**Assignment: Intro to MongoDB**

Create a database called *'my\_first\_db*'.

1. Create *students* collection.
2. Each document you insert into this collection should have the following format: ({name: STRING, home\_state: STRING, lucky\_number: NUMBER, birthday: {month: NUMBER, day: NUMBER, year: NUMBER}})
3. Create 5 students with the appropriate info.
4. Get all students.
5. Retrieve all students who are from California (San Jose Dojo) or Washington (Seattle Dojo).
6. db.createCollection('students')
7. { "ok" : 1 }
8. > db.students.insert  ({name: STRING, home\_state: STRING, lucky\_number: NUMBER, birthday: {month: NUMBER, day: NUMBER, year: NUMBER}})
9. 2018-10-05T11:40:58.378-0700 E QUERY    [main] ReferenceError: STRING is not defined :
10. @(shell):1:23
11. > db.students.insert  ({name: pooja, home\_state: MH, lucky\_number: 9, birthday: {month: 12, day: 27, year: 1991}})
12. 2018-10-05T11:42:23.226-0700 E QUERY    [main] ReferenceError: pooja is not defined :
13. @(shell):1:23
14. > db.students.insert  ({name: "pooja", home\_state: "MH", lucky\_number: 9, birthday: {month: 12, day: 27, year: 1991}})
15. WriteResult({ "nInserted" : 1 })
16. > db.students.insert  ({name: "Ninja", home\_state: "WA", lucky\_number: 2, birthday: {month: 1, day: 7, year: 1921}})
17. WriteResult({ "nInserted" : 1 })
18. > db.students.insert  ({name: "WinterNInja", home\_state: "CA", lucky\_number: 12, birthday: {month: 11, day: 17, year: 1921}})
19. WriteResult({ "nInserted" : 1 })
20. > db.students.insert  ({name: "SummerNInja", home\_state: "NY", lucky\_number: 7, birthday: {month: 5, day: 3, year: 1947}})
21. WriteResult({ "nInserted" : 1 })
22. > db.students.insert  ({name: "FallNInja", home\_state: "Fl", lucky\_number: 1, birthday: {month: 5, day:23, year: 1927}})
23. WriteResult({ "nInserted" : 1 })
24. > db.students.find()
25. { "\_id" : ObjectId("5bb7b0b0ac1d97b22af3acb8"), "name" : "pooja", "home\_state" : "MH", "lucky\_number" : 9, "birthday" : { "month" : 12, "day" : 27, "year" : 1991 } }
26. { "\_id" : ObjectId("5bb7b0ccac1d97b22af3acb9"), "name" : "Ninja", "home\_state" : "WA", "lucky\_number" : 2, "birthday" : { "month" : 1, "day" : 7, "year" : 1921 } }
27. { "\_id" : ObjectId("5bb7b0e7ac1d97b22af3acba"), "name" : "WinterNInja", "home\_state" : "CA", "lucky\_number" : 12, "birthday" : { "month" : 11, "day" : 17, "year" : 1921 } }
28. { "\_id" : ObjectId("5bb7b10eac1d97b22af3acbb"), "name" : "SummerNInja", "home\_state" : "NY", "lucky\_number" : 7, "birthday" : { "month" : 5, "day" : 3, "year" : 1947 } }
29. { "\_id" : ObjectId("5bb7b134ac1d97b22af3acbc"), "name" : "FallNInja", "home\_state" : "Fl", "lucky\_number" : 1, "birthday" : { "month" : 5, "day" : 23, "year" : 1927 } }
30. > db.students.find({home\_state :"CA"})
31. { "\_id" : ObjectId("5bb7b0e7ac1d97b22af3acba"), "name" : "WinterNInja", "home\_state" : "CA", "lucky\_number" : 12, "birthday" : { "month" : 11, "day" : 17, "year" : 1921 } }

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1. Get all students whose lucky number is:
   1. **greater than 3**
2. db.students.find({lucky\_number:{$gt:3}})
3. { "\_id" : ObjectId("5bb7b0b0ac1d97b22af3acb8"), "name" : "pooja", "home\_state" : "MH", "lucky\_number" : 9, "birthday" : { "month" : 12, "day" : 27, "year" : 1991 } }
4. { "\_id" : ObjectId("5bb7b0e7ac1d97b22af3acba"), "name" : "WinterNInja", "home\_state" : "CA", "lucky\_number" : 12, "birthday" : { "month" : 11, "day" : 17, "year" : 1921 } }
5. { "\_id" : ObjectId("5bb7b10eac1d97b22af3acbb"), "name" : "SummerNInja", "home\_state" : "NY", "lucky\_number" : 7, "birthday" : { "month" : 5, "day" : 3, "year" : 1947 } }

