NoSQL data assignment 2

1.

```
@(shell):1:1
> use mydb
switched to db mydb
> db
mydb
> show dbs
admin    0.000CD
```

Making new database:

```
> db.createCollection("Players")
{ "ok" : 1 }
>
```

Make collection:

```
> show collections
Players
>
```

Show collections:

2.

Inserting player:

```
> db.Players.insert(
... { "position": "Right Wing",
... "id": 8465166,
... "weight": 200,
... "height": "6' 0\"",
... "imageUrl": "http://1.cdn.nhle.com/photos/mugs/8465166.jpg",
... "birthplace": "Seria, BRN",
... "age": 37,
... "name": "Craig Adams",
... "birthday": "April 26, 1977",
... "number": 27
... }
... )
WriteResult({ "nInserted" : 1 })
>
```

3.

Inserting 3 players:

```
> db.Players.insert({ "position": "Right Wing",
... "id": 8465166,
... "weight": 200,
... "height": "6' 0\"",
... "imageUrl": "http://1.cdn.nhle.com/photos/mugs/8465166.jpg",
... "birthplace": "Seria, BRN",
... "age": 37,
... "name": "Craig Adams",
... "birthday": "April 26, 1977",
... "number": 27
... },
... { "position": "Right Wing",
... "id": 8475761,
... "weight": 195,
... "height": "6' 2\"",
... "imageUrl": "http://1.cdn.nhle.com/photos/mugs/8475761.jpg",
... "birthplace": "Gardena, CA, USA",
... "age": 23,
... "name": "Beau Bennett",
... "birthday": "November 27, 1991",
... "number": 19
... },
... { "position": "Left Wing",
... "id": 8471260,
... "weight": 202,
... "height": "6' 1\"",
... "imageUrl": "http://3.cdn.nhle.com/photos/mugs/8471260.jpg",
... "birthplace": "Meadow Lake, SK, CAN",
... "age": 29,
... "name": "Blake Comeau",
... "birthday": "February 18, 1986",
... "number": 17
... })
WriteResult({ "nInserted" : 1 })
>
```

There are 2 of the same people as we have not assigned a primary key for the database.

We can fix it by assigning a primary key;

```
> db.Players.insert({_id : 123, "position": "Right Wing", "id": 8465166, "weight": 200, "height": "6' 0\"", "imageUrl": "http://1.cdn.nhle.com/photos/mugs/8465166.jpg", "birthplace": "Seria, BRN", "age": 37, "name": "Craig Adams", "birthday": "April 26, 1977", "number": 27})
WriteResult({ "nInserted" : 1 })
```

4.

It error and says the following message:

```
> db.Players.insert({_id : 123, "position": "Right Wing", "id": 8465166, "weight": 200, "height": "6' 0\"", "imageUrl": "http://1.cdn.nhle.com/photos/mugs/8465166.jpg", "birthplace": "Seria, BRN", "age": 37
me": "Craig Adams", "birthday": "April 26, 1977", "number": 27})
WriteResult({
        "nInserted" : 0,
        "writeError" : {
                "code" : 11000,
                "errmsg" : "E11000 duplicate key error collection: mydb.Players index: _id_ dup key: { : 123.0 }"
        }
})
```

5.

Removing one Craig:

```
> db.Players.remove ({ name:"Craig Adams"  },1)
WriteResult({ "nRemoved" : 1 })
```

Removing the other craigs:

```
> db.Players.remove ({ name:"Craig Adams"  })
WriteResult({ "nRemoved" : 1 })
```

Removing the collection:

```
            "number" : 17
}
> db.Players.remove ({})
WriteResult({ "nRemoved" : 3 })
> db.Players.find().pretty()
>
```

6.

```
> db.Players.update({name:"Craig Adams"},{$set : {number: "9"}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.Players.find().pretty()
{
        "_id" : ObjectId("5c769fbe44c0a20915be430d"),
        "position" : "Right Wing",
        "id" : 8465166,
        "weight" : 200,
        "height" : "6' 0\"",
        "imageUrl" : "http://1.cdn.nhle.com/photos/mugs/8465166.jpg",
        "birthplace" : "Seria, BRN",
        "age" : 37,
        "name" : "Craig Adams",
        "birthday" : "April 26, 1977",
        "number" : "9"
}
```

7.

```
> db.Players.update({name:'Craig Adams'},{$set:{favorites:{cities:["Chicago","Cheyenne"], movies:["Casablanca","For a Few Dollars more
","The Sting"]}}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.Players.find().pretty()
{
        "_id" : ObjectId("5c76a4f544c0a20915be4310"),
        "position" : "Right Wing",
        "id" : 8465166,
        "weight" : 200,
        "height" : "6' 0\"",
        "imageUrl" : "http://1.cdn.nhle.com/photos/mugs/8465166.jpg",
        "birthplace" : "Seria, BRN",
        "age" : 37,
        "name" : "Craig Adams",
        "birthday" : "April 26, 1977",
        "number" : "9",
        "favorites" : {
                "cities" : [
                        "Chicago",
                        "Cheyenne"
                ],
                "movies" : [
                        "Casablanca",
                        "For a Few Dollars more",
                        "The Sting"
                ]
        }
}
```

