

# Mongo CRUD

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# Create

```
use school
```

```
db.class5.insert( { "name" : "Hari" , "age" : 10 , "likes" : "Painting" } )
```

```
db.class5.insert( { "name" : "Swathi" , "age" : 11 , "likes" : "Karate" } )
```

```
db.class5.insert( { "name" : "Isha" , "age" : 10 , "likes" : "Reading" } )
```

## Create - Bulk Insert

```
db.class5.insert([ { "name" : "John" , "age" : 9, "likes" : "Cricket" } , { "name" :  
"Lekha" , "age" : 11, "likes" : "Cricket" } , { "name" : "Lahari" , "age" : 8, "likes" :  
"Singing" } ] )
```

# Create - Working with Arrays

```
use school
```

```
db.class5.insert( { "name" : "Jane" , "age" : 10 , "likes" : [ "Painting" , "Singing" ] } )
```

```
db.class5.insert( { "name" : "Hari" , "age" : 11 , "likes" : [ "Karate" , "Cricket" ] } )
```

```
db.class5.insert( { "name" : "Ravi" , "age" : 10 , "likes" : [ "Reading" , "Cricket" ] } )
```

# Finding

`db.class5.find()`

`db.class5.find({})`

`db.class5.findOne()`

`db.class5.find().pretty()`

`find()` returns a cursor

`findOne()` returns a document/object

`pretty()` formats the output for better human reading

# Finding

```
db.class5.find({"name":"Ravi"})
```

Finds all students with name “Ravi”

```
db.class5.find({"age":10})
```

Finds all students with age 10

# Finding

```
db.class5.find({"name":"Hari","age":10})
```

Finds all students with name "Hari" and age 10

```
db.class5.find({"age":8,"likes":"Singing"})
```

Finds all students with age 8 and who like Singing

## Finding - working with comparison operators

```
db.class5.find({"age":{"$gt:10}})
```

Finds all students with age greater than 10

You may want to try out \$lt , \$gte ,  
\$lte , \$eq , \$ne





## Finding - searching arrays

```
db.class5.find({"likes": "Cricket"})
```

Finds all students who like "Cricket"

Did you notice that find() is polymorphic?

## Finding - searching arrays based on position

```
db.class5.find({"likes.0":"Cricket"})
```

Finds all students who like "Cricket" most

# Finding

```
db.class5.find(  
    $or:[{"likes":"Cricket"}, {"likes":"Reading"}]  
    )
```

Finds all students who like “Cricket” or “Reading”

# Finding

```
db.class5.find({  
  "likes":{"$in":["Cricket","Reading"]}  
})
```

Finds all students who like “Cricket” or “Reading”

# Finding - based on a field

```
use school
```

```
db.class5.insert( { "name" : "Ashok" , "age" : 10 } )
```

```
db.class5.insert( { "name" : "Rahim" , "likes" : "Painting" } )
```

```
db.class5.find( { age : { $exists : true } } )
```

```
db.class5.find( { likes : { $exists : false } } )
```

## Finding - based on a field

```
db.employees.find({spouse:{$exists:true}})
```

```
db.employees.find({retired:{$exists:false}})
```

# Finding - projection

```
db.class5.find( { age: 10 }, { name: 1, age: 1 } )
```

```
db.class5.find( { age: 10 }, { likes:0 } )
```

```
db.class5.find( { age: 10 }, { age: 0 } )
```

```
db.class5.find( { age: 10 }, { _id: 0 } )
```

```
db.class5.find( { age: 10 }, { _id: 0, name: 1 } )
```

```
db.class5.find( { age: 10 }, { name: 1, age: 0 } )
```

# Finding - distinct

```
db.class5.distinct("age")
```

```
db.class5.distinct("likes")
```



# Update

```
db.xyz.insert({"name":"Ramesh"})
```

```
db.xyz.update({"name":"Ramesh"}, {"job":"Trainer"})
```

```
db.xyz.update({"name":"Ramesh"}, {$set: {"job":"Trainer"}})
```

```
db.xyz.update({"name":"Ramesh"}, {$set: {"job":"Trainer"}}, {"multi":true})
```

```
db.xyz.update({"name":"Ramesh"}, {$set: {"job":"Trainer"}}, {"multi":true, "upsert":true})
```

