

Case Study 1 - Documentation

MongoDB Case Study: Product Details

Database: productDB

Collection: products

Total Records: 25

We are working with a dataset of 25 products, each having:

- id
- product_name
- product_price
- product_material
- product_color

Step 1: Import Data into MongoDB

You can import this JSON using the following:

Option 1: Manually insert using mongosh

```
mongosh mongoDB://127.0.0.1:27017/?directConnection=true&serverSelectionTimeoutMS=2000&appName=mongosh+2.5.6
C:\Users\Ragavi>mongosh
Current Mongosh Log ID: 6881a9293f03b0d923eec4a8
Connecting to: mongod://127.0.0.1:27017/?directConnection=true&serverSelectionTimeoutMS=2000&appName=mongosh+2.5.6
Using MongoDB: 8.0.11
Using Mongosh: 2.5.6
For mongosh info see: https://www.mongodb.com/docs/mongodb-shell/
-----
The server generated these startup warnings when booting
2025-07-21T12:53:50.674+05:30: Access control is not enabled for the database. Read and write access to data and configuration is unrestricted
-----
test> use productDB
switched to db productDB
productDB>
```

```
mongosh mongoDB://127.0.0.1:27017/?directConnection=true&serverSelectionTimeoutMS=2000&appName=mongosh+2.5.6
productDB> db.products.insertMany([
... {"id": "1", "product_name": "Intelligent Fresh Chips", "product_price": 655.00, "product_material": "Concrete", "product_color": "mint green"}, {"id": "2", "product_name": "Practical Fresh Sausages", "product_price": 911.0, "product_material": "Cotton", "product_color": "indigo"}, {"id": "3", "product_name": "Refined Steel Car", "product_price": 690.00, "product_material": "Rubber", "product_color": "gold"}, {"id": "4", "product_name": "Gorgeous Plastic Pants", "product_price": 492.00, "product_material": "Soft", "product_color": "plum"}, {"id": "5", "product_name": "Sleek Cotton Chair", "product_price": 33.00, "product_material": "Fresh", "product_color": "black"}, {"id": "6", "product_name": "Awesome Wooden Towels", "product_price": 474.00, "product_material": "Plastic", "product_color": "orange"}, {"id": "7", "product_name": "Practical Soft Shoes", "product_price": 500.00, "product_material": "Rubber", "product_color": "pink"}, {"id": "8", "product_name": "Incredible Steel Hat", "product_price": 78.00, "product_material": "Rubber", "product_color": "violet"}, {"id": "9", "product_name": "Awesome Wooden Ball", "product_price": 28.00, "product_material": "Soft", "product_color": "azure"}, {"id": "10", "product_name": "Generic Wooden Pizza", "product_price": 84.00, "product_material": "Frozen", "product_color": "indigo"}, {"id": "11", "product_name": "Unbranded Wooden Cheese", "product_price": 26.00, "product_material": "Soft", "product_color": "black"}, {"id": "12", "product_name": "Unbranded Plastic Salad", "product_price": 89.00, "product_material": "Wooden", "product_color": "pink"}, {"id": "13", "product_name": "Gorgeous Cotton Keyboard", "product_price": 37.00, "product_material": "Concrete", "product_color": "sky blue"}, {"id": "14", "product_name": "Incredible Steel Shirt", "product_price": 54.00, "product_material": "Metal", "product_color": "white"}, {"id": "15", "product_name": "Ergonomic Cotton Hat", "product_price": 43.00, "product_material": "Rubber", "product_color": "mint green"}, {"id": "16", "product_name": "Small Soft Chair", "product_price": 47.00, "product_material": "Cotton", "product_color": "teal"}, {"id": "17", "product_name": "Incredible Metal Car", "product_price": 36.00, "product_material": "Fresh", "product_color": "indigo"}, {"id": "18", "product_name": "Licensed Plastic Bacon", "product_price": 88.00, "product_material": "Steel", "product_color": "yellow"}, {"id": "19", "product_name": "Intelligent Cotton Chips", "product_price": 46.00, "product_material": "Soft", "product_color": "azure"}, {"id": "20", "product_name": "Handcrafted Wooden Bacon", "product_price": 36.00, "product_material": "Concrete", "product_color": "lime"}, {"id": "21", "product_name": "Unbranded Granite Chicken", "product_price": 98.00, "product_material": "Metal", "product_color": "gold"}, {"id": "22", "product_name": "Ergonomic Soft Hat", "product_price": 99.00, "product_material": "Rubber", "product_color": "black"}, {"id": "23", "product_name": "Intelligent Steel Pizza", "product_price": 95.00, "product_material": "Cotton", "product_color": "azure"}, {"id": "24", "product_name": "Tasty Rubber Cheese", "product_price": 47.00, "product_material": "Frozen", "product_color": "orchid"}, {"id": "25", "product_name": "Licensed Steel Car", "product_price": 20.00, "product_material": "Cotton", "product_color": "indigo"}])
```

```
{
  acknowledged: true,
  insertedIds: [
    '0': ObjectId('6881aa9c3f03b0d923eec4c2'),
    '1': ObjectId('6881aa9c3f03b0d923eec4c3'),
    '2': ObjectId('6881aa9c3f03b0d923eec4c4'),
    '3': ObjectId('6881aa9c3f03b0d923eec4c5'),
    '4': ObjectId('6881aa9c3f03b0d923eec4c6'),
    '5': ObjectId('6881aa9c3f03b0d923eec4c7'),
    '6': ObjectId('6881aa9c3f03b0d923eec4c8'),
    '7': ObjectId('6881aa9c3f03b0d923eec4c9'),
    '8': ObjectId('6881aa9c3f03b0d923eec4ca'),
    '9': ObjectId('6881aa9c3f03b0d923eec4cb'),
    '10': ObjectId('6881aa9c3f03b0d923eec4cc'),
    '11': ObjectId('6881aa9c3f03b0d923eec4cd'),
    '12': ObjectId('6881aa9c3f03b0d923eec4ce'),
    '13': ObjectId('6881aa9c3f03b0d923eec4cf'),
    '14': ObjectId('6881aa9c3f03b0d923eec4d0'),
    '15': ObjectId('6881aa9c3f03b0d923eec4d1'),
    '16': ObjectId('6881aa9c3f03b0d923eec4d2'),
    '17': ObjectId('6881aa9c3f03b0d923eec4d3'),
    '18': ObjectId('6881aa9c3f03b0d923eec4d4'),
    '19': ObjectId('6881aa9c3f03b0d923eec4d5'),
    '20': ObjectId('6881aa9c3f03b0d923eec4d6'),
    '21': ObjectId('6881aa9c3f03b0d923eec4d7'),
    '22': ObjectId('6881aa9c3f03b0d923eec4d8'),
    '23': ObjectId('6881aa9c3f03b0d923eec4d9'),
    '24': ObjectId('6881aa9c3f03b0d923eec4da')
  ]
}
```

