

Add my first car to the collection to test insertOne:

```
Atlas atlas-se91v5-shard-0 [primary] test> use test
already on db test
Atlas atlas-se91v5-shard-0 [primary] test> db.cars.insertOne({
  registrationNumber: "CA 123-456",    owner: "John Smith",    make: "Volkswagen",    model: "Polo",    color: "White",
  address: "15 Long Street, Cape Town, 8000" })
{
  acknowledged: true,
  insertedId: ObjectId('67406b7301f554a0bcb094d1')
}
Atlas atlas-se91v5-shard-0 [primary] test> █
```

Add my other four cars to the cars collection to test insertMany:

```
Atlas atlas-se91v5-shard-0 [primary] test> db.cars.insertMany([
  {
    registrationNumber: "ND 789-012",    owner: "Thandi Nkosi",    make: "Renault",    model: "Clio",    color: "Red",    registrationNumber: "GP 345 ABC",    owner: "Sipho Mkhize",    make: "Toyota",    model: "Corolla",    color: "Blue",    address: "22 Florida Road, Durban, 4001" },
    {
      registrationNumber: "FS 678 DEF",    owner: "Pieter van der Merwe",    make: "Ford",    model: "Fiesta",    color: "Silver",    address: "10 Rivonia Road, Johannesburg, 2196" },
    {
      registrationNumber: "EC 901 GHI",    owner: "Nomsa Dlamini",    make: "BMW",    model: "320i",    color: "Black",    address: "5 Church Street, Bloemfontein, 9301" },
    {
      registrationNumber: "8 Oxford Street, East London, 5201"
    }
  ])
{
  acknowledged: true,
  insertedIds: {
    '0': ObjectId('67406beb01f554a0bcb094d2'),
    '1': ObjectId('67406beb01f554a0bcb094d3'),
    '2': ObjectId('67406beb01f554a0bcb094d4'),
    '3': ObjectId('67406beb01f554a0bcb094d5')
  }
}
Atlas atlas-se91v5-shard-0 [primary] test> █
```

add the one specifically requested car required by the task:

```
Atlas atlas-se91v5-shard-0 [primary] test> db.cars.insertOne({
  Model: 2005,    Make: "Ford Fiesta",    Owner: "Sue Bailey",    Registration: "ABC 123 GP",    Address: "13 Main Road, Johannesburg, South Africa" })
{
  acknowledged: true,
  insertedId: ObjectId('67406e5c01f554a0bcb094d6')
}
Atlas atlas-se91v5-shard-0 [primary] test> █
```

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Display all cars (the entire cars collection) with `find()` and use `pretty()` to make it pretty:

```
PROBLEMS 5 OUTPUT DEBUG CONSOLE TERMINAL PORTS SPELL CHECKER COMMENTS
Atlas atlas-se91v5-shard-0 [primary] test> db.cars.find().pretty()
[
  {
    _id: ObjectId('67406b7301f554a0bcb094d1'),
    make: 'Volkswagen',
    model: 'Polo',
    color: 'White',
    registrationNumber: 'CA 123-456',
    owner: 'John Smith',
    address: '15 Long Street, Cape Town, 8000'
  },
  {
    _id: ObjectId('67406beb01f554a0bcb094d2'),
    make: 'Renault',
    model: 'Clio',
    color: 'Red',
    registrationNumber: 'ND 789-012',
    owner: 'Thandi Nkosi',
    address: '22 Florida Road, Durban, 4001'
  },
  {
    _id: ObjectId('67406beb01f554a0bcb094d3'),
    make: 'Toyota',
    model: 'Corolla',
    color: 'Blue',
    registrationNumber: 'GP 345 ABC',
    owner: 'Sipho Mkhize',
    address: '10 Rivonia Road, Johannesburg, 2196'
  },
  {
    _id: ObjectId('67406beb01f554a0bcb094d4'),
    make: 'Ford',
    model: 'Fiesta',
    color: 'Silver',
    registrationNumber: 'FS 678 DEF',
    owner: 'Pieter van der Merwe',
    address: '5 Church Street, Bloemfontein, 9301'
  },
  {
    _id: ObjectId('67406beb01f554a0bcb094d5'),
    make: 'BMW',
    model: '320i',
    color: 'Black',
    registrationNumber: 'EC 901 GHI',
    owner: 'Nomsa Dlamini',
    address: '8 Oxford Street, East London, 5201'
  },
  {
    _id: ObjectId('6740728a01f554a0bcb094d7'),
    make: 'Ford Fiesta',
    model: 2005,
    registrationNumber: 'ABC 123 GP',
    owner: 'Sue Bailey',
    address: '13 Main Road, Johannesburg, South Africa'
  }
]
Atlas atlas-se91v5-shard-0 [primary] test>
```