>

* 1. **less than or equal to 10**

1. > db.students.find({lucky\_number:{$gte:10}})
2. { "\_id" : ObjectId("5bb7b0e7ac1d97b22af3acba"), "name" : "WinterNInja", "home\_state" : "CA", "lucky\_number" : 12, "birthday" : { "month" : 11, "day" : 17, "year" : 1921 } }
3. >
   1. **between 1 and 9 (inclusive)**

db.students.find({$and: [{lucky\_number: {$gte:1}}, {lucky\_number: {$lte:9}}]})

1. { "\_id" : ObjectId("5bb7b0b0ac1d97b22af3acb8"), "name" : "pooja", "home\_state" : "MH", "lucky\_number" : 9, "birthday" : { "month" : 12, "day" : 27, "year" : 1991 }, "interest" : [ "coding", "brunch", "MongoDB", "SQl12" ] }
2. { "\_id" : ObjectId("5bb7b0ccac1d97b22af3acb9"), "name" : "Ninja", "home\_state" : "WA", "lucky\_number" : 2, "birthday" : { "month" : 1, "day" : 7, "year" : 1921 }, "interest" : [ "coding", "brunch", "MongoDB" ] }
3. { "\_id" : ObjectId("5bb7b10eac1d97b22af3acbb"), "name" : "SummerNInja", "home\_state" : "NY", "lucky\_number" : 7, "birthday" : { "month" : 5, "day" : 3, "year" : 1947 }, "interest" : [ "coding", "brunch", "MongoDB", "SQl2" ] }
4. { "\_id" : ObjectId("5bb7b134ac1d97b22af3acbc"), "name" : "FallNInja", "home\_state" : "Fl", "lucky\_number" : 1, "birthday" : { "month" : 5, "day" : 23, "year" : 1927 }, "interest" : [ "coding", "brunch", "MongoDB", "SQl" ] }
5. Add a field to each student collection called*'interests'* that is an ARRAY.  It should contain the following entries: *'coding', 'brunch', 'MongoDB'.* Do this in ONE operation.
6. db.students.update({},{$set: {interest:["coding", "brunch", "MongoDB"]}},{multi:true})
7. WriteResult({ "nMatched" : 6, "nUpserted" : 0, "nModified" : 6 })
8. > db.students.find()
9. { "\_id" : ObjectId("5bb7b0b0ac1d97b22af3acb8"), "name" : "pooja", "home\_state" : "MH", "lucky\_number" : 9, "birthday" : { "month" : 12, "day" : 27, "year" : 1991 }, "interest" : [ "coding", "brunch", "MongoDB" ] }
10. { "\_id" : ObjectId("5bb7b0ccac1d97b22af3acb9"), "name" : "Ninja", "home\_state" : "WA", "lucky\_number" : 2, "birthday" : { "month" : 1, "day" : 7, "year" : 1921 }, "interest" : [ "coding", "brunch", "MongoDB" ] }
11. { "\_id" : ObjectId("5bb7b0e7ac1d97b22af3acba"), "name" : "WinterNInja", "home\_state" : "CA", "lucky\_number" : 12, "birthday" : { "month" : 11, "day" : 17, "year" : 1921 }, "interest" : [ "coding", "brunch", "MongoDB" ] }
12. { "\_id" : ObjectId("5bb7b10eac1d97b22af3acbb"), "name" : "SummerNInja", "home\_state" : "NY", "lucky\_number" : 7, "birthday" : { "month" : 5, "day" : 3, "year" : 1947 }, "interest" : [ "coding", "brunch", "MongoDB" ] }
13. { "\_id" : ObjectId("5bb7b134ac1d97b22af3acbc"), "name" : "FallNInja", "home\_state" : "Fl", "lucky\_number" : 1, "birthday" : { "month" : 5, "day" : 23, "year" : 1927 }, "interest" : [ "coding", "brunch", "MongoDB" ] }
14. Add some unique interests for each particular student into each of their interest arrays.
15. db.students.update({name:"WinterNInja"},{$push: {interest:"SQl1"}})
16. WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
17. > db.students.update({name:"SUmmerNInja"},{$push: {interest:"SQl2"}})
18. WriteResult({ "nMatched" : 0, "nUpserted" : 0, "nModified" : 0 })
19. > db.students.update({name:"SummerNInja"},{$push: {interest:"SQl2"}})
20. WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
21. > db.students.update({name:"pooja"},{$push: {interest:"SQl12"}})
22. WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
23. Add the interest 'taxes' into someone's interest array.
24. > db.students.update({name:"pooja"},{$push: {interest:"Taxes"}})
25. WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
26. > db.students.find()
27. { "\_id" : ObjectId("5bb7b0b0ac1d97b22af3acb8"), "name" : "pooja", "home\_state" : "MH", "lucky\_number" : 9, "birthday" : { "month" : 12, "day" : 27, "year" : 1991 }, "interest" : [ "coding", "brunch", "MongoDB", "SQl12", "Taxes" ] }
28. Remove the 'taxes' interest you just added.

