1. Create a Database named "Stocks".

```
> use Stocks
switched to db Stocks
> db
Stocks
> use Stocks
switched to db Stocks
> db
Stocks
```

2. Create an empty collection named "inventory".

```
> db.createCollection("inventory")
{ "ok" : 1 }
> show collections
inventory
> db.createCollection("inventory")
{ "ok" : 1 }
> show collections
inventory
```

3. Insert below records in the inventory collection all together.

```
db.inventory.insertMany([
    { item: "journal", qty: 25, size: { h: 14, w: 21, uom: "cm" },
    status: "A" },
    { item: "notebook", qty: 50, size: { h: 8.5, w: 11, uom: "in" },
    status: "A" },
    { item: "paper", qty: 100, size: { h: 8.5, w: 11, uom: "in" },
    status: "D" },
    { item: "planner", qty: 75, size: { h: 22.85, w: 30, uom: "cm" },
    status: "D" },
    { item: "postcard", qty: 45, size: { h: 10, w: 15.25, uom: "cm" },
    status: "A" }
]);
```

```
... { item: "journal", qty: 25, size: { h: 14, w: 21, uom: "cm" },
status: "A" },
... { item: "notebook", qty: 50, size: { h: 8.5, w: 11, uom: "in"
}, status: "A" },
... { item: "paper", qty: 100, size: { h: 8.5, w: 11, uom: "in" },
status: "D" },
... { item: "planner", qty: 75, size: { h: 22.85, w: 30, uom: "cm"
}, status: "D" },
... { item: "postcard", qty: 45, size: { h: 10, w: 15.25, uom: "cm"
}, status: "A" }
...]);
{
       "acknowledged" : true,
       "insertedIds" : [
               ObjectId("627de4a04686509f257bffd1"),
               ObjectId("627de4a04686509f257bffd2"),
               ObjectId("627de4a04686509f257bffd3"),
               ObjectId("627de4a04686509f257bffd4"),
               ObjectId("627de4a04686509f257bffd5")
]
}
 db.inventory.insertMany([
    ...]);
      "acknowledged" : true,
      "insertedIds" : [
            ObjectId("627de4a04686509f257bffd1"),
            ObjectId("627de4a04686509f257bffd2"),
            ObjectId("627de4a04686509f257bffd3"),
            ObjectId("627de4a04686509f257bffd4"),
            ObjectId("627de4a04686509f257bffd5")
```

```
4. Select all documents from inventory collection
> db.inventory.find().pretty()
{
    "_id": ObjectId("627de4a04686509f257bffd1"),
    "item": "journal",
    "qty" : 25,
    "size" : {
         "h": 14,
         "w" : 21,
         "uom" : "cm"
    },
    "status" : "A"
}
{
    "_id": ObjectId("627de4a04686509f257bffd2"),
    "item": "notebook",
    "qty" : 50,
    "size" : {
         "h": 8.5,
         "w": 11,
         "uom" : "in"
    },
    "status" : "A"
```

```
}
{
    "_id": ObjectId("627de4a04686509f257bffd3"),
    "item": "paper",
    "qty" : 100,
    "size" : {
         "h": 8.5,
         "w" : 11,
         "uom" : "in"
    },
    "status" : "D"
}
{
    "_id": ObjectId("627de4a04686509f257bffd4"),
    "item": "planner",
    "qty": 75,
    "size" : {
         "h": 22.85,
         "w": 30,
         "uom" : "cm"
    },
    "status" : "D"
}
{
    "_id": ObjectId("627de4a04686509f257bffd5"),
    "item": "postcard",
```

```
db.inventory.find().pretty()
       "_id" : ObjectId("627de4a04686509f257bffd1"),
       "item" : "journal",
"qty" : 25,
      "qty . 2-,
"size" : {
    "h" : 14,
    "w" : 21,
    "uom" : "cm"
       },
"status" : "A"
       "_id" : ObjectId("627de4a04686509f257bffd2"),
       "item" : "notebook",
       "qty" : 50,
       "size" : {
    "h" : 8.5,
    "w" : 11,
    "uom" : "in"
       },
"status" : "A"
       "_id" : ObjectId("627de4a04686509f257bffd3"),
       "item" : "paper",
"qty" : 100,
       "size" : {
                 "h" : 8.5,
"w" : 11,
"uom" : "in"
       },
"status" : "D"
       "_id" : ObjectId("627de4a04686509f257bffd4"),
       "item" : "planner",
       "qty": 75,
       },
"status" : "D"
       "_id" : ObjectId("627de4a04686509f257bffd5"),
       "item" : "postcard",
       "qty": 45,
       "size" : {
                 "h" : 10,
"w" : 15.25,
                 "uom" : "cm"
       },
"status" : "A"
```

