

SNEHA R  
1NT20IS414  
C SECTION  
C3 BATCH

## Exercise-I

### Problem Statement & Dataset:

**Create a collection named "Employee" under the "EmployeeDB" database with each document in the format shown below Table 1**

```
> use empbd
switched to db empbd
> db.createCollection("nams")
{ "ok" : 1 }
> show collections
nams
```

```
use empbd
switched to db empbd
> db.createCollection("nams")
{ "ok" : 1 }
> show collections
nams
```

```
> db.nams.insert([{"name":"sneha","middlename":"krishna","last
name":"r","age":26,"salary":50000,"designation":"scientist","role":"tester"}])
BulkWriteResult({
  "writeErrors" : [ ],
  "writeConcernErrors" : [ ],
  "nInserted" : 1,
  "nUpserted" : 0,
  "nMatched" : 0,
  "nModified" : 0,
  "nRemoved" : 0,
  "upserted" : [ ]
})
```

```
> db.nams.insert([{"name":"sushmitha","middlename":"r","last
name":"hegde","age":27,"salary":55000,"designation":"PA","role":"team lead"}])
BulkWriteResult({
  "writeErrors" : [ ],
  "writeConcernErrors" : [ ],
  "nInserted" : 1,
  "nUpserted" : 0,
```

```

        "nMatched" : 0,
        "nModified" : 0,
        "nRemoved" : 0,
        "upserted" : [ ]
    })

> db.nams.insert([{"name":"vedhama","middlename":"sri","last
name":"v","age":28,"salary":60000,"designation":"lead","role":"UI Designer"}])
BulkWriteResult({
    "writeErrors" : [ ],
    "writeConcernErrors" : [ ],
    "nInserted" : 1,
    "nUpserted" : 0,
    "nMatched" : 0,
    "nModified" : 0,
    "nRemoved" : 0,
    "upserted" : [ ]
})

> db.nams.insert([{"name":"samy","middlename":"s","last
name":"smith","age":35,"salary":70000,"designation":"associate","role":"manager"}])
BulkWriteResult({
    "writeErrors" : [ ],
    "writeConcernErrors" : [ ],
    "nInserted" : 1,
    "nUpserted" : 0,
    "nMatched" : 0,
    "nModified" : 0,
    "nRemoved" : 0,
    "upserted" : [ ]
})

> db.nams.insert([{"name":"rajesh","middlename":"kumar","last
name":"swamy","age":32,"salary":32000,"designation":"scientist","role":"tester"}])
BulkWriteResult({
    "writeErrors" : [ ],
    "writeConcernErrors" : [ ],
    "nInserted" : 1,
    "nUpserted" : 0,
    "nMatched" : 0,
    "nModified" : 0,
    "nRemoved" : 0,
    "upserted" : [ ]
})

> db.nams.insert([{"name":"shreyas","middlename":"kumar","last
name":"h","age":34,"salary":31000,"designation":"pa","role":"team lead"}])
BulkWriteResult({
    "writeErrors" : [ ],

```

```

        "writeConcernErrors" : [ ],
        "nInserted" : 1,
        "nUpserted" : 0,
        "nMatched" : 0,
        "nModified" : 0,
        "nRemoved" : 0,
        "upserted" : [ ]
    })
> db.nams.insert([{"name":"samanth","middlename":"s","last
name":"h","age":33,"salary":34000,"designation":"teacher","role":"software developer"}])
BulkWriteResult({
    "writeErrors" : [ ],
    "writeConcernErrors" : [ ],
    "nInserted" : 1,
    "nUpserted" : 0,
    "nMatched" : 0,
    "nModified" : 0,
    "nRemoved" : 0,
    "upserted" : [ ]
})
> db.nams.insert([{"name":"ram","middlename":"k","last
name":"mukharjee","age":28,"salary":22000,"designation":"guide","role":"team lead"}])
BulkWriteResult({
    "writeErrors" : [ ],
    "writeConcernErrors" : [ ],
    "nInserted" : 1,
    "nUpserted" : 0,
    "nMatched" : 0,
    "nModified" : 0,
    "nRemoved" : 0,
    "upserted" : [ ]
})
> db.nams.insert([{"name":"Aruna","middlename":"shree","last
name":"k","age":34,"salary":21000,"designation":"recruiter","role":"manager"}])
BulkWriteResult({
    "writeErrors" : [ ],
    "writeConcernErrors" : [ ],
    "nInserted" : 1,
    "nUpserted" : 0,
    "nMatched" : 0,
    "nModified" : 0,
    "nRemoved" : 0,
    "upserted" : [ ]
})
> db.nams.insert([{"name":"Vishwa","middlename":"Nath","last
name":"A","age":28,"salary":27000,"designation":"recruiter","role":"manager"}])
BulkWriteResult({
    "writeErrors" : [ ],
    "writeConcernErrors" : [ ],
    "nInserted" : 1,
    "nUpserted" : 0,
    "nMatched" : 0,