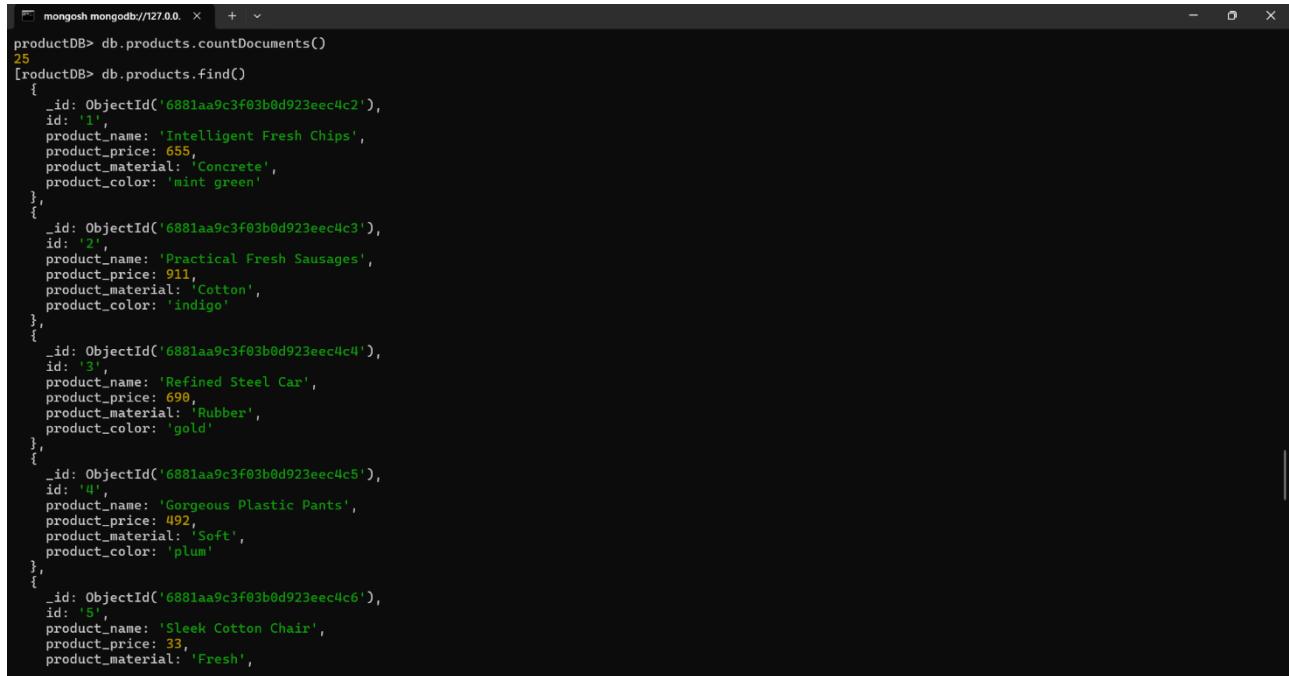
Note: Insert all 25 products inside the array in insertMany().

