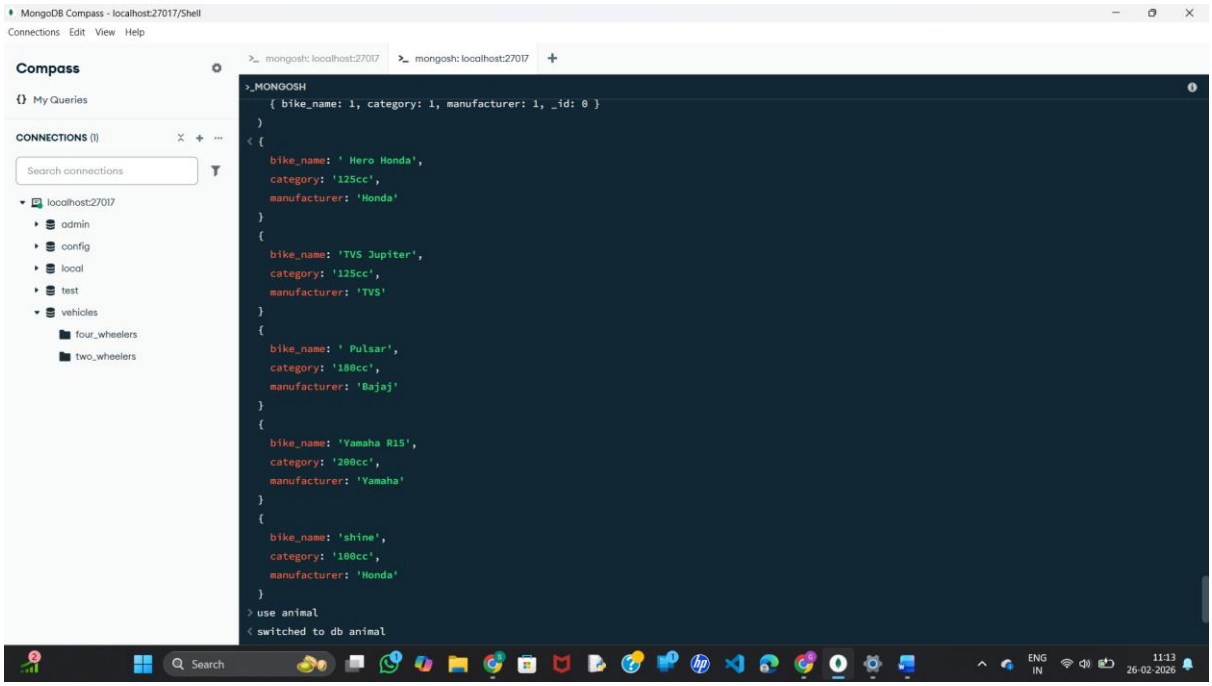
10. Write a MongoDB query to display vehicles name, category and manufacturer details whose rating is more than 5.

Code:

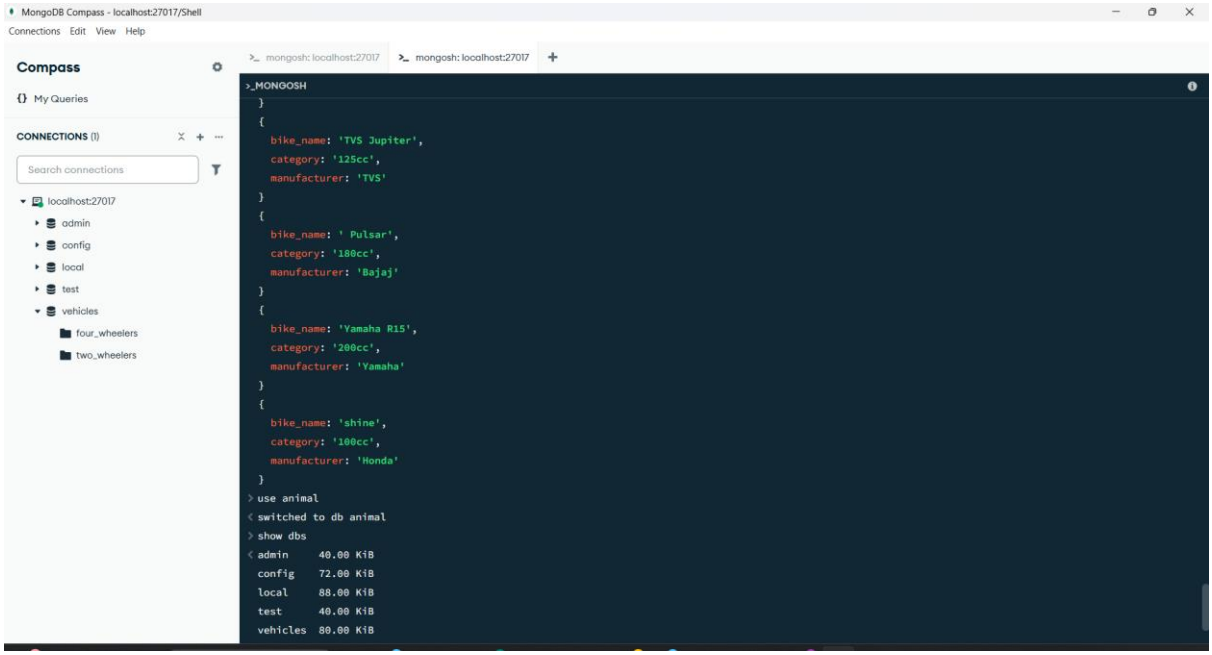


2. Use MongoDB to implement the following DB operations for a Zoo

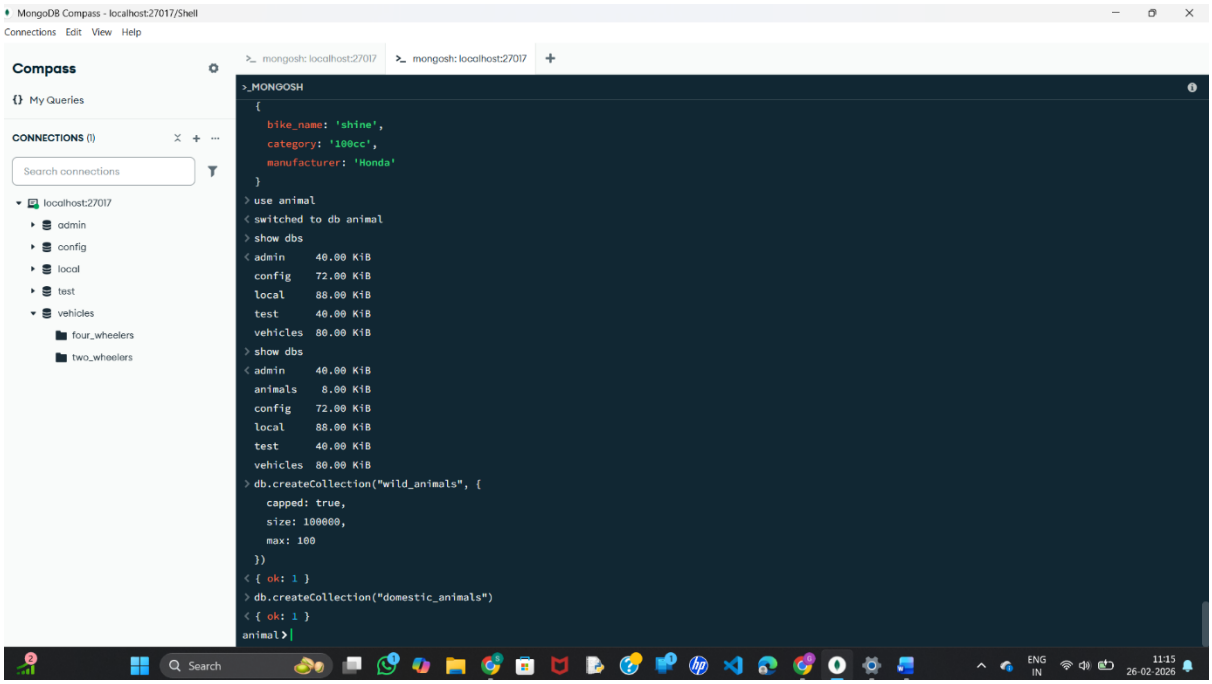
1. Create a database called 'animal' and *write* a MongoDB query to select database as 'animal'.