```

```

        "nModified" : 0,
        "nRemoved" : 0,
        "upserted" : [ ]
    })
    > db.nams.insert([{"name":"Swathi","middlename":"S","last
name":"Reddy","age":28,"salary":34000,"designation":"teacher","role":"software developer"}])
BulkWriteResult({
    "writeErrors" : [ ],
    "writeConcernErrors" : [ ],
    "nInserted" : 1,
    "nUpserted" : 0,
    "nMatched" : 0,
    "nModified" : 0,
    "nRemoved" : 0,
    "upserted" : [ ]
})
    > db.nams.insert([{"name":"Rajesh","middlename":"r","last
name":"Reddy","age":39,"salary":55000,"designation":"scientist","role":"teacher"}])
BulkWriteResult({
    "writeErrors" : [ ],
    "writeConcernErrors" : [ ],
    "nInserted" : 1,
    "nUpserted" : 0,
    "nMatched" : 0,
    "nModified" : 0,
    "nRemoved" : 0,
    "upserted" : [ ]
})
    > db.nams.insert([{"name":"Ashwini","middlename":"r","last
name":"shetty","age":34,"salary":55650,"designation":"PA","role":"team lead"}])
BulkWriteResult({
    "writeErrors" : [ ],
    "writeConcernErrors" : [ ],
    "nInserted" : 1,
    "nUpserted" : 0,
    "nMatched" : 0,
    "nModified" : 0,
    "nRemoved" : 0,
    "upserted" : [ ]
})
    > db.nams.insert([{"name":"Veera","middlename":"N","last
name":"shetty","age":31,"salary":55650,"designation":"HR","role":"team lead"}])
BulkWriteResult({
    "writeErrors" : [ ],
    "writeConcernErrors" : [ ],
    "nInserted" : 1,
    "nUpserted" : 0,
    "nMatched" : 0,
    "nModified" : 0,
    "nRemoved" : 0,
    "upserted" : [ ]
})