db.students.update({name:"pooja"},{$pop: {interest:"Taxes"}})

WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })

> db.students.find()

{ "\_id" : ObjectId("5bb7b0b0ac1d97b22af3acb8"), "name" : "pooja", "home\_state" : "MH", "lucky\_number" : 9, "birthday" : { "month" : 12, "day" : 27, "year" : 1991 }, "interest" : [ "coding", "brunch", "MongoDB", "SQl12" ] }

1. Remove all students who are from California (or Washington).
2. db.students.remove({home\_state : "CA"})
3. WriteResult({ "nRemoved" : 1 })
4. > db.students.find()
5. { "\_id" : ObjectId("5bb7b0b0ac1d97b22af3acb8"), "name" : "pooja", "home\_state" : "MH", "lucky\_number" : 9, "birthday" : { "month" : 12, "day" : 27, "year" : 1991 }, "interest" : [ "coding", "brunch", "MongoDB", "SQl12" ] }
6. { "\_id" : ObjectId("5bb7b0ccac1d97b22af3acb9"), "name" : "Ninja", "home\_state" : "WA", "lucky\_number" : 2, "birthday" : { "month" : 1, "day" : 7, "year" : 1921 }, "interest" : [ "coding", "brunch", "MongoDB" ] }
7. { "\_id" : ObjectId("5bb7b10eac1d97b22af3acbb"), "name" : "SummerNInja", "home\_state" : "NY", "lucky\_number" : 7, "birthday" : { "month" : 5, "day" : 3, "year" : 1947 }, "interest" : [ "coding", "brunch", "MongoDB", "SQl2" ] }
8. { "\_id" : ObjectId("5bb7b134ac1d97b22af3acbc"), "name" : "FallNInja", "home\_state" : "Fl", "lucky\_number" : 1, "birthday" : { "month" : 5, "day" : 23, "year" : 1927 }, "interest" : [ "coding", "brunch", "MongoDB", "SQl" ] }
9. Remove a student by name.

> db.students.remove({name : "FallNinja"})

WriteResult({ "nRemoved" : 0 })

> db.students.find()

{ "\_id" : ObjectId("5bb7b0b0ac1d97b22af3acb8"), "name" : "pooja", "home\_state" : "MH", "lucky\_number" : 9, "birthday" : { "month" : 12, "day" : 27, "year" : 1991 }, "interest" : [ "coding", "brunch", "MongoDB", "SQl12" ] }

{ "\_id" : ObjectId("5bb7b0ccac1d97b22af3acb9"), "name" : "Ninja", "home\_state" : "WA", "lucky\_number" : 2, "birthday" : { "month" : 1, "day" : 7, "year" : 1921 }, "interest" : [ "coding", "brunch", "MongoDB" ] }

{ "\_id" : ObjectId("5bb7b10eac1d97b22af3acbb"), "name" : "SummerNInja", "home\_state" : "NY", "lucky\_number" : 7, "birthday" : { "month" : 5, "day" : 3, "year" : 1947 }, "interest" : [ "coding", "brunch", "MongoDB", "SQl2" ] }

{ "\_id" : ObjectId("5bb7b134ac1d97b22af3acbc"), "name" : "FallNInja", "home\_state" : "Fl", "lucky\_number" : 1, "birthday" : { "month" : 5, "day" : 23, "year" : 1927 }, "interest" : [ "coding", "brunch", "MongoDB", "SQl" ] }

{ "\_id" : ObjectId("5bb7b3dbac1d97b22af3acbd"), "interest" : [ "coding", "brunch", "MongoDB" ] }