2. Write a MongoDB query to display all the databases.

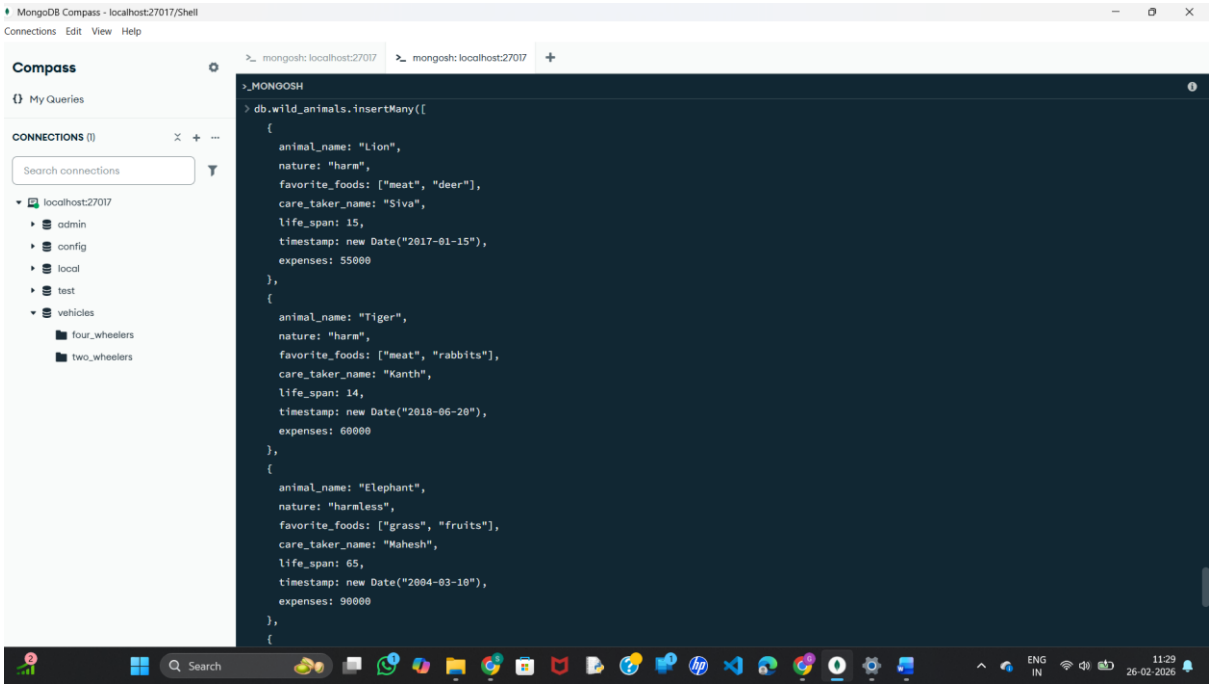


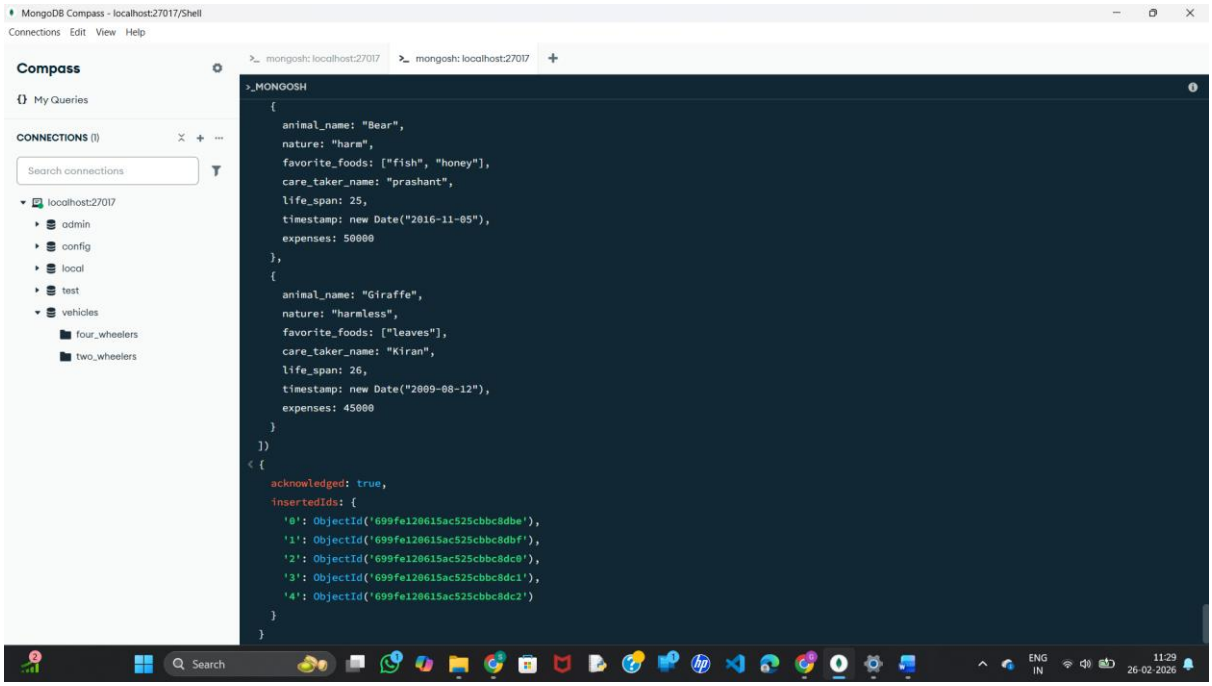
3. Create a collection called ‘wild_animals’.(use capping) and Create a collection called ‘domestic_animals’.



4. 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.