```

## QUERY 1:

### Populate the database with atleast 15 documents

```
db.nams.find()
```

```
{ "_id" : ObjectId("6299c50e84713522105151e1"), "name" : "sneha", "middlename" : "krishna",  
"last name" : "r", "age" : 26, "salary" : 50000, "designation" : "scientist", "role" : "tester" }
```

```
{ "_id" : ObjectId("6299c5a984713522105151e2"), "name" : "sushmitha", "middlename" : "r", "last  
name" : "hegde", "age" : 27, "salary" : 55000, "designation" : "PA", "role" : "team lead" }
```

```
{ "_id" : ObjectId("6299c5fe84713522105151e3"), "name" : "vedhama", "middlename" : "sri", "last  
name" : "v", "age" : 28, "salary" : 60000, "designation" : "lead", "role" : "UI Designer" }
```

```
{ "_id" : ObjectId("6299c64084713522105151e4"), "name" : "samy", "middlename" : "s", "last  
name" : "smith", "age" : 35, "salary" : 70000, "designation" : "associate", "role" : "manager" }
```

```
{ "_id" : ObjectId("6299c68c84713522105151e5"), "name" : "rajesh", "middlename" : "kumar",  
"last name" : "swamy", "age" : 32, "salary" : 32000, "designation" : "scientist", "role" : "tester" }
```

```
{ "_id" : ObjectId("6299c6cd84713522105151e6"), "name" : "shreyas", "middlename" : "kumar",  
"last name" : "h", "age" : 34, "salary" : 31000, "designation" : "pa", "role" : "team lead" }
```

```
{ "_id" : ObjectId("6299c76d84713522105151e7"), "name" : "samanth", "middlename" : "s", "last  
name" : "h", "age" : 33, "salary" : 34000, "designation" : "teacher", "role" : "software developer" }
```

```
{ "_id" : ObjectId("6299c7b784713522105151e8"), "name" :  
"ram", "middlename" : "k", "last name" : "mukharjee", "age" : 28, "salary" : 22000, "designation" :  
"guide", "role" : "team lead" }
```

```
{ "_id" : ObjectId("6299c81c84713522105151e9"), "name" : "Aruna", "middlename" : "shree",  
"last name" : "k", "age" : 34, "salary" : 21000, "designation" : "recruiter", "role" : "manager" }
```

```
{ "_id" : ObjectId("6299c85b84713522105151ea"), "name" :  
"Vishwa", "middlename" : "Nath", "last name" : "A", "age" : 28, "salary" : 27000, "designation" :  
"recruiter", "role" : "manager" }
```

```
{ "_id" : ObjectId("6299c89684713522105151eb"), "name" : "Swathi", "middlename" : "S", "last name" : "Reddy", "age" : 28, "salary" : 34000, "designation" : "teacher", "role" : "software developer" }
```

```
{ "_id" : ObjectId("6299c8cf84713522105151ec"), "name" : "Rajesh", "middlename" : "r", "last name" : "Reddy", "age" : 39, "salary" : 55000, "designation" : "scientist", "role" : "teacher" }
```

```
{ "_id" : ObjectId("6299c92f84713522105151ed"), "name" : "Ashwini", "middlename" : "r", "last name" : "shetty", "age" : 34, "salary" : 55650, "designation" : "PA", "role" : "team lead" }
```

```
{ "_id" : ObjectId("6299c95484713522105151ee"), "name" : "Veera", "middlename" : "N", "last name" : "shetty", "age" : 31, "salary" : 55650, "designation" : "HR", "role" : "team lead" }
```

```
> db.nams.find({"salary":{$gt:20000,$lt:35000}})
{ "_id" : ObjectId("6299c68c84713522105151e5"), "name" : "rajesh", "middlename" : "kumar", "last name" : "swamy", "age" : 32, "salary" : 32000, "designation" : "scientist", "role" : "tester" }
```

```
{ "_id" : ObjectId("6299c6cd84713522105151e6"), "name" : "shreyas", "middlename" : "kumar", "last name" : "h", "age" : 34, "salary" : 31000, "designation" : "pa", "role" : "team lead" }
```

```
{ "_id" : ObjectId("6299c76d84713522105151e7"), "name" : "samanth", "middlename" : "s", "last name" : "h", "age" : 33, "salary" : 34000, "designation" : "teacher", "role" : "software developer" }