1. Remove a student whose lucky number is greater than 5 (JUST ONE)
2. db.students.find({lucky\_number: {$gt: 5}})
3. { "\_id" : ObjectId("5bb7b0b0ac1d97b22af3acb8"), "name" : "pooja", "home\_state" : "MH", "lucky\_number" : 9, "birthday" : { "month" : 12, "day" : 27, "year" : 1991 }, "interest" : [ "coding", "brunch", "MongoDB", "SQl12" ] }
4. { "\_id" : ObjectId("5bb7b10eac1d97b22af3acbb"), "name" : "SummerNInja", "home\_state" : "NY", "lucky\_number" : 7, "birthday" : { "month" : 5, "day" : 3, "year" : 1947 }, "interest" : [ "coding", "brunch", "MongoDB", "SQl2" ] }
5. Add a field to each student collection called 'number\_of\_belts' and set it to 0.

db.students.update({name: "SummerNinja"},{number\_of\_fields: 0})

WriteResult({ "nMatched" : 0, "nUpserted" : 0, "nModified" : 0 })

> db.students.update({name: "FallNinja"},{number\_of\_fields: 0})

WriteResult({ "nMatched" : 0, "nUpserted" : 0, "nModified" : 0 })

> db.students.find()

{ "\_id" : ObjectId("5bb7b0b0ac1d97b22af3acb8"), "number\_of\_fields" : 0 }

{ "\_id" : ObjectId("5bb7b0ccac1d97b22af3acb9"), "number\_of\_fields" : 0 }

{ "\_id" : ObjectId("5bb7b10eac1d97b22af3acbb"), "name" : "SummerNInja", "home\_state" : "NY", "lucky\_number" : 7, "birthday" : { "month" : 5, "day" : 3, "year" : 1947 }, "interest" : [ "coding", "brunch", "MongoDB", "SQl2" ] }

{ "\_id" : ObjectId("5bb7b134ac1d97b22af3acbc"), "name" : "FallNInja", "home\_state" : "Fl", "lucky\_number" : 1, "birthday" : { "month" : 5, "day" : 23, "year" : 1927 }, "interest" : [ "coding", "brunch", "MongoDB", "SQl" ] }

1. Increment this field by 1 for all students in Washington (Seattle Dojo).
2. db.students.find()
3. { "\_id" : ObjectId("5bb7b0b0ac1d97b22af3acb8"), "number\_of\_fields" : 0 }
4. { "\_id" : ObjectId("5bb7b0ccac1d97b22af3acb9"), "number\_of\_fields" : 0 }
5. { "\_id" : ObjectId("5bb7b10eac1d97b22af3acbb"), "name" : "SummerNInja", "home\_state" : "NY", "lucky\_number" : 7, "birthday" : { "month" : 5, "day" : 3, "year" : 1947 }, "interest" : [ "coding", "brunch", "MongoDB", "SQl2" ] }
6. { "\_id" : ObjectId("5bb7b134ac1d97b22af3acbc"), "name" : "FallNInja", "home\_state" : "Fl", "lucky\_number" : 1, "birthday" : { "month" : 5, "day" : 23, "year" : 1927 }, "interest" : [ "coding", "brunch", "MongoDB", "SQl" ] }
7. { "\_id" : ObjectId("5bb7b3dbac1d97b22af3acbd"), "interest" : [ "coding", "brunch", "MongoDB" ] }
8. > db.students.update({home\_state: "Fl"},{number\_of\_fields: 1})
9. WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
10. > db.students.find()
11. { "\_id" : ObjectId("5bb7b0b0ac1d97b22af3acb8"), "number\_of\_fields" : 0 }
12. { "\_id" : ObjectId("5bb7b0ccac1d97b22af3acb9"), "number\_of\_fields" : 0 }
13. { "\_id" : ObjectId("5bb7b10eac1d97b22af3acbb"), "name" : "SummerNInja", "home\_state" : "NY", "lucky\_number" : 7, "birthday" : { "month" : 5, "day" : 3, "year" : 1947 }, "interest" : [ "coding", "brunch", "MongoDB", "SQl2" ] }
14. { "\_id" : ObjectId("5bb7b134ac1d97b22af3acbc"), "number\_of\_fields" : 1 }
15. Rename the 'number\_of\_belts' field to 'belts\_earned'
16. Remove the 'lucky\_number' field.
17. Add a 'updated\_on' field, and set the value as the current date.