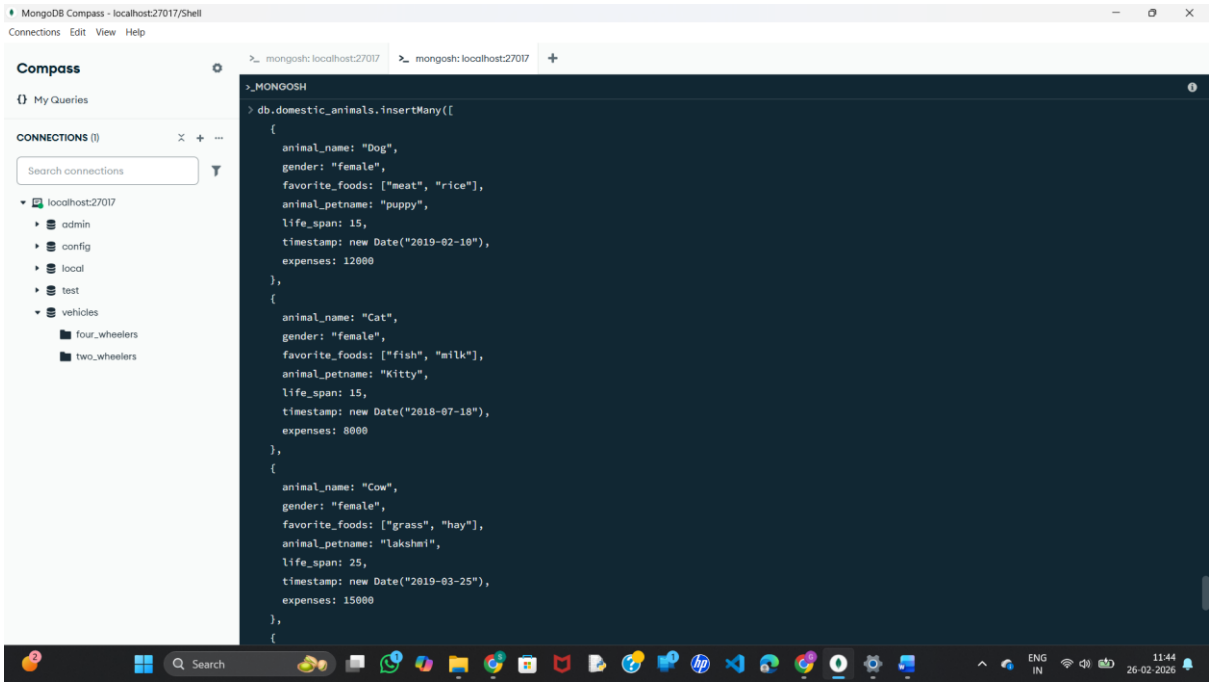
Code:

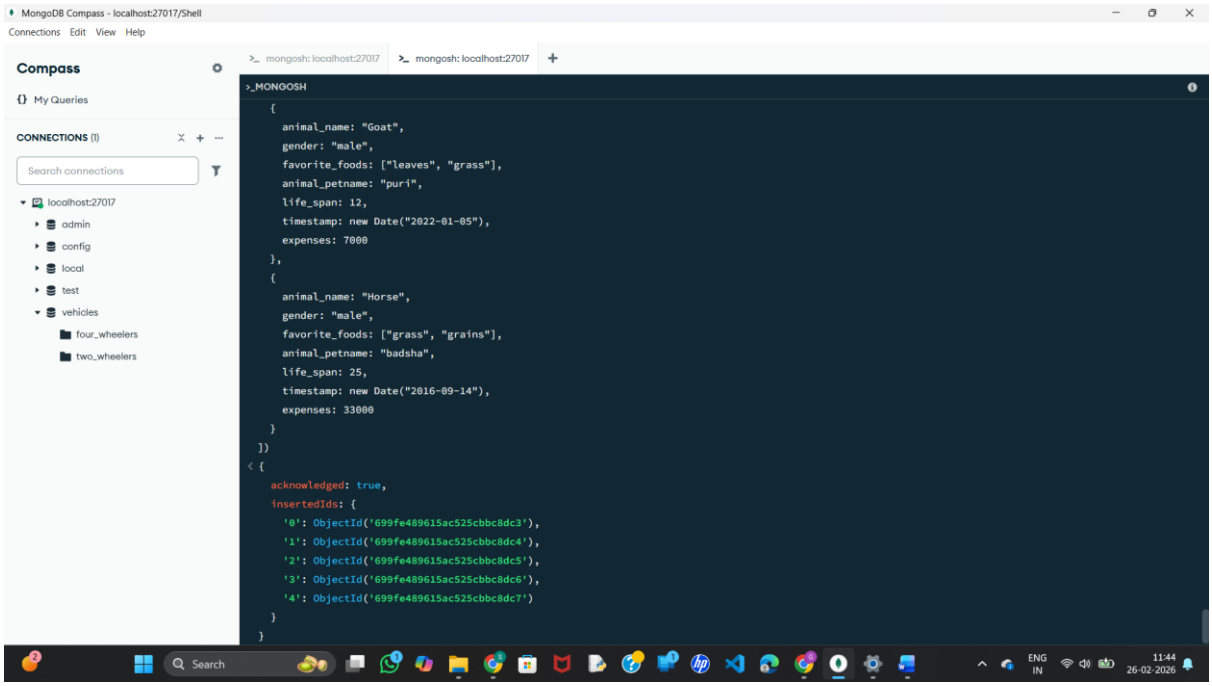




5. Add 5 domestic-animal details to the collection named 'domestic_animals'. Each document consists of following fields as animal_name, gender (male or female), favorite_foods (meat, rabbits, deer etc) as array, animal_petname, life span (in years), timestamp (when the animal registered at the Zoo) and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

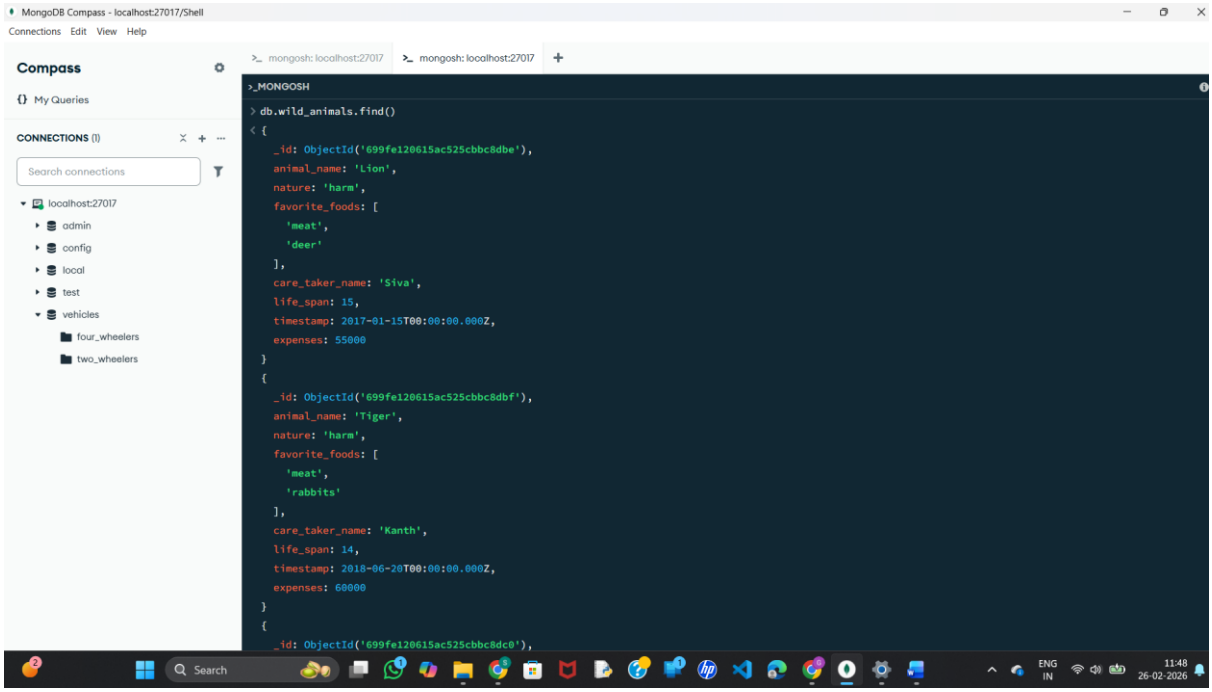
Code:

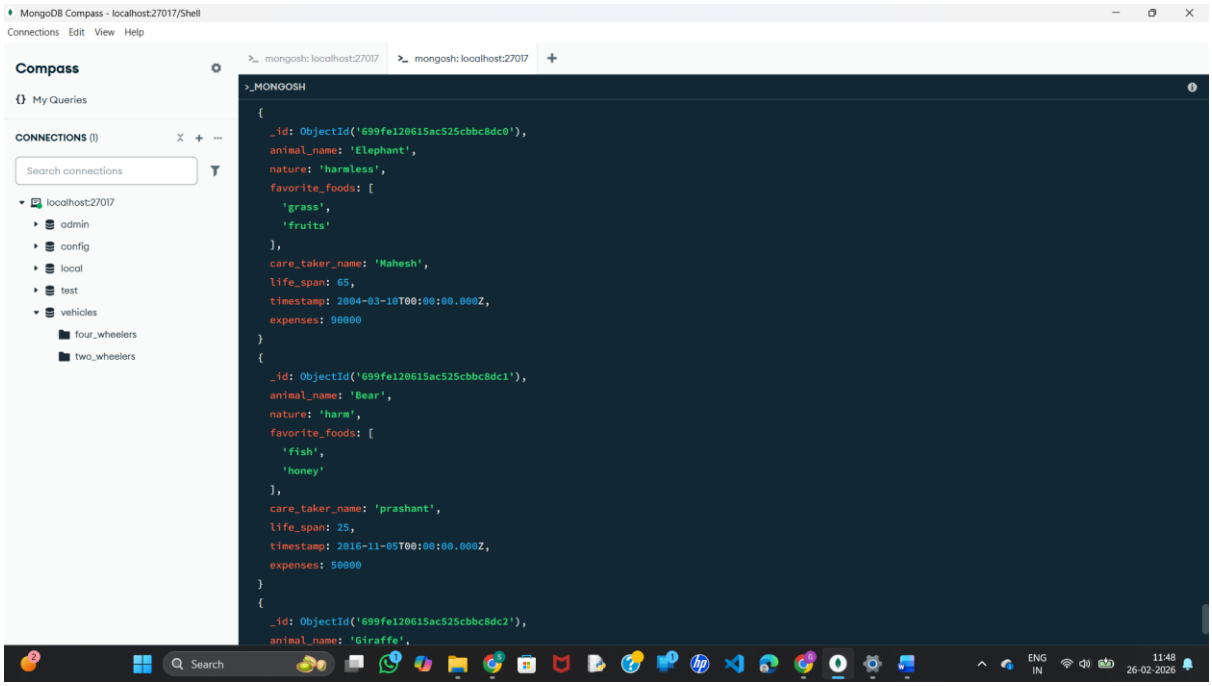


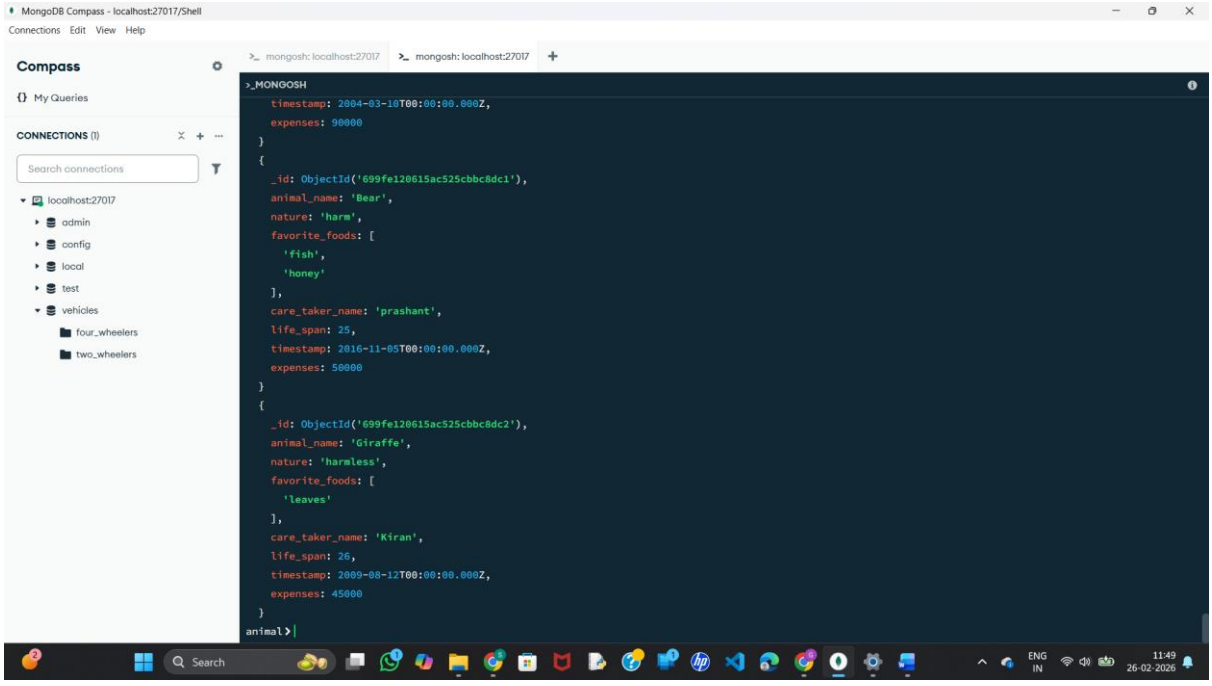


6. Write a MongoDB query to display all documents available in wild_animals and domastic_animals.

Code:




MongoDB Compass - localhost:27017/Shell
Connections Edit View Help
Compass
My Queries
CONNECTIONS (1)
Search connections
localhost:27017
admin
config
local
test
vehicles
four_wheelers
two_wheelers
mongosh: localhost:27017
mongosh: localhost:27017
>_MONGOSH
{
_id: ObjectId('699fe120615ac525cbbc8dc0'),
animal_name: 'Elephant',
nature: 'harmless',
favorite_foods: [
'grass',
'fruits'
],
care_taker_name: 'Mahesh',
life_span: 65,
timestamp: 2004-03-10T00:00:00.000Z,
expenses: 90000
}
{
_id: ObjectId('699fe120615ac525cbbc8dc1'),
animal_name: 'Bear',
nature: 'harm',
favorite_foods: [
'fish',
'honey'
],
care_taker_name: 'prashant',
life_span: 25,
timestamp: 2016-11-05T00:00:00.000Z,
expenses: 50000
}
{
_id: ObjectId('699fe120615ac525cbbc8dc2'),
animal_name: 'Giraffe',
Search
ENG
IN
11:48
26-02-2026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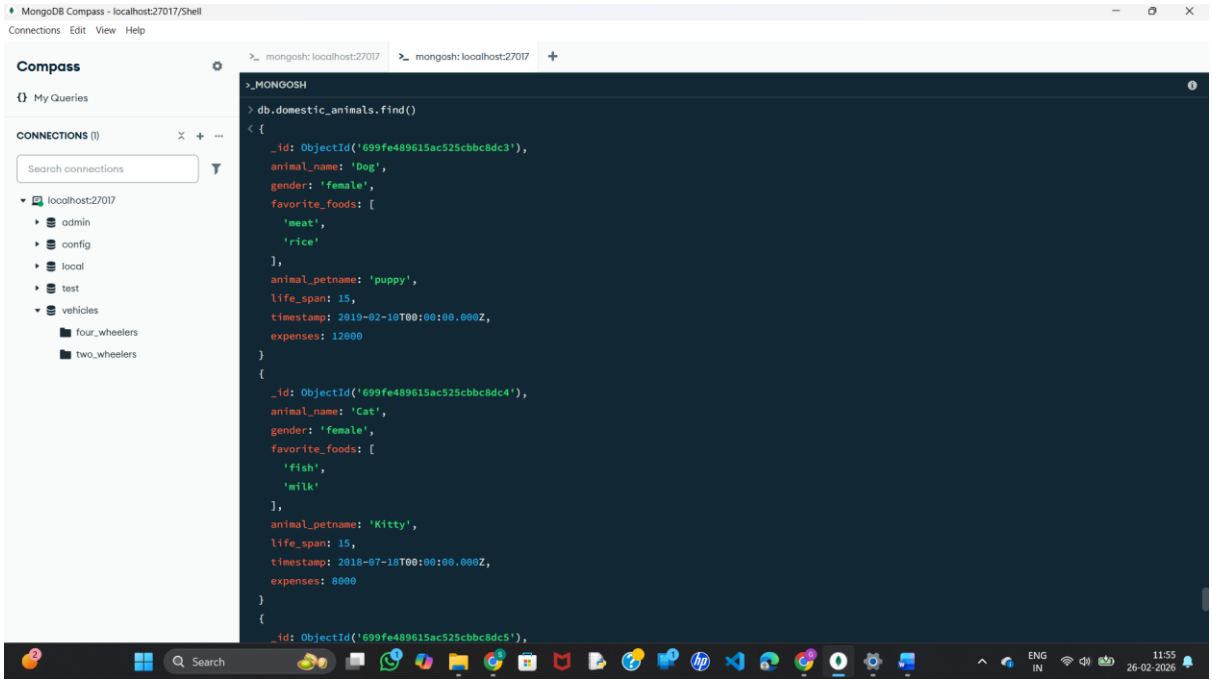
mongosh: localhost:27017
>_MONGOSH
timestamp: 2004-03-10T00:00:00.000Z,
expenses: 90000
}
{
_id: ObjectId('699fe120615ac525cbbc8dc1'),
animal_name: 'Bear',
nature: 'harm',
favorite_foods: [
'fish',
'honey'
],
care_taker_name: 'prashant',
life_span: 25,
timestamp: 2016-11-05T00:00:00.000Z,
expenses: 50000
}
{
_id: ObjectId('699fe120615ac525cbbc8dc2'),
animal_name: 'Giraffe',
nature: 'harmless',
favorite_foods: [
'leaves'
],
care_taker_name: 'Kiran',
life_span: 26,
timestamp: 2009-08-12T00:00:00.000Z,
expenses: 45000
}
animal>
Search
ENG
IN
11:49