{ "_id" : ObjectId("6299c7b784713522105151e8"), "name" : "ram", "middlename" : "k", "last name" : "mukharjee", "age" : 28, "salary" : 22000, "designation" : "guide", "role" : "team lead" }
```

```
{ "_id" : ObjectId("6299c81c84713522105151e9"), "name" : "Aruna", "middlename" : "shree", "last name" : "k", "age" : 34, "salary" : 21000, "designation" : "recruiter", "role" : "manager" }
```

```
{ "_id" : ObjectId("6299c85b84713522105151ea"), "name" : "Vishwa", "middlename" : "Nath", "last name" : "A", "age" : 28, "salary" : 27000, "designation" : "recruiter", "role" : "manager" }
```

```
{ "_id" : ObjectId("6299c89684713522105151eb"), "name" : "Swathi", "middlename" : "S", "last name" : "Reddy", "age" : 28, "salary" : 34000, "designation" : "teacher", "role" : "software developer" }
```

```

> db.nams.find()
{ "_id" : ObjectId("6299c50e84713522105151e1"), "name" : "sneha", "middlename" : "krishna", "last name" : "r", "age" : 26, "salary" : 50000, "designation" : "scientist", "role" : "tester" }
{ "_id" : ObjectId("6299c5a984713522105151e2"), "name" : "sushmitha", "middlename" : "r", "last name" : "hegde", "age" : 27, "salary" : 55000, "designation" : "PA", "role" : "team lead" }
{ "_id" : ObjectId("6299c5fe84713522105151e3"), "name" : "vedhana", "middlename" : "sri", "last name" : "v", "age" : 28, "salary" : 60000, "designation" : "lead", "role" : "UI Designer" }
{ "_id" : ObjectId("6299c64084713522105151e4"), "name" : "samy", "middlename" : "s", "last name" : "smith", "age" : 35, "salary" : 70000, "designation" : "associate", "role" : "manager" }
{ "_id" : ObjectId("6299c68c84713522105151e5"), "name" : "rajesh", "middlename" : "kumar", "last name" : "swamy", "age" : 32, "salary" : 32000, "designation" : "scientist", "role" : "tester" }
{ "_id" : ObjectId("6299c6cd84713522105151e6"), "name" : "shreyas", "middlename" : "kumar", "last name" : "h", "age" : 34, "salary" : 31000, "designation" : "pa", "role" : "team lead" }
{ "_id" : ObjectId("6299c76d84713522105151e7"), "name" : "samanth", "middlename" : "s", "last name" : "h", "age" : 33, "salary" : 34000, "designation" : "teacher", "role" : "software developer" }
{ "_id" : ObjectId("6299c7b784713522105151e8"), "name" : "ram", "middlename" : "k", "last name" : "mukharjee", "age" : 28, "salary" : 22000, "designation" : "guide", "role" : "team lead" }
{ "_id" : ObjectId("6299c81c84713522105151e9"), "name" : "Aruna", "middlename" : "shree", "last name" : "k", "age" : 34, "salary" : 21000, "designation" : "recruiter", "role" : "manager" }
{ "_id" : ObjectId("6299c85b84713522105151ea"), "name" : "Vishwa", "middlename" : "Nath", "last name" : "A", "age" : 28, "salary" : 27000, "designation" : "recruiter", "role" : "manager" }
{ "_id" : ObjectId("6299c89684713522105151eb"), "name" : "Swathi", "middlename" : "S", "last name" : "Reddy", "age" : 28, "salary" : 34000, "designation" : "teacher", "role" : "software developer" }
{ "_id" : ObjectId("6299c8cf84713522105151ec"), "name" : "Rajesh", "middlename" : "r", "last name" : "Reddy", "age" : 39, "salary" : 55000, "designation" : "scientist", "role" : "teacher" }
{ "_id" : ObjectId("6299c92f84713522105151ed"), "name" : "Ashwini", "middlename" : "r", "last name" : "shetty", "age" : 34, "salary" : 55650, "designation" : "PA", "role" : "team lead" }
{ "_id" : ObjectId("6299c95484713522105151ee"), "name" : "Veera", "middlename" : "N", "last name" : "shetty", "age" : 31, "salary" : 55650, "designation" : "HR", "role" : "team lead" }