5. selects from the <u>inventory</u> collection all documents where the <u>status</u> equals "D"

```
> db.inventory.find({status: "D"})

{ "_id" : ObjectId("627de4a04686509f257bffd3"), "item" :
    "paper", "qty" : 100, "size" : { "h" : 8.5, "w" : 11, "uom" :
    "in" }, "status" : "D" }

{ "_id" : ObjectId("627de4a04686509f257bffd4"), "item" :
    "planner", "qty" : 75, "size" : { "h" : 22.85, "w" : 30, "uom" :
    "cm" }, "status" : "D" }

> db.inventory.find((status: "D"))
```

```
{ "_id" : ObjectId("627de4a04686509f257bffd3"), "item" : "paper", "qty" : 100, "size" : { "h" : 8.5, "w" : 11, "uom" : "in" }, "status" : "D" }
{ "_id" : ObjectId("627de4a04686509f257bffd4"), "item" : "planner", "qty" : 75, "size" : { "h" : 22.85, "w" : 30, "uom" : "cm" }, "status" : "D" }
```

6. Retrieves all documents from the <u>inventory</u> collection where <u>status</u> equals either "A" or "D".

```
" id" : ObjectId("627de4a04686509f257bffd2"),
        "item" : "notebook",
     "qty" : 50,
        "size" : {
                "h" : 8.5,
                "w" : 11,
                "uom" : "in"
     },
       "status" : "A"
}
{
        " id" : ObjectId("627de4a04686509f257bffd3"),
        "item" : "paper",
        "qty" : 100,
        "size" : {
                "h" : 8.5,
                "w" : 11,
                "uom" : "in"
        },
        "status" : "D"
}
{
        " id" : ObjectId("627de4a04686509f257bffd4"),
        "item" : "planner",
        "qty" : 75,
        "size" : {
```

```
"h" : 22.85,
              "w" : 30,
              "uom" : "cm"
  },
  "status" : "D"
}
{
       " id" : ObjectId("627de4a04686509f257bffd5"),
     "item" : "postcard",
       "qty" : 45,
       "size" : {
           "h" : 10,
              "w" : 15.25,
              "uom" : "cm"
  },
       "status" : "A"
}
```

```
db.inventory.find({$or:[{status:"A"},{status:"D"}]}).pretty()
       " id" : ObjectId("627de4a04686509f257bffd1"),
       "item" : "journal",
       "qty" : 25,
"size" : {
    "h" : 14,
    "w" : 21,
                  "uom" : "cm"
       },
"status" : "A"
       __id" : ObjectId("627de4a04686509f257bffd2"),
       "item" : "notebook",
       "qty" : 50,
       "size" : {
    "h" : 8.5,
    "w" : 11,
    "uom" : "in"
       },
"status" : "A"
       "_id" : ObjectId("627de4a04686509f257bffd3"),
"item" : "paper",
       "qty" : 100,
       "size" : {
    "h" : 8.5,
    "w" : 11,
    "uom" : "in"
       },
"status" : "D"
       "_id" : ObjectId("627de4a04686509f257bffd4"),
       "item" : "planner",
"qty" : 75,
"size" : {
                 "h" : 22.85,
"w" : 30,
"uom" : "cm"
       },
"status" : "D"
       "_id" : ObjectId("627de4a04686509f257bffd5"),
       "w" : 15.25,
                  "uom" : "cm"
       },
"status" : "A"
```

7. Retrieve documents in the inventory collection where the status equals "A" and gty is less than (\$1t

(Links to an external site.)

```
Links to an external site.
) 30
db.inventory.find({$and:[{status:"A"},{qty:{$1t:30}}]}).pretty()
{
         " id" : ObjectId("627de4a04686509f257bffd1"),
         "item" : "journal",
         "qty" : 25,
         "size" : {
                  "h" : 14,
                  "w" : 21,
                   "uom" : "cm"
         },
         "status" : "A"
}
  db.inventory.find({$and:[{status:"A"},{qty:{$lt:30}}]}).pretty()
        "_id" : ObjectId("627de4a04686509f257bffd1"),
        "item" : "journal",
        "qty" : 25,
        'size" : {
                "h" : 14,
               "w" : 21,
"uom" : "cm"
        },
"status" : "A"
```

8. Retrieve all documents in the collection where the status equals "A" or qty is less than (\$1t

(Links to an external site.)