Step 2: Perform the Queries

1. Find all the information about each product

Query:

```
db.products.find()
```



The screenshot shows a terminal window titled "mongosh mongodb://127.0.0.1:27017" running the MongoDB shell. The user has run the command `db.products.find()` and is viewing the results. The results are an array of 25 documents, each representing a product with fields: _id, id, product_name, product_price, product_material, and product_color. The products listed are: 1. Intelligent Fresh Chips, 2. Practical Fresh Sausages, 3. Refined Steel Car, 4. Gorgeous Plastic Pants, and 5. Sleek Cotton Chair.

```
productDB> db.products.countDocuments()
25
[{"_id": ObjectId("6881aa9c3f03b0d923eec4c2"), "id": "1", "product_name": "Intelligent Fresh Chips", "product_price": 655, "product_material": "Concrete", "product_color": "mint green"}, {"_id": ObjectId("6881aa9c3f03b0d923eec4c3"), "id": "2", "product_name": "Practical Fresh Sausages", "product_price": 911, "product_material": "Cotton", "product_color": "indigo"}, {"_id": ObjectId("6881aa9c3f03b0d923eec4c4"), "id": "3", "product_name": "Refined Steel Car", "product_price": 690, "product_material": "Rubber", "product_color": "gold"}, {"_id": ObjectId("6881aa9c3f03b0d923eec4c5"), "id": "4", "product_name": "Gorgeous Plastic Pants", "product_price": 492, "product_material": "Soft", "product_color": "plum"}, {"_id": ObjectId("6881aa9c3f03b0d923eec4c6"), "id": "5", "product_name": "Sleek Cotton Chair", "product_price": 33, "product_material": "Fresh"}]
```

```
mongosh mongodb://127.0.0.1:27017/test> db.products.find()
[{"_id": ObjectId("6881aa9c3f03b0d923eec4c7"), "id": "6", "product_name": "Awesome Wooden Towels", "product_price": 474, "product_material": "Plastic", "product_color": "orange"}, {"_id": ObjectId("6881aa9c3f03b0d923eec4c8"), "id": "7", "product_name": "Practical Soft Shoes", "product_price": 500, "product_material": "Rubber", "product_color": "pink"}, {"_id": ObjectId("6881aa9c3f03b0d923eec4c9"), "id": "8", "product_name": "Incredible Steel Hat", "product_price": 78, "product_material": "Rubber", "product_color": "violet"}, {"_id": ObjectId("6881aa9c3f03b0d923eec4ca"), "id": "9", "product_name": "Awesome Wooden Ball", "product_price": 28, "product_material": "Soft", "product_color": "azure"}, {"_id": ObjectId("6881aa9c3f03b0d923eec4cb"), "id": "10", "product_name": "Generic Wooden Pizza", "product_price": 84, "product_material": "Frozen", "product_color": "indigo"}]
```

```
mongosh mongodb://127.0.0.1:27017/test> db.products.find()
[{"_id": ObjectId("6881aa9c3f03b0d923eec4cc"), "id": "11", "product_name": "Unbranded Wooden Cheese", "product_price": 26, "product_material": "Soft", "product_color": "black"}, {"_id": ObjectId("6881aa9c3f03b0d923eec4cd"), "id": "12", "product_name": "Unbranded Plastic Salad", "product_price": 89, "product_material": "Wooden", "product_color": "pink"}, {"_id": ObjectId("6881aa9c3f03b0d923eec4ce"), "id": "13", "product_name": "Gorgeous Cotton Keyboard", "product_price": 37, "product_material": "Concrete", "product_color": "sky blue"}, {"_id": ObjectId("6881aa9c3f03b0d923eec4cf"), "id": "14", "product_name": "Incredible Steel Shirt", "product_price": 54, "product_material": "Metal", "product_color": "white"}, {"_id": ObjectId("6881aa9c3f03b0d923eec4d0"), "id": "15", "product_name": "Ergonomic Cotton Hat", "product_price": 43, "product_material": "Rubber", "product_color": "mint green"}]
```

```
mongosh mongodb://127.0.0.1:27017/test> db.products.find()
[{"id": "16", "product_name": "Small Soft Chair", "product_price": 47, "product_material": "Cotton", "product_color": "teal"}, {"_id": ObjectId("6881aa9c3f03b0d923eec4d2"), "id": "17", "product_name": "Incredible Metal Car", "product_price": 36, "product_material": "Fresh", "product_color": "indigo"}, {"_id": ObjectId("6881aa9c3f03b0d923eec4d3"), "id": "18", "product_name": "Licensed Plastic Bacon", "product_price": 88, "product_material": "Steel", "product_color": "yellow"}, {"_id": ObjectId("6881aa9c3f03b0d923eec4d4"), "id": "19", "product_name": "Intelligent Cotton Chips", "product_price": 46, "product_material": "Soft", "product_color": "azure"}, {"_id": ObjectId("6881aa9c3f03b0d923eec4d5"), "id": "20", "product_name": "Handcrafted Wooden Bacon", "product_price": 36, "product_material": "Concrete", "product_color": "lime"}]
Type "it" for more
productDB>
```