```

## QUERY 2:

### List all the records having salary in the range of 20000 - 35000(Exclusive)

```
db.nams.find({"salary":{"$gt:20000,$lt:35000}})
```

```
{ "_id" : ObjectId("6299c68c84713522105151e5"), "name" : "rajesh", "middlename" : "kumar", "last name" : "swamy", "age" : 32, "salary" : 32000, "designation" : "scientist", "role" : "tester" }
```

```
{ "_id" : ObjectId("6299c6cd84713522105151e6"), "name" : "shreyas", "middlename" : "kumar", "last name" : "h", "age" : 34, "salary" : 31000, "designation" : "pa", "role" : "team lead" }
```

```
{ "_id" : ObjectId("6299c76d84713522105151e7"), "name" : "samanth", "middlename" : "s", "last name" : "h", "age" : 33, "salary" : 34000, "designation" : "teacher", "role" : "software developer" }
```

```
{ "_id" : ObjectId("6299c7b784713522105151e8"), "name" : "ram", "middlename" : "k", "last name" : "mukharjee", "age" : 28, "salary" : 22000, "designation" : "guide", "role" : "team lead" }
```

```
{ "_id" : ObjectId("6299c81c84713522105151e9"), "name" : "Aruna", "middlename" : "shree", "last name" : "k", "age" : 34, "salary" : 21000, "designation" : "recruiter", "role" : "manager" }
```

```
{ "_id" : ObjectId("6299c85b84713522105151ea"), "name" : "Vishwa", "middlename" : "Nath", "last name" : "A", "age" : 28, "salary" : 27000, "designation" : "recruiter", "role" : "manager" }
```

```
{ "_id" : ObjectId("6299c89684713522105151eb"), "name" : "Swathi", "middlename" : "S", "last name" : "Reddy", "age" : 28, "salary" : 34000, "designation" : "teacher", "role" : "software developer" }
```

```
> db.nams.find({"salary":{"$gt:20000,$lt:35000}})
{ "_id" : ObjectId("6299c68c84713522105151e5"), "name" : "rajesh", "middlename" : "kumar", "last name" : "swamy", "age" : 32, "salary" : 32000, "designation" : "scientist", "role" : "tester" }
{ "_id" : ObjectId("6299c6cd84713522105151e6"), "name" : "shreyas", "middlename" : "kumar", "last name" : "h", "age" : 34, "salary" : 31000, "designation" : "pa", "role" : "team lead" }
{ "_id" : ObjectId("6299c76d84713522105151e7"), "name" : "samanth", "middlename" : "s", "last name" : "h", "age" : 33, "salary" : 34000, "designation" : "teacher", "role" : "software developer" }
{ "_id" : ObjectId("6299c7b784713522105151e8"), "name" : "ram", "middlename" : "k", "last name" : "mukharjee", "age" : 28, "salary" : 22000, "designation" : "guide", "role" : "team lead" }
{ "_id" : ObjectId("6299c81c84713522105151e9"), "name" : "Aruna", "middlename" : "shree", "last name" : "k", "age" : 34, "salary" : 21000, "designation" : "recruiter", "role" : "manager" }
{ "_id" : ObjectId("6299c85b84713522105151ea"), "name" : "Vishwa", "middlename" : "Nath", "last name" : "A", "age" : 28, "salary" : 27000, "designation" : "recruiter", "role" : "manager" }
{ "_id" : ObjectId("6299c89684713522105151eb"), "name" : "Swathi", "middlename" : "S", "last name" : "Reddy", "age" : 28, "salary" : 34000, "designation" : "teacher", "role" : "software developer" }
```

## QUERY 3:

### List all the Employee whose Middle name is "Kumar"

```
> db.nams.find({"middlename":"kumar"})
```

```
{ "_id" : ObjectId("6299c68c84713522105151e5"), "name" : "rajesh", "middlename" : "kumar", "last name" : "swamy", "age" : 32, "salary" : 32000, "designation" : "scientist", "role" : "tester" }
```

```
{ "_id" : ObjectId("6299c6cd84713522105151e6"), "name" : "shreyas", "middlename" : "kumar", "last name" : "h", "age" : 34, "salary" : 31000, "designation" : "pa", "role" : "team lead" }
```

```
> db.nams.find({"middlename":"kumar"})
{ "_id" : ObjectId("6299c68c84713522105151e5"), "name" : "rajesh", "middlename" : "kumar", "last name" : "swamy", "age" : 32, "salary" : 32000, "designation" : "scientist", "role" : "tester" }
{ "_id" : ObjectId("6299c6cd84713522105151e6"), "name" : "shreyas", "middlename" : "kumar", "last name" : "h", "age" : 34, "salary" : 31000, "designation" : "pa", "role" : "team lead" }
```