8.

```
> db.Players.update({name:'Craig Adams'},{$push:{"favorites.movies":"The Maltese Falcon"}})
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.Players.find().pretty()
{
        "_id" : ObjectId("5c76a4f544c0a20915be4310"),
        "position" : "Right Wing",
        "id" : 8465166,
        "weight" : 200,
        "height" : "6' 0\"",
        "imageUrl" : "http://1.cdn.nhle.com/photos/mugs/8465166.jpg",
        "birthplace" : "Seria, BRN",
        "age" : 37,
        "name" : "Craig Adams",
        "birthday" : "April 26, 1977",
        "number" : "9",
        "favorites" : {
                "cities" : [
                        "Chicago",
                        "Cheyenne"
                ],
                "movies" : [
                        "Casablanca",
                        "For a Few Dollars more",
                        "The Sting",
                        "The Maltese Falcon"
                ]
        }
```

9.

```
> db.Players.remove({name:'Craig Adams'},{$unset:{imageUrl:1}})
WriteResult({ "nRemoved" : 1 })
> db.Players.find().pretty()
{
        "_id" : ObjectId("5c76a4f544c0a20915be4311"),
        "position" : "Right Wing",
        "id" : 8475761,
        "weight" : 195,
        "height" : "6' 2\"",
        "imageUrl" : "http://1.cdn.nhle.com/photos/mugs/8475761.jpg",
        "birthplace" : "Gardena, CA, USA",
        "age" : 23,
        "name" : "Beau Bennett",
        "birthday" : "November 27, 1991",
        "number" : 19
}
```

10.

```
> db.Players.find({"age":21,"position":"Defenseman"})
>
```

Q2.

1.

```
> db.restaurants.find({borough:"Bronx"} , {"borough" : 1, "_id" : 0, "cuisine" : 1, "restaurant_id" : 1, "name" : 1}).limit(5)
{ "borough" : "Bronx", "cuisine" : "Bakery", "name" : "Morris Park Bake Shop", "restaurant_id" : "30075445" }
{ "borough" : "Bronx", "cuisine" : "American ", "name" : "Wild Asia", "restaurant_id" : "40357217" }
{ "borough" : "Bronx", "cuisine" : "Ice Cream, Gelato, Yogurt, Ices", "name" : "Carvel Ice Cream", "restaurant_id" : "40363093" }
{ "borough" : "Bronx", "cuisine" : "Chinese", "name" : "Happy Garden", "restaurant_id" : "40363289" }
{ "borough" : "Bronx", "cuisine" : "Chinese", "name" : "Happy Garden", "restaurant_id" : "40364296" }
>
```

2.

```
> db.restaurants.find({grades : { $elemMatch:{"score":{$gt : 90}}}}).pretty();
```

3.

```
> db.restaurants.find( {"cuisine" : {$ne : "American "},"grades.grade" :"A","borough": {$ne : "Brooklyn"} } ).sort({"cuisine":-1}).pretty();
```

4.

```
> db.restaurants.find({name: /^Wil/},{"restaurant_id" : 1,"name":1,"borough":1,"cuisine" :1}).pretty();
{
        "_id" : ObjectId("5c7fdc6b72a2993db3f1a6a1"),
        "borough" : "Brooklyn",
        "cuisine" : "Delicatessen",
        "name" : "Wilken'S Fine Food",
        "restaurant_id" : "40356483"
}
{
        "_id" : ObjectId("5c7fdc6b72a2993db3f1a6a6"),
        "borough" : "Bronx",
        "cuisine" : "American ",
        "name" : "Wild Asia",
        "restaurant_id" : "40357217"
}
{
        "_id" : ObjectId("5c7fdc6b72a2993db3f1b4b2"),
        "borough" : "Bronx",
        "cuisine" : "Pizza",
        "name" : "Wilbel Pizza",
        "restaurant_id" : "40871979"
}
```

5.

```
Type It for more
> db.restaurants.find({name: /ces$/},{"restaurant_id" : 1,"name":1,"borough":1,"cuisine" :1}).pretty();
{
        "_id" : ObjectId("5c7fdc6b72a2993db3f1ab34"),
        "borough" : "Manhattan",
        "cuisine" : "American ",
        "name" : "Pieces",
        "restaurant_id" : "40399910"
}
{
        "_id" : ObjectId("5c7fdc6b72a2993db3f1abf3"),
        "borough" : "Queens",
        "cuisine" : "American ",
        "name" : "S.M.R Restaurant Services",
        "restaurant_id" : "40403857"
}
```

6.

```
> db.restaurants.find({"name": /.*Reg.*/},{"restaurant_id" : 1,"name":1,"borough":1,"cuisine" :1}).pretty();
{
        "_id" : ObjectId("5c7fdc6b72a2993db3f1a6a2"),
        "borough" : "Brooklyn",
        "cuisine" : "American ",
        "name" : "Regina Caterers",
        "restaurant_id" : "40356649"
}
{
        "_id" : ObjectId("5c7fdc6b72a2993db3f1a7a6"),
        "borough" : "Manhattan",
        "cuisine" : "Café/Coffee/Tea",
        "name" : "Caffe Reggio",
        "restaurant_id" : "40369418"
}
```

7.

```
> db.restaurants.find({"borough": "Bronx" , $or : [{ "cuisine" : "American " },{ "cuisine" : "Chinese" }] } ).pretty();
{
        "_id" : ObjectId("5c7fdc6b72a2993db3f1a6a6"),
        "address" : {
                "building" : "2300",
                "coord" : [
                        -73.8786113,
                        40.8502883
                ],
                "street" : "Southern Boulevard",
                "zipcode" : "10460"
        },
        "borough" : "Bronx",
        "cuisine" : "American ",
        "grades" : [
                {
                        "date" : {
                                "date" : NumberLong("1401235200000")
```

8.

```
> db.restaurants.find().sort({"cuisine":1,"borough" : -1,});
```

9.

```
> db.restaurants.find({"address.street" :{ $exists : true }}).pretty();
```

10.