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Subject: DBSL – Assignment B01 – MongoDB CRUD Operations

Code:

```
help
show dbs

// create db
use b01_db

// current db
db

// insert
db.students.insertOne(
    {
        name:"Alex",
        marks: 99,
        grade: "NA"
    }
)

db.students.insertMany([
    {
        name:"Bob",
        marks: 72,
        grade:"NA"
    },
    {
        name:"Tony",
        marks:90,
        grade:"NA"
    },
    {
        name:"Stephen",
        marks:83,
        grade:"NA"
    }
]
)

show collections
```

```
// read
// all records
db.students.find()
db.students.find(
    {},
    {
        _id:0
    }
)

// conditional find
db.students.find(
{
    marks:{$gte:80, $lte:100}
},
{
    _id:0,
    grade:0
}
)

// another way
db.students.find(
    {
        $and:[
            {marks:{$gte:80}},
            {marks:{$lte:100}}
        ]
    },
    {
        _id:0,
        grade:0
    }
)

// update
db.students.updateMany(
    {
        marks:{$gte:70, $lt:80}
    },
    {
        $set:{
            "grade":"B"
        }
    }
)
```

```
// delete
db.students.deleteOne(
    {marks:{$get:90, $lt:100}}
)

// save
db.students.save(
    {
        "_id":ObjectId("61a259548cf5b74a7ecdfe41"),
        "name":"Bob",
        "marks":95,
        "grade":"A+"
    }
)

db.dropDatabase()
```

Output:

```
> use b01_db
switched to db b01_db
> db
b01_db
```

Screenshot-1: Using Database

```
> db.students.insertOne(
...     {
...         name:"Alex",
...         marks: 99,
...         grade: "NA"
...     }
... )
{
    "acknowledged" : true,
    "insertedId" : ObjectId("61a2591f8cf5b74a7ecdfe40")
}
```

Screenshot-2: Inserting one document at a time

```
> db.students.insertMany([
...        {
...                name:"Bob",
...                marks: 72,
...                grade:"NA"
...        },
...        {
...                name:"Tony",
...                marks:90,
...                grade:"NA"
...        },
...        {
...                name:"Stephen",
...                marks:83,
...                grade:"NA"
...        }
... ]
... )
{
        "acknowledged" : true,
        "insertedIds" : [
                ObjectId("61a259548cf5b74a7ecdfe41"),
                ObjectId("61a259548cf5b74a7ecdfe42"),
                ObjectId("61a259548cf5b74a7ecdfe43")
        ]
}
```

Screenshot-3: Inserting Many documents at a time

```
> show collections
students
> db.students.find()
{ "_id" : ObjectId("61a2591f8cf5b74a7ecdfe40"), "name" : "Alex", "marks" : 99, "grade" : "NA"
}
{ "_id" : ObjectId("61a259548cf5b74a7ecdfe41"), "name" : "Bob", "marks" : 72, "grade" : "NA" }

{ "_id" : ObjectId("61a259548cf5b74a7ecdfe42"), "name" : "Tony", "marks" : 90, "grade" : "NA"
}
{ "_id" : ObjectId("61a259548cf5b74a7ecdfe43"), "name" : "Stephen", "marks" : 83, "grade" : "N
A" }
```

Screenshot-4: Reading database with find function

```
> db.students.find(
...        {},
...        {
...             _id:0
...        }
... )
{ "name" : "Alex", "marks" : 99, "grade" : "NA" }
{ "name" : "Bob", "marks" : 72, "grade" : "NA" }
{ "name" : "Tony", "marks" : 90, "grade" : "NA" }
{ "name" : "Stephen", "marks" : 83, "grade" : "NA" }
> db.students.find(
... {
...      marks:{$gte:80, $lte:100}
... },
... {
...      _id:0,
...      grade:0
... }
... )
{ "name" : "Alex", "marks" : 99 }
{ "name" : "Tony", "marks" : 90 }
{ "name" : "Stephen", "marks" : 83 }
```

```
> db.students.find(
...        {
...             $and:[
...                 {marks:{$gte:80}},
...                 {marks:{$lte:100}}
...             ]
...        },
...        {
...             _id:0,
...             grade:0
...        }
... )
{ "name" : "Alex", "marks" : 99 }
{ "name" : "Tony", "marks" : 90 }
{ "name" : "Stephen", "marks" : 83 }
```

Screenshot-5: Reading records using conditionals in find

```
> db.students.updateMany(
...     {
...             marks:{$gte:80, $lt:90}
...     },
...     {
...             $set:{
...                     "grade":"A"
...             }
...     }
... )
{ "acknowledged" : true, "matchedCount" : 1, "modifiedCount" : 1 }
> db.students.updateMany(
...     {
...             marks:{$gte:70, $lt:80}
...     },
...     {
...             $set:{
...                     "grade":"B"
...             }
...     }
... )
{ "acknowledged" : true, "matchedCount" : 1, "modifiedCount" : 1 }
> db.students.find(
...     {},
...     {
...             _id:0
...     }
... )
{ "name" : "Alex", "marks" : 99, "grade" : "A+" }
{ "name" : "Bob", "marks" : 72, "grade" : "B" }
{ "name" : "Tony", "marks" : 90, "grade" : "A+" }
{ "name" : "Stephen", "marks" : 83, "grade" : "A" }
```

Screenshot-6: Updating records

```
> db.students.deleteOne(
...     {marks:{$gte:90, $lt:100}}
... )
{ "acknowledged" : true, "deletedCount" : 1 }
> db.students.find(
...     {},
...     {
...             _id:0
...     }
... )
{ "name" : "Bob", "marks" : 72, "grade" : "B" }
{ "name" : "Tony", "marks" : 90, "grade" : "A+" }
{ "name" : "Stephen", "marks" : 83, "grade" : "A" }
```

Screenshot-7: Deleting document

```
> db.students.save(
...     {
...         "_id":ObjectId("61a259548cf5b74a7ecdfe41"),
...         "name":"Bob",
...         "marks":95,
...         "grade":"A+"
...     }
... )
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.students.find(
...     {},
...     {
...         _id:0
...     }
... )
{ "name" : "Bob", "marks" : 95, "grade" : "A+" }
{ "name" : "Tony", "marks" : 90, "grade" : "A+" }
{ "name" : "Stephen", "marks" : 83, "grade" : "A" }
```

Screenshot-8: Save method to update record

```
> db.dropDatabase()
{ "dropped" : "b01_db", "ok" : 1 }
>
```

Screenshot-9: Dropping Database