## QUERY 4:

### Count the number of Employees who has a role "Manager" in the Role field

```
db.nams.find({"role":"manager"}).count()
```

3

```
> db.nams.find({"role":"manager"}).count()
3
```



## QUERY 5:

**Find out all the documents who have age < 35 and salary in the range of 30000-35000**

```
db.nams.find({$and:[{salary:{$gt:30000}},{$salary:{$lt:35000}},{$age:{$lt:35}}])
```

```
{ "_id" : ObjectId("6299c68c84713522105151e5"), "name" : "rajesh", "middlename" : "kumar",  
"last name" : "swamy", "age" : 32, "salary" : 32000, "designation" : "scientist", "role" : "tester" }
```

```
{ "_id" : ObjectId("6299c6cd84713522105151e6"), "name" : "shreyas", "middlename" : "kumar",  
"last name" : "h", "age" : 34, "salary" : 31000, "designation" : "pa", "role" : "team lead" }
```

```
{ "_id" : ObjectId("6299c76d84713522105151e7"), "name" : "samanth", "middlename" : "s", "last  
name" : "h", "age" : 33, "salary" : 34000, "designation" : "teacher", "role" : "software developer" }
```

```
{ "_id" : ObjectId("6299c89684713522105151eb"), "name" : "Swathi", "middlename" : "S", "last  
name" : "Reddy", "age" : 28, "salary" : 34000, "designation" : "teacher", "role" : "software  
developer" }
```

```
> db.nams.find({$and:[{salary:{$gt:30000}},{$salary:{$lt:35000}},{$age:{$lt:35}}])  
{ "_id" : ObjectId("6299c68c84713522105151e5"), "name" : "rajesh", "middlename" : "kumar", "last name" : "swamy", "age" : 32, "salary" : 32000  
, "designation" : "scientist", "role" : "tester" }  
{ "_id" : ObjectId("6299c6cd84713522105151e6"), "name" : "shreyas", "middlename" : "kumar", "last name" : "h", "age" : 34, "salary" : 31000, "  
designation" : "pa", "role" : "team lead" }  
{ "_id" : ObjectId("6299c76d84713522105151e7"), "name" : "samanth", "middlename" : "s", "last name" : "h", "age" : 33, "salary" : 34000, "desi  
gnation" : "teacher", "role" : "software developer" }  
{ "_id" : ObjectId("6299c89684713522105151eb"), "name" : "Swathi", "middlename" : "S", "last name" : "Reddy", "age" : 28, "salary" : 34000, "d  
esignation" : "teacher", "role" : "software developer" }
```