26-02-2026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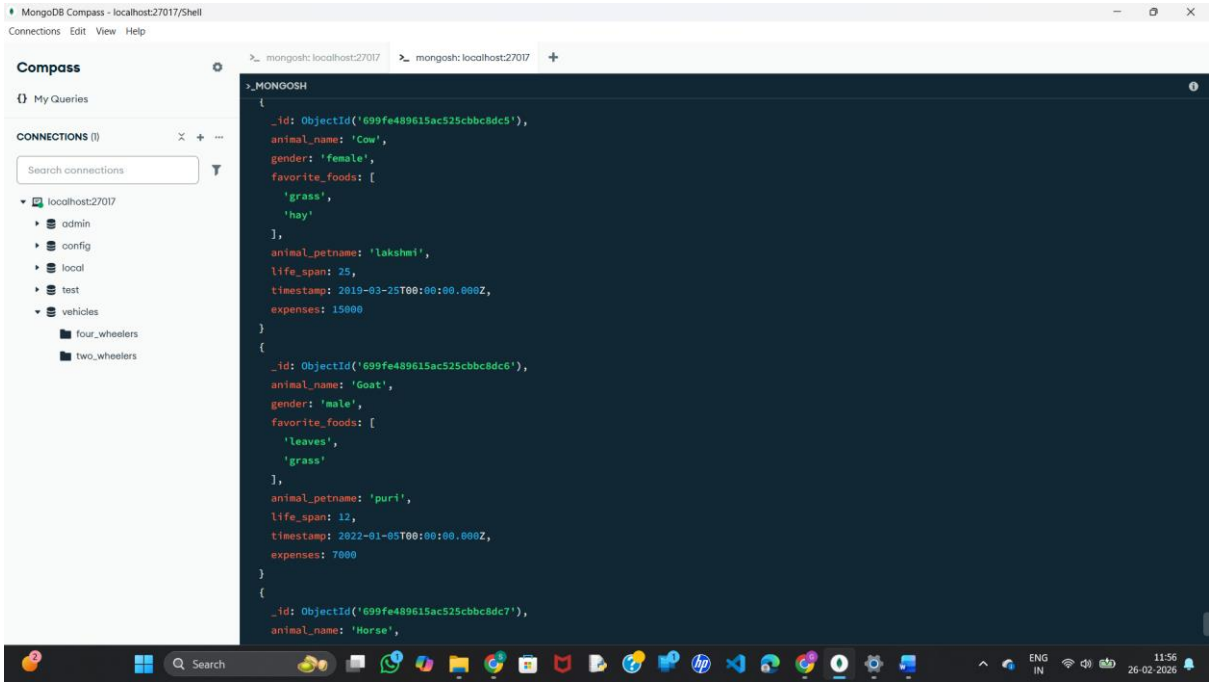
test
vehicles
four_wheelers
two_wheelers
mongosh: localhost:27017
mongosh: localhost:27017
>_MONGOSH
> db.domestic_animals.find()
{
_id: ObjectId('699fe489615ac525cbbc8dc3'),
animal_name: 'Dog',
gender: 'female',
favorite_foods: [
'meat',
'rice'
],
animal_petname: 'puppy',
life_span: 15,
timestamp: 2019-02-10T00:00:00.000Z,
expenses: 12000
}
{
_id: ObjectId('699fe489615ac525cbbc8dc4'),
animal_name: 'Cat',
gender: 'female',
favorite_foods: [
'fish',
'milk'
],
animal_petname: 'Kitty',
life_span: 15,
timestamp: 2018-07-18T00:00:00.000Z,
expenses: 8000
}
{
_id: ObjectId('699fe489615ac525cbbc8dc5'),
Search
ENG
IN
11:55
26-02-2026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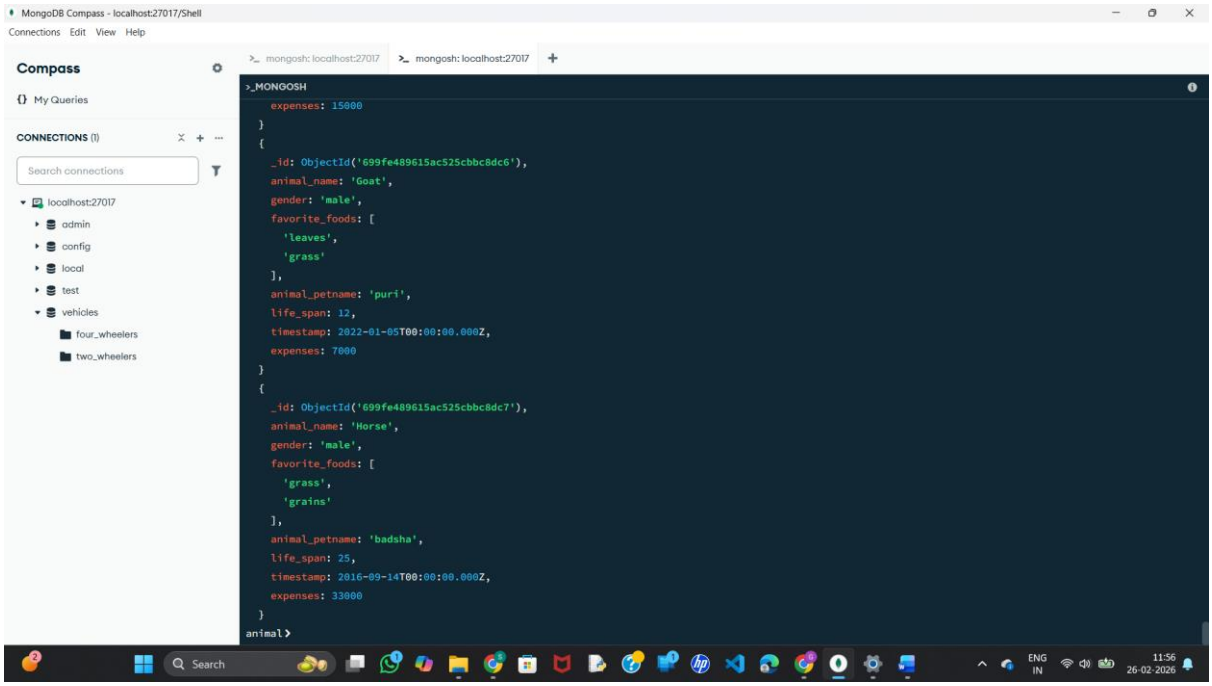
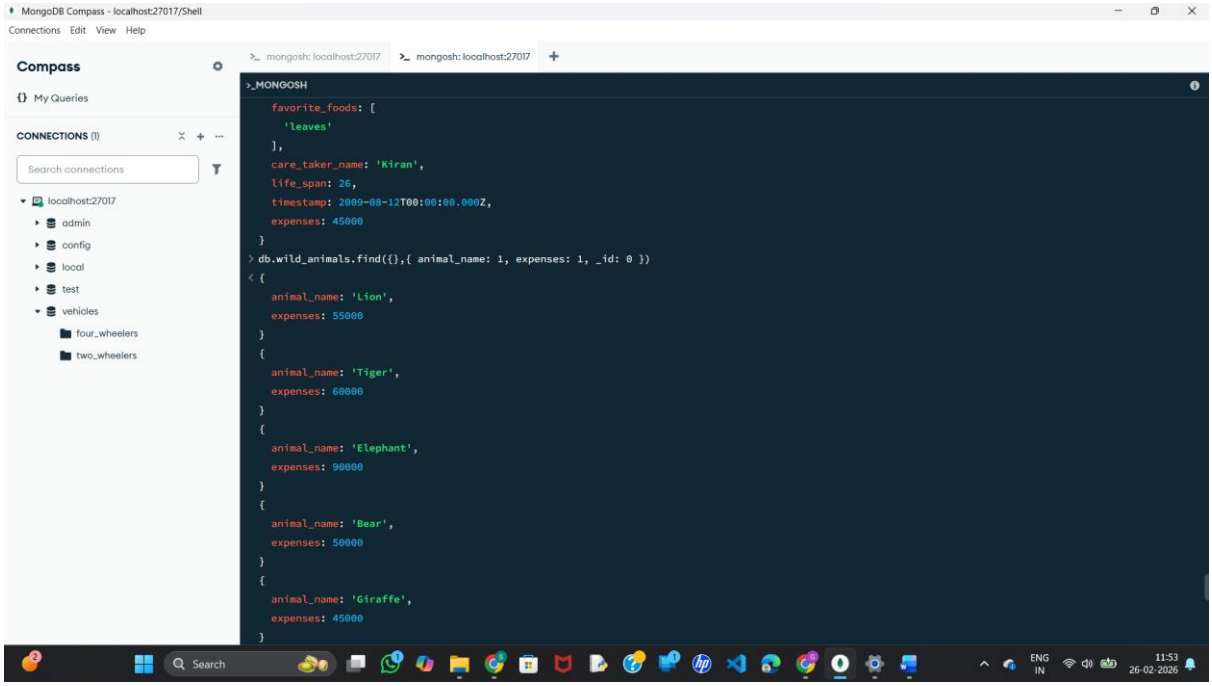
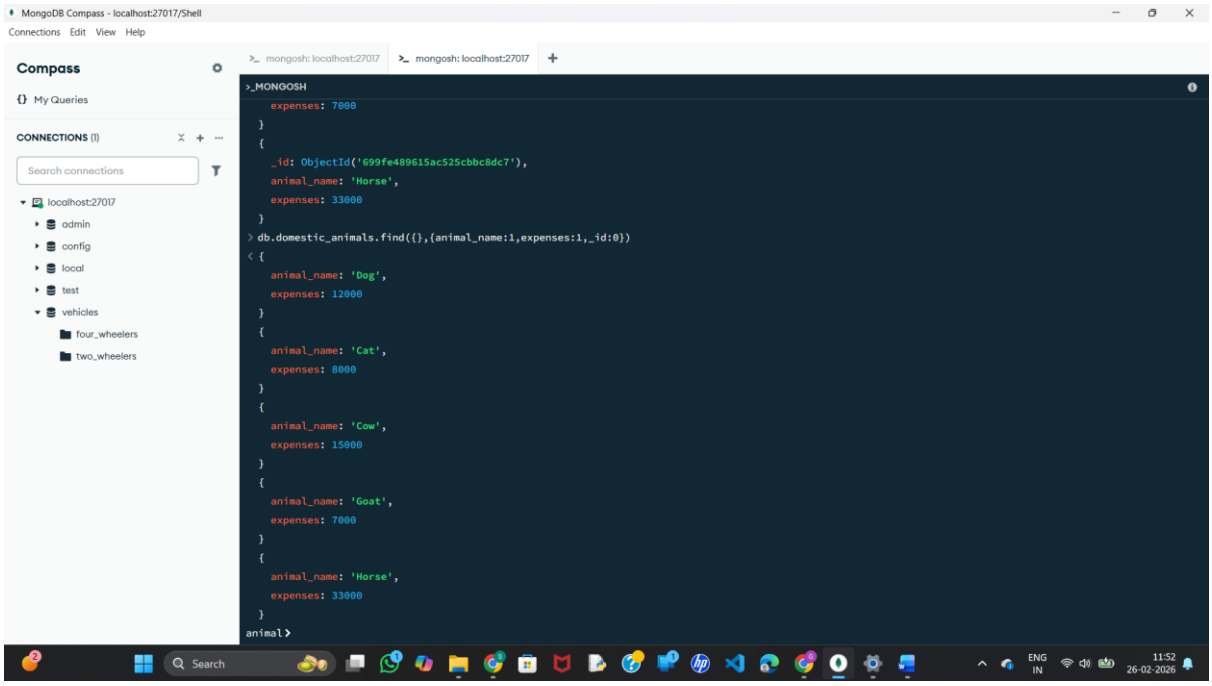
two_wheelers
mongosh: localhost:27017
mongosh: localhost:27017
>_MONGOSH
{
_id: ObjectId('699fe489615ac525cbbc8dc5'),
animal_name: 'Cow',
gender: 'female',
favorite_foods: [
'grass',
'hay'
],
animal_petname: 'lakshmi',
life_span: 25,
timestamp: 2019-03-25T00:00:00.000Z,
expenses: 15000
}
{
_id: ObjectId('699fe489615ac525cbbc8dc6'),
animal_name: 'Goat',
gender: 'male',
favorite_foods: [
'leaves',
'grass'
],
animal_petname: 'puri',
life_span: 12,
timestamp: 2022-01-05T00:00:00.000Z,
expenses: 7000
}
{
_id: ObjectId('699fe489615ac525cbbc8dc7'),
animal_name: 'Horse',
Search
ENG
IN
11:56
26-02-2026