2. Find the product price which are between 400 to 800

Query:

```
db.products.find(  
  { product_price: { $gte: 400, $lte: 800 } }  
)
```

```
mongosh mongoDB:127.0.0. × + ×  
productDB> db.products.find({ product_price: { $gte: 400, $lte: 800 } })  
[  
  {  
    _id: ObjectId('6881aa9c3f03b8d923eec4c2'),  
    id: '1',  
    product_name: 'Intelligent Fresh Chips',  
    product_price: 655,  
    product_material: 'Concrete',  
    product_color: 'mint green'  
  },  
  {  
    _id: ObjectId('6881aa9c3f03b8d923eec4c4'),  
    id: '2',  
    product_name: 'Refined Steel Car',  
    product_price: 690,  
    product_material: 'Rubber',  
    product_color: 'gold'  
  },  
  {  
    _id: ObjectId('6881aa9c3f03b8d923eec4c5'),  
    id: '3',  
    product_name: 'Gorgeous Plastic Pants',  
    product_price: 492,  
    product_material: 'Soft',  
    product_color: 'plum'  
  },  
  {  
    _id: ObjectId('6881aa9c3f03b8d923eec4c7'),  
    id: '4',  
    product_name: 'Awesome Wooden Towels',  
    product_price: 474,  
    product_material: 'Plastic',  
    product_color: 'orange'  
  },  
  {  
    _id: ObjectId('6881aa9c3f03b8d923eec4c8'),  
    id: '5',  
    product_name: 'Practical Soft Shoes',  
    product_price: 500,  
    product_material: 'Rubber',  
    product_color: 'pink'  
}  
]  
productDB>
```