## QUERY 6:

**Delete an Employee whose "Firstname" is "Rajesh" and having the designation as "Scientist"**

```
db.nams.deleteOne({$and:[{name:"Rajesh"},{designation:"scientist"}]})  
{ "acknowledged" : true, "deletedCount" : 1 }
```

```

db.nams.deleteOne({$and:[{name:"Rajesh"},{designation:"scientist"}]})
{ "acknowledged" : true, "deletedCount" : 1 }
db.nams.find()
{ "_id" : ObjectId("6299c50e84713522105151e1"), "name" : "sneha", "middlename" : "krishna", "last name" : "r", "age" : 26, "salary" : 50000, "designat
designation" : "scientist", "role" : "tester" }
{ "_id" : ObjectId("6299c5a984713522105151e2"), "name" : "sushmitha", "middlename" : "r", "last name" : "hegde", "age" : 27, "salary" : 55000, "de
designation" : "PA", "role" : "team lead" }
{ "_id" : ObjectId("6299c5fe84713522105151e3"), "name" : "vedhama", "middlename" : "sri", "last name" : "v", "age" : 28, "salary" : 60000, "de
designation" : "lead", "role" : "UI Designer" }
{ "_id" : ObjectId("6299c64084713522105151e4"), "name" : "samy", "middlename" : "s", "last name" : "smith", "age" : 35, "salary" : 70000, "des
designation" : "associate", "role" : "manager" }
{ "_id" : ObjectId("6299c68c84713522105151e5"), "name" : "rajesh", "middlename" : "kumar", "last name" : "swamy", "age" : 32, "salary" : 32000, "desi
designation" : "scientist", "role" : "tester" }
{ "_id" : ObjectId("6299c6cd84713522105151e6"), "name" : "shreyas", "middlename" : "kumar", "last name" : "h", "age" : 34, "salary" : 31000, "d
designation" : "pa", "role" : "team lead" }
{ "_id" : ObjectId("6299c76d84713522105151e7"), "name" : "samanth", "middlename" : "s", "last name" : "h", "age" : 33, "salary" : 34000, "desi
gnation" : "teacher", "role" : "software developer" }
{ "_id" : ObjectId("6299c7b784713522105151e8"), "name" : "ram", "middlename" : "k", "last name" : "mukharjee", "age" : 28, "salary" : 22000, "d
designation" : "guide", "role" : "team lead" }
{ "_id" : ObjectId("6299c81c84713522105151e9"), "name" : "Aruna", "middlename" : "shree", "last name" : "k", "age" : 34, "salary" : 21000, "de
designation" : "recruiter", "role" : "manager" }
{ "_id" : ObjectId("6299c85b84713522105151ea"), "name" : "Vishwa", "middlename" : "Nath", "last name" : "A", "age" : 28, "salary" : 27000, "de
designation" : "recruiter", "role" : "manager" }
{ "_id" : ObjectId("6299c89684713522105151eb"), "name" : "Swathi", "middlename" : "S", "last name" : "Reddy", "age" : 28, "salary" : 34000, "d
designation" : "teacher", "role" : "software developer" }
{ "_id" : ObjectId("6299c92f84713522105151ed"), "name" : "Ashwini", "middlename" : "R", "last name" : "shetty", "age" : 34, "salary" : 55650, "d
designation" : "PA", "role" : "team lead" }
{ "_id" : ObjectId("6299c95484713522105151ee"), "name" : "Veera", "middlename" : "N", "last name" : "shetty", "age" : 31, "salary" : 55650, "d
designation" : "HR", "role" : "team lead" }

```

## QUERY 7:

### Update all the Employees whose role is "Team Lead" with a salary of 55650 INR

```

> db.nams.updateMany({"role":"team lead"},{$set:{"salary":55650}})
{ "acknowledged" : true, "matchedCount" : 5, "modifiedCount" : 3 }
> db.nams.find()

```

```

{ "_id" : ObjectId("629875d6ab1f2779ce0709ee"), "firstname" : "Namratha", "middlename" :
"Shree", "lastname" : "V", "age" : 26, "salary" : 50000, "designation" : "scientist", "role" : "tester" }
{ "_id" : ObjectId("629875d6ab1f2779ce0709ef"), "firstname" : "Sushma", "middlename" : "R",
"lastname" : "Hegde", "age" : 27, "salary" : 55650, "designation" : "PA", "role" : "team lead" }
{ "_id" : ObjectId("629875d6ab1f2779ce0709f0"), "firstname" : "vedha", "middlename" : "Shree",
"lastname" : "V", "age" : 28, "salary" : 60000, "designation" : "lead", "role" : "UI designer" }
{ "_id" : ObjectId("629875d6ab1f2779ce0709f1"), "firstname" : "Sam", "middlename" : "S",
"lastname" : "Smith", "age" : 35, "salary" : 70000, "designation" : "associate", "role" : "manager" }
{ "_id" : ObjectId("62987814ab1f2779ce0709f3"), "firstname" : "Sriya", "middlename" : "Kumar",
"lastname" : "H", "age" : 34, "salary" : 55650, "designation" : "PA", "role" : "team lead" }
{ "_id" : ObjectId("62987814ab1f2779ce0709f4"), "firstname" : "Vidya", "middlename" : "Kumar",
"lastname" : "S", "age" : 28, "salary" : 60000, "designation" : "lead", "role" : "UI designer" }
{ "_id" : ObjectId("62987814ab1f2779ce0709f5"), "firstname" : "Samarth", "middlename" : "S",
"lastname" : "H", "age" : 33, "salary" : 34000, "designation" : "teacher", "role" : "software
developer" }
{ "_id" : ObjectId("62987964ab1f2779ce0709f6"), "firstname" : "Ram", "middlename" : "K",
"lastname" : "Mukherjee", "age" : 28, "salary" : 55650, "designation" : "guide", "role" : "team
lead" }
{ "_id" : ObjectId("62987964ab1f2779ce0709f7"), "firstname" : "Aruna", "middlename" : "Shree",
"lastname" : "K", "age" : 34, "salary" : 21000, "designation" : "recruiter", "role" : "manager" }
{ "_id" : ObjectId("62987964ab1f2779ce0709f8"), "firstname" : "Vishwa", "middlename" : "Nath",
"lastname" : "A", "age" : 28, "salary" : 27000, "designation" : "recruiter", "role" : "manager" }
{ "_id" : ObjectId("62987964ab1f2779ce0709f9"), "firstname" : "Swathi", "middlename" : "S",
"lastname" : "Reddy", "age" : 28, "salary" : 34000, "designation" : "teacher", "role" : "software
developer" }
{ "_id" : ObjectId("62987a97ab1f2779ce0709fb"), "firstname" : "Ashwini", "middlename" : "R",
"lastname" : "Shetty", "age" : 34, "salary" : 55650, "designation" : "PA", "role" : "team lead" }