Update Sue's address since she's moving:

```
Atlas atlas-se91v5-shard-0 [primary] test> db.cars.updateOne({ owner: "Sue Bailey" }, { $set: { address: "21 Maureen Street, Bluewater Bay, Port Elizabeth, South Africa" } })
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}
Atlas atlas-se91v5-shard-0 [primary] test>
```

Update Sue's surname to Smith since she remarries:

```
Atlas atlas-se91v5-shard-0 [primary] test> db.cars.updateOne({ owner: "Sue Bailey" }, { $set: { owner: "Sue Smith" } })
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}
Atlas atlas-se91v5-shard-0 [primary] test>
```

NOTE: at this point I realised my original input data doesn't contain dates for me to use for the "filter by date older than.." exercise. So I just updated my "model" field with some dates just for this part. That's why the returned objects may look different than the start. (normally the model field would contain something like "polo" - not a date, that would be manufacture year).

Display all cars older than five years ago (using the mongodb "less than" operator):

```
Atlas atlas-se91v5-shard-0 [primary] test> db.cars.find({ model: { $lt: 2019 } });
[
  {
    _id: ObjectId('67406beb01f554a0bcb094d4'),
    make: 'Ford',
    model: 2008,
    color: 'Silver',
    registrationNumber: 'FS 678 DEF',
    owner: 'Pieter van der Merwe',
    address: '5 Church Street, Bloemfontein, 9301'
  },
  {
    _id: ObjectId('67406beb01f554a0bcb094d5'),
    make: 'BMW',
    model: 2012,
    color: 'Black',
    registrationNumber: 'EC 901 GHI',
    owner: 'Nomsa Dlamini',
    address: '8 Oxford Street, East London, 5201'
  },
  {
    _id: ObjectId('6740728a01f554a0bcb094d7'),
    make: 'Ford Fiesta',
    model: 2005,
    registrationNumber: 'ABC 123 GP',
    owner: 'Sue Smith',
    address: '21 Maureen Street, Bluewater Bay, Port Elizabeth, South Africa'
  }
]
Atlas atlas-se91v5-shard-0 [primary] test> █
```

Add a duplicate "Sue Smith" "Ford Fiesta" with slightly different details to our original sue:

```
Atlas atlas-se91v5-shard-0 [primary] test> db.cars.insertOne({ make: "Ford Fiesta", model: 2005, registrationNumber: "XYZ 456 GP", owner: "Sue Smith", address: "10 Pine Street, Durban, South Africa" })
{
  acknowledged: true,
  insertedId: ObjectId('67407d2f8dbb162bcb35eac8')
}
Atlas atlas-se91v5-shard-0 [primary] test> █
```

Remove only our original Sue Smith using her unique mongoIDB ID:

```
Atlas atlas-se91v5-shard-0 [primary] test> db.cars.deleteOne({_id: ObjectId('6740728a01f554a0bcb094d7')})
{ acknowledged: true, deletedCount: 1 }
Atlas atlas-se91v5-shard-0 [primary] test> █
```

Prove that it worked - search for all cars with name "Sue Smith":

```
Atlas atlas-se91v5-shard-0 [primary] test> db.cars.find({owner:"Sue Smith"}).pretty()
[
  {
    _id: ObjectId('67407d2f8dbb162bcb35eac8'),
    make: 'Ford Fiesta',
    model: 2005,
    registrationNumber: 'XYZ 456 GP',
    owner: 'Sue Smith',
    address: '10 Pine Street, Durban, South Africa'
  }
]
Atlas atlas-se91v5-shard-0 [primary] test> █
```

I was a bit confused by this last one. I thought it might be saying “create a new document that contains a whole array of objects for every car that has been added to the database - which then contains each cars previousOwners as an array of strings”.

But I thought that was needlessly complex and would make a really nested object that would be hard to query.

So I assumed they just meant: “create one new car instance that has a new FIELD called “previousOwners” (an array of strings) and populate it with at least three names”. So I went with the second option:

Add a new document that contains a car with a new field showing all the cars previous owners:

```
Atlas atlas-se91v5-shard-0 [primary] test> db.cars.insertOne({make:"Honda",model:2015,color:"Silver",registrationNumber:"CA 678-910",owner:"James Peterson",previousOwners:["Sue Bailey","Michael Roberts","Laura Stevens"],address:"45 Green Street, Cape Town, South Africa"})
{
  acknowledged: true,
  insertedId: ObjectId('674088658dbb162bcb35eaca')
}
Atlas atlas-se91v5-shard-0 [primary] test> █
```

show the new car with the owner history using db.cars.find() so we can see the new structure:

```
{
  _id: ObjectId('674088658dbb162bcb35eaca'),
  make: 'Honda',
  model: 2015,
  color: 'Silver',
  registrationNumber: 'CA 678-910',
  owner: 'James Peterson',
  previousOwners: [ 'Sue Bailey', 'Michael Roberts', 'Laura Stevens' ], ←
  address: '45 Green Street, Cape Town, South Africa'
}
Atlas atlas-se91v5-shard-0 [primary] test> █
```