3. Find the product price which are not between 400 to 800

Query:

```
db.products.find(  
  { $or: [ { product_price: { $lt: 400 } }, { product_price: { $gt: 600 } } ] }  
)
```

```
mongosh mongoDB:127.0.0. × + ×  
productDB> db.products.find({ $or: [ { product_price: { $lt: 400 } }, { product_price: { $gt: 600 } } ] })  
[  
  {  
    _id: ObjectId('6881aa9c3f03b8d923eec4c2'),  
    id: '1',  
    product_name: 'Intelligent Fresh Chips',  
    product_price: 655,  
    product_material: 'Concrete',  
    product_color: 'mint green'  
  },  
  {  
    _id: ObjectId('6881aa9c3f03b8d923eec4c3'),  
    id: '2',  
    product_name: 'Practical Fresh Sausages',  
    product_price: 911,  
    product_material: 'Cotton',  
    product_color: 'indigo'  
  },  
  {  
    _id: ObjectId('6881aa9c3f03b8d923eec4c4'),  
    id: '3',  
    product_name: 'Refined Steel Car',  
    product_price: 690,  
    product_material: 'Rubber',  
    product_color: 'gold'  
  },  
  {  
    _id: ObjectId('6881aa9c3f03b8d923eec4c5'),  
    id: '4',  
    product_name: 'Streak Cotton Chair',  
    product_price: 33,  
    product_material: 'Fresh',  
    product_color: 'black'  
  },  
  {  
    _id: ObjectId('6881aa9c3f03b8d923eec4c9'),  
    id: '8',  
    product_name: 'Incredible Steel Hat',  
    product_price: 78,  
    product_material: 'Rubber',  
    product_color: 'violet'  
  },  
  {  
    _id: ObjectId('6881aa9c3f03b8d923eec4ca'),  
    id: '9',  
    product_name: 'Awesome Wooden Ball',  
    product_price: 28,  
    product_material: 'Soft',  
    product_color: 'azure'  
},  
]
```

```

mongosh mongodb://127.0.0.1:27017
{
  "_id": ObjectId("6881aa9c3f03b8d923eec4cb"),
  "id": "10",
  "product_name": "Generic Wooden Pizza",
  "product_price": 84,
  "product_material": "Frozen",
  "product_color": "indigo"
},
{
  "_id": ObjectId("6881aa9c3f03b8d923eec4cc"),
  "id": "11",
  "product_name": "Unbranded Wooden Cheese",
  "product_price": 26,
  "product_material": "Soft",
  "product_color": "black"
},
{
  "_id": ObjectId("6881aa9c3f03b8d923eec4cd"),
  "id": "12",
  "product_name": "Unbranded Plastic Salad",
  "product_price": 89,
  "product_material": "Wooden",
  "product_color": "pink"
},
{
  "_id": ObjectId("6881aa9c3f03b8d923eec4ce"),
  "id": "13",
  "product_name": "Gorgeous Cotton Keyboard",
  "product_price": 37,
  "product_material": "Concrete",
  "product_color": "sky blue"
},
{
  "_id": ObjectId("6881aa9c3f03b8d923eec4cf"),
  "id": "14",
  "product_name": "Incredible Steel Shirt",
  "product_price": 54,
  "product_material": "Metal",
  "product_color": "white"
},
{
  "_id": ObjectId("6881aa9c3f03b8d923eec4d0"),
  "id": "15",
  "product_name": "Ergonomic Cotton Hat",
  "product_price": 43,
  "product_material": "Rubber",
  "product_color": "mint green"
},
{
  "_id": ObjectId("6881aa9c3f03b8d923eec4d1"),
  "id": "16",
  "product_name": "Small Soft Chair",
  "product_price": 47,
  "product_material": "Cotton",
  "product_color": "teal"
},
{
  "_id": ObjectId("6881aa9c3f03b8d923eec4d2"),
  "id": "17",
  "product_name": "Incredible Metal Car",
  "product_price": 36,
  "product_material": "Fresh",
  "product_color": "indigo"
},
{
  "_id": ObjectId("6881aa9c3f03b8d923eec4d3"),
  "id": "18",
  "product_name": "Licensed Plastic Bacon",
  "product_price": 88,
  "product_material": "Steel",
  "product_color": "yellow"
},
{
  "_id": ObjectId("6881aa9c3f03b8d923eec4d4"),
  "id": "19",
  "product_name": "Intelligent Cotton Chips",
  "product_price": 46,
  "product_material": "Soft",
  "product_color": "azure"
},
{
  "_id": ObjectId("6881aa9c3f03b8d923eec4d5"),
  "id": "20",
  "product_name": "Handcrafted Wooden Bacon",
  "product_price": 36,
  "product_material": "Concrete",
  "product_color": "lime"
},
{
  "_id": ObjectId("6881aa9c3f03b8d923eec4d6"),
  "id": "21",
  "product_name": "Unbranded Granite Chicken",
  "product_price": 90,
  "product_material": "Metal",
  "product_color": "gold"
},
{
  "_id": ObjectId("6881aa9c3f03b8d923eec4d7"),
  "id": "22",
  "product_name": "Ergonomic Soft Hat",
  "product_price": 99,
  "product_material": "Rubber",
  "product_color": "black"
},
{
  "_id": ObjectId("6881aa9c3f03b8d923eec4d8"),
  "id": "23",
  "product_name": "Unintelligent Steel Pizza",
  "product_price": 95,
  "product_material": "Cotton",
  "product_color": "azure"
}
]
Type "it" for more
productDB>