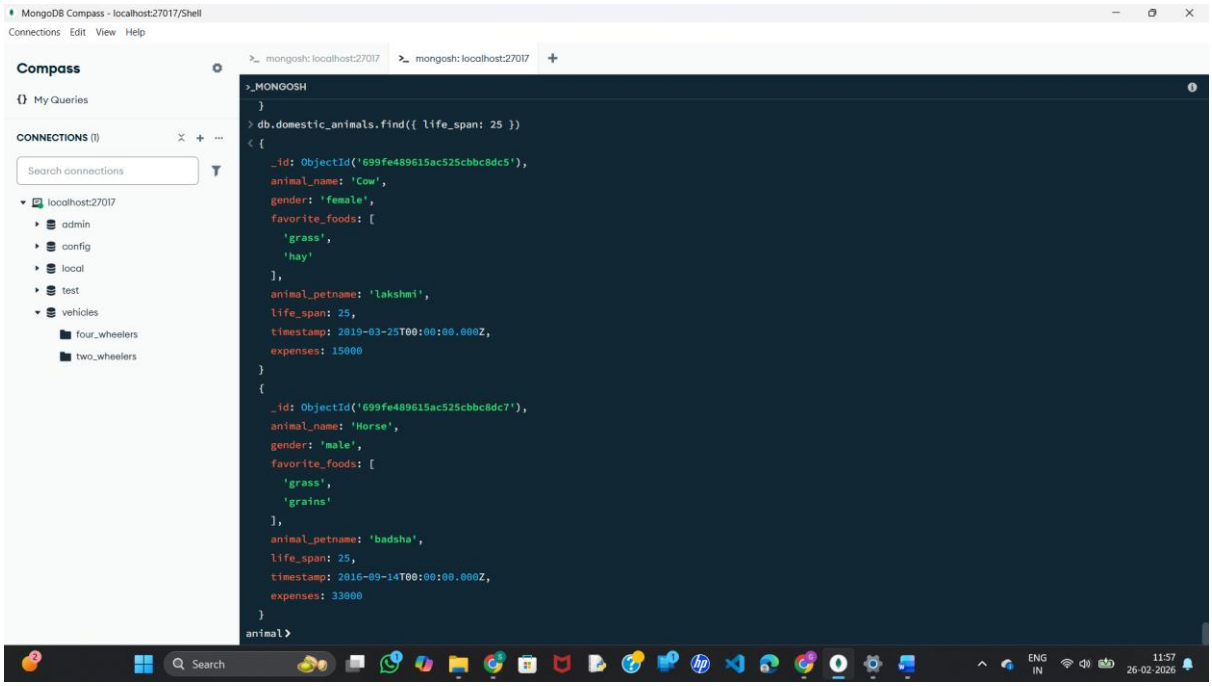


7. Write a MongoDB query to display only animal name and expenses in all the collection of the database

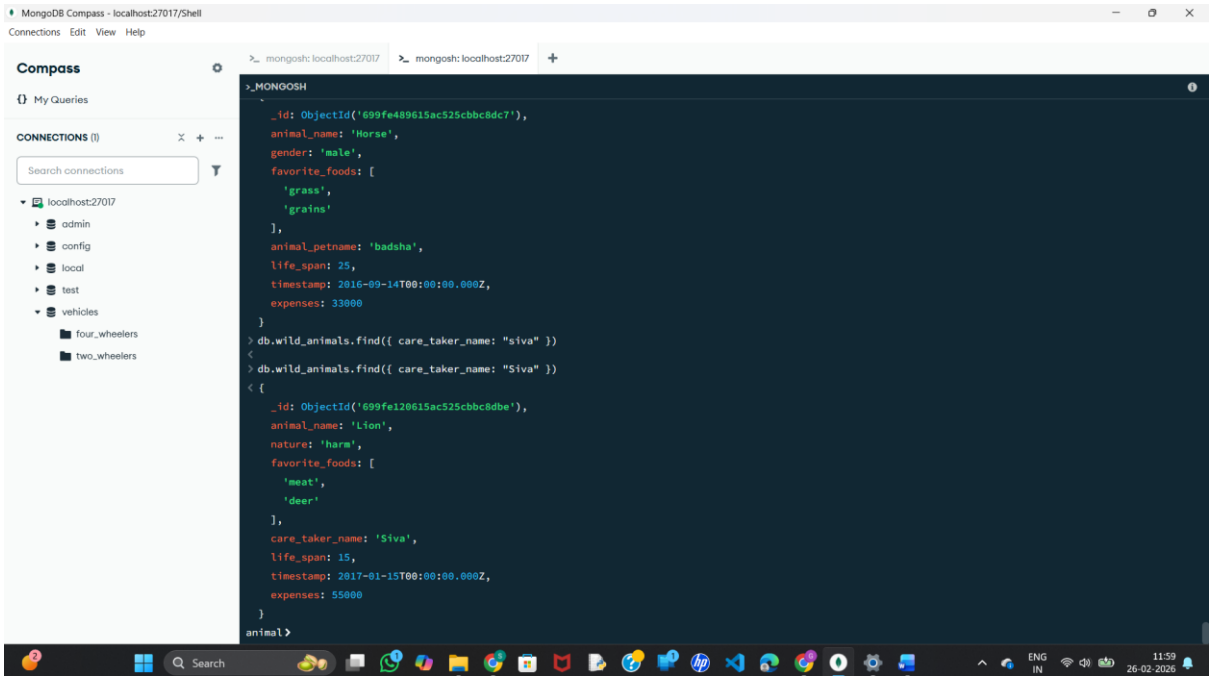




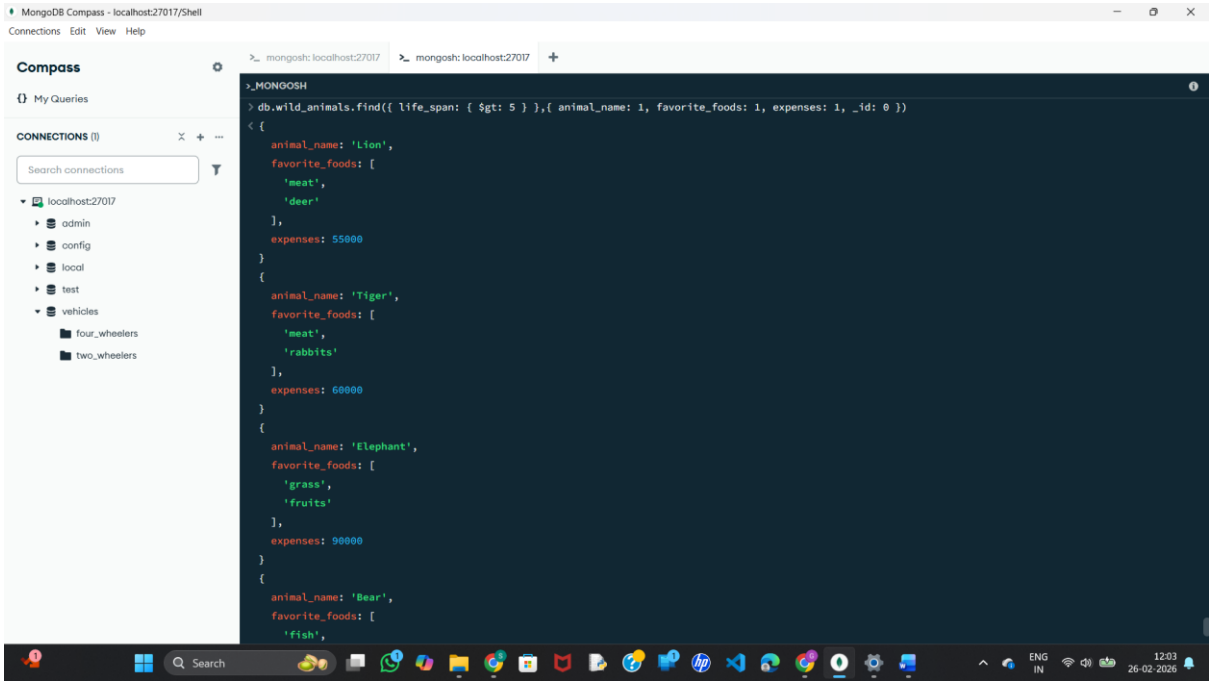
8. Write a MongoDB query to display domestic_animals whose life is a particular year