Links to an external site.

```
) 30
```

```
>
db.inventory.find({$or:[{status:"A"},{qty:{$1t:30}}]}).pretty()
{
        " id" : ObjectId("627de4a04686509f257bffd1"),
        "item" : "journal",
        "qty" : 25,
        "size" : {
                "h" : 14,
                "w" : 21,
                "uom" : "cm"
        },
        "status" : "A"
}
{
        " id" : ObjectId("627de4a04686509f257bffd2"),
        "item" : "notebook",
        "qty" : 50,
        "size" : {
                "h" : 8.5,
                "w" : 11,
                "uom" : "in"
```

```
},
    "status" : "A"
}

{
    "_id" : ObjectId("627de4a04686509f257bffd5"),
    "item" : "postcard",
    "qty" : 45,
    "size" : {
        "h" : 10,
        "w" : 15.25,
        "uom" : "cm"
    },
    "status" : "A"
}
```

9. Update qty to 25 where item is notebook

```
> db.inventory.updateOne({item:"notebook"},{$set:{qty:25}})
{ "acknowledged" : true, "matchedCount" : 1, "modifiedCount" : 1 }
> db.inventory.find().pretty()
{
        "_id" : ObjectId("627de4a04686509f257bffd1"),
        "item" : "journal",
        "qty" : 25,
        "size" : {
```

```
"h": 14,
          "w": 21,
          "uom" : "cm"
     },
     "status" : "A"
}
{
     "_id": ObjectId("627de4a04686509f257bffd2"),
     "item": "notebook",
     "qty": 25,
     "size" : {
          "h": 8.5,
          "w" : 11,
          "uom" : "in"
     },
     "status" : "A"
}
{
     "_id": ObjectId("627de4a04686509f257bffd3"),
     "item": "paper",
     "qty": 100,
     "size" : {
          "h": 8.5,
          "w" : 11,
          "uom" : "in"
     },
```

```
"status" : "D"
}
{
     "_id": ObjectId("627de4a04686509f257bffd4"),
     "item": "planner",
     "qty": 75,
     "size" : {
          "h": 22.85,
          "w":30,
          "uom" : "cm"
     },
     "status" : "D"
}
{
     "_id": ObjectId("627de4a04686509f257bffd5"),
     "item": "postcard",
     "qty": 45,
     "size" : {
          "h": 10,
          "w": 15.25,
          "uom" : "cm"
    },
     "status" : "A"
}
```

```
> db.inventory.updateOne({item:"notebook"},{$set:{qty:25}})
{ "acknowledged" : true, "matchedCount" : 1, "modifiedCount" : 1 }
> db.inventory.updateOne({item:"notebook"},{$set:{qty:25}}).pretty()
uncaught exception: TypeError: db.inventory.updateOne(...).pretty is not a function :
@(shell):1:1
  db.inventory.find().pretty()
         },
"status" : "A"
         },
"status" : "A"
         "_id" : ObjectId("627de4a04686509f257bffd3"),
"item" : "paper",
"qty" : 100,
"size" : {
        "h" : 8.5,
        "w" : 11,
        "uom" : "in"
         },
"status" : "D"
         },
"status" : "D"
         },
"status" : "A"
```