```

4. List the four products which are greater than 500 in price

Query:

```

db.products.find(
  { product_price: { $gt: 500 } }
).limit(4)

```

```

productDB> db.products.find({ product_price: { $gt: 500 } }).limit(4)
[
  {
    _id: ObjectId('6881aa9c3f03b8d923eec4c2'),
    id: '1',
    product_name: 'Intelligent Fresh Chips',
    product_price: 655,
    product_material: 'Concrete',
    product_color: 'mint green'
  },
  {
    _id: ObjectId('6881aa9c3f03b8d923eec4c3'),
    id: '2',
    product_name: 'Practical Fresh Sausages',
    product_price: 911,
    product_material: 'Cotton',
    product_color: 'indigo'
  },
  {
    _id: ObjectId('6881aa9c3f03b8d923eec4c4'),
    id: '3',
    product_name: 'Refined Steel Car',
    product_price: 699,
    product_material: 'Rubber',
    product_color: 'gold'
  }
]
productDB>

```

5. Find the product name and product material of each product

Query:

```

db.products.find(
  {}, { _id: 0, product_name: 1, product_material: 1 }
)

```

```

productDB> db.products.find({}, { _id: 0, product_name: 1, product_material: 1 })
[
  {
    product_name: 'Intelligent Fresh Chips',
    product_material: 'Concrete'
  },
  {
    product_name: 'Practical Fresh Sausages',
    product_material: 'Cotton'
  },
  {
    product_name: 'Refined Steel Car', product_material: 'Rubber' },
  { product_name: 'Gorgeous Plastic Pants', product_material: 'Soft' },
  {
    product_name: 'Sleek Cotton Chair', product_material: 'Fresh' },
  {
    product_name: 'Awesome Wooden Towels',
    product_material: 'Plastic'
  },
  {
    product_name: 'Practical Soft Shoes', product_material: 'Rubber' },
  { product_name: 'Incredible Steel Hat', product_material: 'Rubber' },
  { product_name: 'Awesome Wooden Ball', product_material: 'Soft' },
  { product_name: 'Generic Wooden Pizza', product_material: 'Frozen' },
  { product_name: 'Unbranded Wooden Cheese', product_material: 'Soft' },
  {
    product_name: 'Unbranded Plastic Salad',
    product_material: 'Wooden'
  },
  {
    product_name: 'Gorgeous Cotton Keyboard',
    product_material: 'Concrete'
  },
  { product_name: 'Incredible Steel Shirt', product_material: 'Metal' },
  { product_name: 'Ergonomic Cotton Hat', product_material: 'Rubber' },
  { product_name: 'Small Soft Chair', product_material: 'Cotton' },
  { product_name: 'Incredible Metal Car', product_material: 'Fresh' },
  { product_name: 'Licensed Plastic Bacon', product_material: 'Steel' },
  {
    product_name: 'Intelligent Cotton Chips',
    product_material: 'Soft'
  },
  {
    product_name: 'Handcrafted Wooden Bacon',
    product_material: 'Concrete'
  }
]
Type "it" for more
productDB>