# Update - working with arrays

```
db.class5.update(  
  { "age": 10 },  
  { $push: { marks: 89 } },  
  { multi:1 }  
)
```

This will add 89 to marks array

# Update - working with arrays

```
db.class5.update(  
  { age: 10 },  
  { $addToSet: { "likes": "Swimming" } },  
  {"multi":true}  
)
```

This will add “Swimming” to likes array if it is not already there

# Advanced Queries

```
db.abcd.insert({'name':'Ramesh',  
               experience:{Intergraph:'IT Head',Genpact:'AVP'}  
})
```

```
db.abcd.find().pretty()
```

# Advanced Queries

```
db.abcd.update({name:'Ramesh'},  
{ $set: {'experience.HCL': 'AGM'}})
```

```
db.abcd.find().pretty()
```

# Advanced Queries

```
db.abcd.update({name:'Ramesh'},  
{ $set: {'skills': ['MongoDB', 'AngularJS']} })
```

```
db.abcd.find().pretty()
```

# Advanced Queries

```
db.abcd.update({name:'Ramesh'},  
{ $push: {'skills': 'Python' } })
```

```
db.abcd.find().pretty()
```

# Advanced Queries

```
db.abcd.update({name:'Ramesh'},  
{ $pull: {skills:'AngularJS'}})
```

```
db.abcd.find().pretty()
```



# Advanced Queries

```
db.abcd.update({name:'Ramesh'},  
{ $pop:{skills:1}})
```

```
db.abcd.find().pretty()
```

# Delete documents

```
db.xyz.remove({name:'ramesh'})
```

Caution!

```
db.xyz.remove({})
```

 removes all documents in a collection

# Delete fields

```
db.persons.update({ },{$unset: {"city": ""}},{“multi”:1})
```

# Rename fields

```
db.persons.update({ },{$rename: {"city": "village"}},{“multi”:1})
```

# MongoDB Supported BSON Data Types

Type	Number	Alias	Notes
Double	1	"double"	
String	2	"string"	
Object	3	"object"	
Array	4	"array"	
Binary data	5	"binData"	
Undefined	6	"undefined"	Deprecated.
ObjectId	7	"objectId"	

# MongoDB Supported BSON Data Types

Type	Number	Alias	Notes
Boolean	8	"bool"	
Date	9	"date"	
Null	10	"null"	
Regular Expression	11	"regex"	
DBPointer	12	"dbPointer"	
JavaScript	13	"javascript"	
Symbol	14	"symbol"	

# Query by field type

```
db.class5.find({"name":{"$type:"number"}})
```

```
db.class5.find( { $where : "Array.isArray(this.likes)" } )
```

# Regex

```
db.training.find({name:{$regex:/^h/i}})
```

This will find all documents with names starting with 'h' case insensitive.



db.xyz.find({"name": /me/ }) # contains “me”

db.xyz.find({"name": /^R/ }) #starts with “R”

db.xyz.find({"name": /^R/i }) # starts with “R” ignore case

db.xyz.find({"name": /h\$/ }) #ends with “h”

# SQL vs Mongo Query

UPDATE users

SET age = age + 3

WHERE status = "A"

**SQL**



**Mongo**

```
db.users.update(  
  { status: "A" } ,  
  { $inc: { age: 3 } },  
  { multi: true })
```

# Working with Binary Data

```
db.coll.insert({'abc': new BinData(0,"AQAAAAEBAAVIbl9VSwAAAAA") })
```

```
db.coll.find({'abc': new BinData(0,"AQAAAAEBAAVIbl9VSwAAAAA") })
```

# Sorting

use school

```
db.class5.find({}).sort({"age":1}) # sort by age asc
```

```
db.class5.find({}).sort({"age":-1}) # sort by age desc
```

```
db.class5.find({}).sort({"age":1,"name":1}) # sort by age and name
```

# Pagination

```
db.class5.find().sort({"age":1}).skip(2)
```

```
db.class5.find().sort({"age":1}).skip(2).limit(2)
```