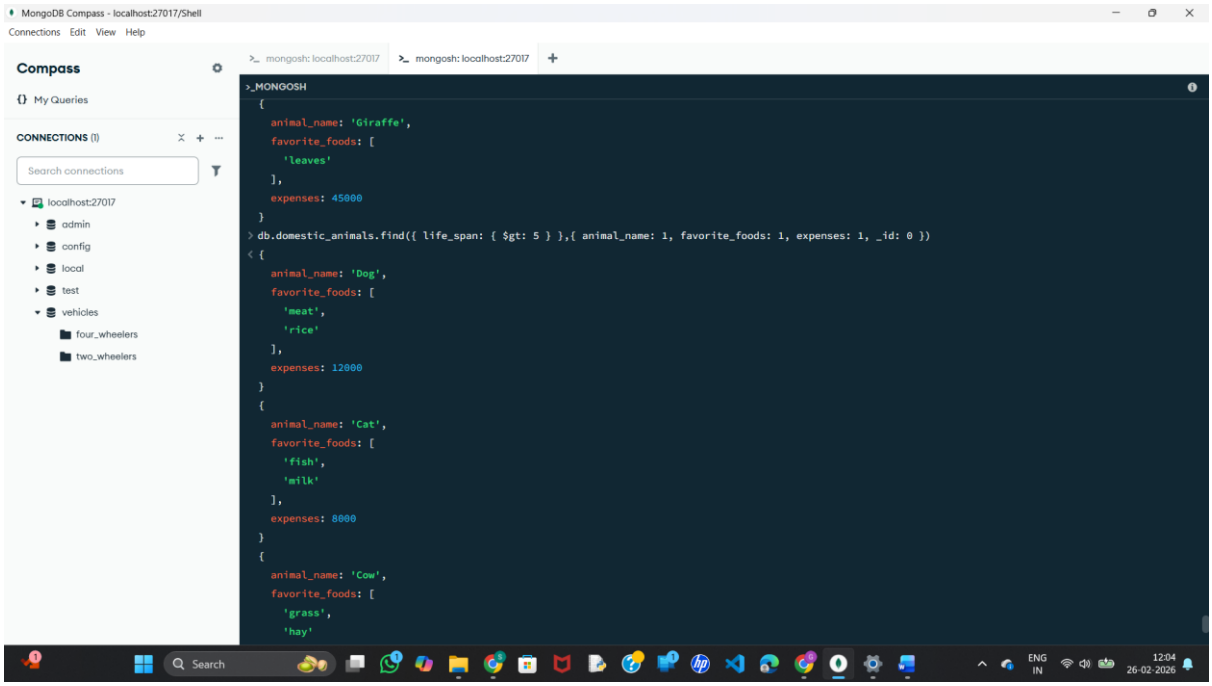


9. Write a MongoDB query to display wild_animals available under a particular care_taker



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

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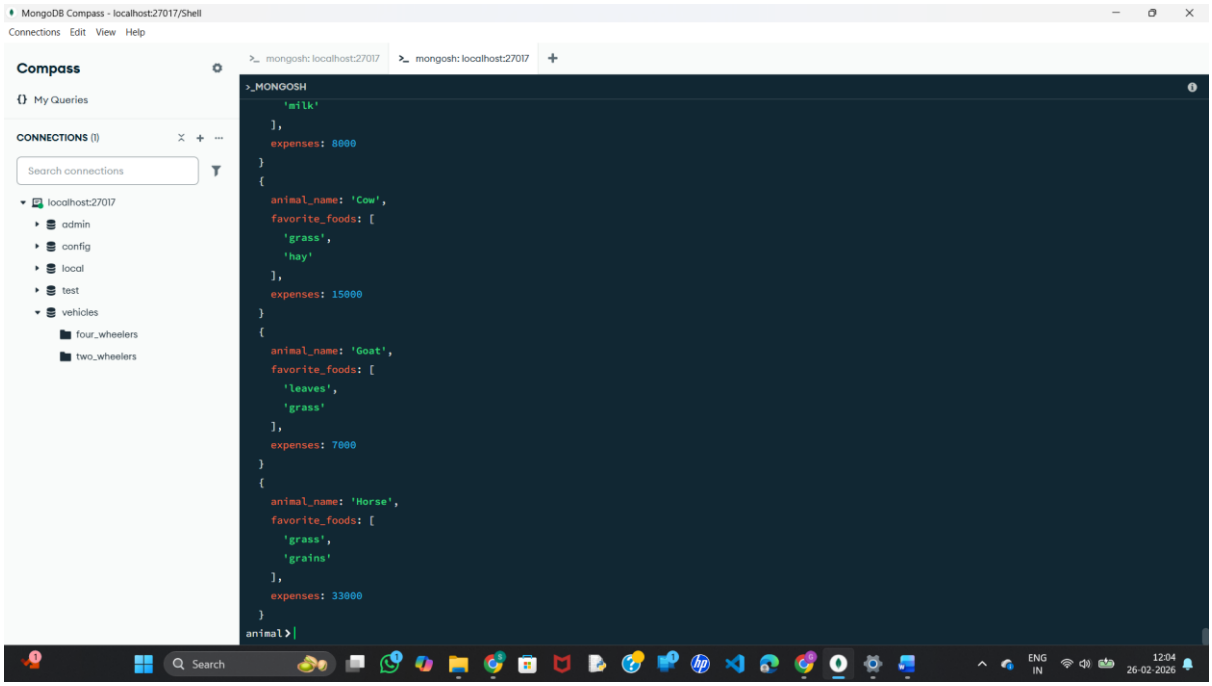
mongosh: localhost:27017
>_MONGOSH
{
animal_name: 'Giraffe',
favorite_foods: [
'leaves'
],
expenses: 45000
}
db.domestic_animals.find({ life_span: { $gt: 5 } },{ animal_name: 1, favorite_foods: 1, expenses: 1, _id: 0 })
{
animal_name: 'Dog',
favorite_foods: [
'meat',
'rice'
],
expenses: 12000
}
{
animal_name: 'Cat',
favorite_foods: [
'fish',
'milk'
],
expenses: 8000
}
{
animal_name: 'Cow',
favorite_foods: [
'grass',
'hay'
Search
ENG
IN
12:04
26-02-2026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two_wheelers
mongosh: localhost:27017
mongosh: localhost:27017
>_MONGOSH
'milk'
],
expenses: 8000
}
{
animal_name: 'Cow',
favorite_foods: [
'grass',
'hay'
],
expenses: 15000
}
{
animal_name: 'Goat',
favorite_foods: [
'leaves',
'grass'
],
expenses: 7000
}
{
animal_name: 'Horse',
favorite_foods: [
'grass',
'grains'
],
expenses: 33000
}
animal>
Search
ENG
IN
12:04
26-02-2026