```

6. Find the product with a row id of 10

Query:

```

db.products.find(
  { id: "10" }
)

```

```

productDB> db.products.find({ id: "10" })
[
  {
    _id: ObjectId('6881aa9c3f03b8d923eec4cb'),
    id: '10',
    product_name: 'Generic Wooden Pizza',
    product_price: 84,
    product_material: 'Frozen',
    product_color: 'indigo'
  }
]

```

7. Find only the product name and product material

Query:

```

db.products.find(
  {}, { _id: 0, product_name: 1, product_material: 1 }
)

```

```

productDB> db.products.find({}, { _id: 0, product_name: 1, product_material: 1 })
[
  {
    product_name: 'Intelligent Fresh Chips',
    product_material: 'Concrete'
  },
  {
    product_name: 'Practical Fresh Sausages',
    product_material: 'Cotton'
  },
  {
    product_name: 'Refined Steel Car',
    product_material: 'Rubber'
  },
  {
    product_name: 'Gorgeous Plastic Pants',
    product_material: 'Soft'
  },
  {
    product_name: 'Sleek Cotton Chair',
    product_material: 'Fresh'
  },
  {
    product_name: 'Awesome Wooden Towels',
    product_material: 'Plastic'
  },
  {
    product_name: 'Practical Soft Shoes',
    product_material: 'Rubber'
  },
  {
    product_name: 'Incredible Steel Hat',
    product_material: 'Rubber'
  },
  {
    product_name: 'Awesome Wooden Ball',
    product_material: 'Soft'
  },
  {
    product_name: 'Generic Wooden Pizza',
    product_material: 'Frozen'
  },
  {
    product_name: 'Unbranded Wooden Cheese',
    product_material: 'Soft'
  },
  {
    product_name: 'Unbranded Plastic Salad',
    product_material: 'Wooden'
  },
  {
    product_name: 'Gorgeous Cotton Keyboard',
    product_material: 'Concrete'
  },
  {
    product_name: 'Incredible Steel Shirt',
    product_material: 'Metal'
  },
  {
    product_name: 'Ergonomic Cotton Hat',
    product_material: 'Rubber'
  },
  {
    product_name: 'Small Soft Chair',
    product_material: 'Cotton'
  },
  {
    product_name: 'Incredible Metal Car',
    product_material: 'Fresh'
  },
  {
    product_name: 'Licensed Plastic Bacon',
    product_material: 'Steel'
  },
  {
    product_name: 'Intelligent Cotton Chips',
    product_material: 'Soft'
  }
]
{
  product_name: 'Handcrafted Wooden Bacon',
  product_material: 'Concrete'
}
]
Type "it" for more
productDB>

```

8. Find all products which contain the value of "Soft" in product material

Query:

```

db.products.find(
{ product_material: /Soft/i }
)

```

```

productDB> db.products.find({ product_material: /Soft/i })
[
  {
    _id: ObjectId('6881aa9c3f03b8d923eecc5c'),
    id: '4',
    product_name: 'Gorgeous Plastic Pants',
    product_price: 492,
    product_material: 'Soft',
    product_color: 'plum'
  },
  {
    _id: ObjectId('6881aa9c3f03b8d923eecc4ca'),
    id: '9',
    product_name: 'Awesome Wooden Ball',
    product_price: 28,
    product_material: 'Soft',
    product_color: 'azure'
  },
  {
    _id: ObjectId('6881aa9c3f03b8d923eecc4cc'),
    id: '11',
    product_name: 'Unbranded Wooden Cheese',
    product_price: 26,
    product_material: 'Soft',
    product_color: 'black'
  },
  {
    _id: ObjectId('6881aa9c3f03b8d923eecc4dd'),
    id: '19',
    product_name: 'Intelligent Cotton Chips',
    product_price: 46,
    product_material: 'Soft',
    product_color: 'azure'
  }
]
productDB>

```

Conclusion

In this MongoDB case study, we successfully:

- Created a productDB database and a products collection.
- Inserted 25 product documents with attributes like name, price, material, and color.
- Performed multiple queries including filtering by price, specific attributes, partial matches, and deletion of duplicates.
- Ensured data was correctly inserted and retrieved using mongosh.