10. Update all status to 'B' where status is 'D'

```
> db.inventory.updateMany({status:"D"},{$set:{status:"B"}})
{ "acknowledged" : true, "matchedCount" : 2, "modifiedCount" : 2 }
> db.inventory.find().pretty()
{
     " id": ObjectId("627de4a04686509f257bffd1"),
     "item": "journal",
     "qty" : 25,
     "size" : {
          "h": 14,
          "w": 21,
          "uom" : "cm"
     },
     "status" : "A"
}
{
     " id": ObjectId("627de4a04686509f257bffd2"),
     "item": "notebook",
     "qty": 25,
     "size" : {
          "h": 8.5,
          "w": 11,
          "uom" : "in"
     },
     "status" : "A"
}
{
```

```
"_id": ObjectId("627de4a04686509f257bffd3"),
     "item" : "paper",
     "qty": 100,
     "size" : {
          "h": 8.5,
          "w" : 11,
          "uom" : "in"
     },
     "status" : "B"
}
{
     "_id": ObjectId("627de4a04686509f257bffd4"),
     "item": "planner",
     "qty": 75,
     "size" : {
          "h": 22.85,
          "w":30,
          "uom" : "cm"
     },
     "status" : "B"
}
{
     "_id": ObjectId("627de4a04686509f257bffd5"),
     "item": "postcard",
     "qty": 45,
     "size" : {
```

```
"h" : 10,

"w" : 15.25,

"uom" : "cm"

},

"status" : "A"
}
```

```
db.inventory.updateMany({status:"D"},{$set:{status:"B"}})
"acknowledged" : true, "matchedCount" : 2, "modifiedCount" : 2}
db.inventory.find().pretty()
      _id" : ObjectId("627de4a04686509f257bffd1"),
      "item" : "journal",
      "w" : 21,
"uom" : "cm"
      },
"status" : "A"
      "_id" : ObjectId("627de4a04686509f257bffd2"),
      "item" : "notebook",
      "w" : 11,
"uom" : "in"
      },
"status" : "A"
      "_id" : ObjectId("627de4a04686509f257bffd3"),
      "item" : "paper",
      "w" : 11,
"uom" : "in"
      },
"status" : "B"
      _id" : ObjectId("627de4a04686509f257bffd4"),
      "item" : "planner",
      "w" : 30,
"uom" : "cm"
      },
"status" : "B"
      "_id" : ObjectId("627de4a04686509f257bffd5"),
      "item" : "postcard",
      "w" : 15.25,
"uom" : "cm"
      },
"status" : "A"
```

11. Write a query to demonstrate usage of upsert.

```
> db.inventory.update({status:"D"},{item:"z"},{upsert:true})
WriteResult({
     "nMatched": 0,
     "nUpserted": 1,
     "nModified": 0,
     " id": ObjectId("627df05b3f0a383f2c883bc5")
})
> db.inventory.find()
{ " id" : ObjectId("627de4a04686509f257bffd1"), "item" : "journal", "qty" : 25, "size" : {
"h": 14, "w": 21, "uom": "cm" }, "status": "A" }
{ " id" : ObjectId("627de4a04686509f257bffd2"), "item" : "notebook", "qty" : 25, "size" : {
"h": 8.5, "w": 11, "uom": "in" }, "status": "A" }
{ " id" : ObjectId("627de4a04686509f257bffd3"), "item" : "paper", "qty" : 100, "size" : {
"h": 8.5, "w": 11, "uom": "in" }, "status": "B" }
{ " id" : ObjectId("627de4a04686509f257bffd4"), "item" : "planner", "qty" : 75, "size" : {
"h": 22.85, "w": 30, "uom": "cm"}, "status": "B"}
{ " id" : ObjectId("627de4a04686509f257bffd5"), "item" : "postcard", "qty" : 45, "size" : {
"h": 10, "w": 15.25, "uom": "cm" }, "status": "A" }
{ " id" : ObjectId("627df05b3f0a383f2c883bc5"), "item" : "z" }
```

```
> db.inventory.update({status:"D"},{item:"z"},{upsert:true})
WriteResult({
        "nMatched" : 0,
        "nUpserted" : 1,
        "mModified" : 0,
        "_id" : ObjectId("627df05b3f0a383f2c883bc5")
}
> db.inventory.find()
{ ".id" : ObjectId("627de4a04686509f257bffd1"), "item" : "journal", "qty" : 25, "size" : { "h" : 14, "w" : 21, "uom" : "cm" }, "status" : "A" }
{ ".id" : ObjectId("627de4a04686509f257bffd2"), "item" : "notebook", "qty" : 25, "size" : { "h" : 8.5, "w" : 11, "uom" : "in" }, "status" : "A" }
{ ".id" : ObjectId("627de4a04686509f257bffd3"), "item" : "paper", "qty" : 100, "size" : { "h" : 8.5, "w" : 11, "uom" : "in" }, "status" : "B" }
{ ".id" : ObjectId("627de4a04686509f257bffd3"), "item" : "paper", "qty" : 75, "size" : { "h" : 22.85, "w" : 30, "uom" : "cm" }, "status" : "B" }
{ ".id" : ObjectId("627de4a0668699f257bffd3"), "item" : "palanner", "qty" : 75, "size" : { "h" : 10, "w" : 15.25, "uom" : "cm" }, "status" : "B" }
{ ".id" : ObjectId("627de4a0686509f257bffd3"), "item" : "palanner", "qty" : 45, "size" : { "h" : 10, "w" : 15.25, "uom" : "cm" }, "status" : "A" }
{ ".id" : ObjectId("627de4a065309f257bffd3"), "item" : "palanner", "qty" : 45, "size" : { "h" : 10, "w" : 15.25, "uom" : "cm" }, "status" : "A" }
}
```

12. Delete the document where qty is 100

> db.inventory.deleteOne({qty:100})

```
{ "acknowledged" : true, "deletedCount" : 0 }
> db.inventory.find()

{ "_id" : ObjectId("627de4a04686509f257bffd1"), "item" : "journal", "qty" : 25, "size" : {
    "h" : 14, "w" : 21, "uom" : "cm" }, "status" : "A" }

{ "_id" : ObjectId("627de4a04686509f257bffd2"), "item" : "notebook", "qty" : 25, "size" : {
    "h" : 8.5, "w" : 11, "uom" : "in" }, "status" : "A" }

{ "_id" : ObjectId("627de4a04686509f257bffd4"), "item" : "planner", "qty" : 75, "size" : {
    "h" : 22.85, "w" : 30, "uom" : "cm" }, "status" : "B" }

{ "_id" : ObjectId("627de4a04686509f257bffd5"), "item" : "postcard", "qty" : 45, "size" : {
    "h" : 10, "w" : 15.25, "uom" : "cm" }, "status" : "A" }

{ "_id" : ObjectId("627df05b3f0a383f2c883bc5"), "item" : "z" }

**Gastronoledged" : true, "deletedCount" : 0 )
    "objectId("627de4a08686967257bffd2"), "item" : "journal", "ty" : 25, "size" : { "h" : 12, "wom" : "cm" }, "status" : "A" }

**Gastronoledged" : true, "deletedCount" : 0 )
    "objectId("627de4a08686967257bffd2"), "item" : "journal", "ty" : 25, "size" : { "h" : 14, "w" : 21, "wom" : "cm" }, "status" : "A" }

**Gastronoledged" : true, "deletedCount" : 0 )
    "objectId("627de4a08686967257bffd2"), "item" : "journal", "ty" : 25, "size" : { "h" : 14, "w" : 21, "wom" : "cm" }, "status" : "A" }

**Gastronoledged" : true, "deletedCount" : 0 )
    "objectId("627dea868686967257bffd2"), "item" : "journal", "ty" : 25, "size" : { "h" : 22, 85, "w" : 30, "wom" : "cm" }, "status" : "A" }

**Gastronoledged" : true, "deletedCount" : 0 )
    "objectId("627dea868686967257bffd2"), "item" : "journal", "ty" : 25, "size" : { "h" : 22, 85, "w" : 30, "wom" : "cm" }, "status" : "A" }

**Gastronoledged" : true, "deletedCount" : 0 )
    "objectId("627dea868686967257bffd2"), "item" : "journal", "ty" : 25, "size" : { "h" : 22, 85, "w" : 30, "wom" : "cm" }, "status" : "A" }

**Gastronoledged" : true, "deletedCount" : 0 )
    "objectId("627de3868686967257bffd2"), "item" : "journal", "ty" : 25, "size" : { "h" : 22, 85, "w" : 30, "wom" : "cm" }, "status" : "A" }

**Gast
```

13. Delete all the documents from inventory collection.

```
> db.inventory.deleteMany({})
{ "acknowledged" : true, "deletedCount" : 5 }
> db.inventory.find()
```

```
> db.inventory.deleteMany({})
{ "acknowledged" : true, "deletedCount" : 5 }
> db.inventory.find()
```

14. Rename the collection.

```
> db.inventory.renameCollection("book")
{ "ok" : 1 }
```

```
> db.inventory.renameCollection("book")
{ "ok" : 1 }
>
```

15. Delete the database.

```
> use Stocks
switched to db Stocks
> db.dropDatabase()
{ "ok" : 1 }
> use Stocks
switched to db Stocks
> db.dropDatabase()
{ "ok" : 1 }
```