```

```
{ "_id" : ObjectId("62987a97ab1f2779ce0709fc"), "firstname" : "Veera",
"middlename" : "N", "lastname" : "Shetty", "age" : 31, "salary" : 55650,
"designation" : "HR", "role" : "team lead" }
```

```
> db.nams.updateMany({"role":"team lead"},{$set:{"salary":55650}})
{ "acknowledged" : true, "matchedCount" : 5, "modifiedCount" : 3 }
> db.nams.find()
{ "_id" : ObjectId("629875d6ab1f2779ce0709ee"), "firstname" : "Namratha", "middlename" : "Shree", "lastname" : "V", "age" : 26, "salary" : 50000,
"designation" : "scientist", "role" : "tester" }
{ "_id" : ObjectId("629875d6ab1f2779ce0709ef"), "firstname" : "Sushma", "middlename" : "R", "lastname" : "Hegde", "age" : 27, "salary" : 55650, "
designation" : "PA", "role" : "team lead" }
{ "_id" : ObjectId("629875d6ab1f2779ce0709f0"), "firstname" : "vedha", "middlename" : "Shree", "lastname" : "V", "age" : 28, "salary" : 60000, "d
esignation" : "lead", "role" : "UI designer" }
{ "_id" : ObjectId("629875d6ab1f2779ce0709f1"), "firstname" : "Sam", "middlename" : "S", "lastname" : "Smith", "age" : 35, "salary" : 70000, "des
ignation" : "associate", "role" : "manager" }
{ "_id" : ObjectId("62987814ab1f2779ce0709f3"), "firstname" : "Sriya", "middlename" : "Kumar", "lastname" : "H", "age" : 34, "salary" : 55650, "d
esignation" : "PA", "role" : "team lead" }
{ "_id" : ObjectId("62987814ab1f2779ce0709f4"), "firstname" : "Vidya", "middlename" : "Kumar", "lastname" : "S", "age" : 28, "salary" : 60000, "d
esignation" : "lead", "role" : "UI designer" }
{ "_id" : ObjectId("62987814ab1f2779ce0709f5"), "firstname" : "Samarth", "middlename" : "S", "lastname" : "H", "age" : 33, "salary" : 34000, "des
ignation" : "teacher", "role" : "software developer" }
{ "_id" : ObjectId("62987964ab1f2779ce0709f6"), "firstname" : "Ran", "middlename" : "K", "lastname" : "Mukherjee", "age" : 28, "salary" : 55650,
"designation" : "guide", "role" : "team lead" }
{ "_id" : ObjectId("62987964ab1f2779ce0709f7"), "firstname" : "Aruna", "middlename" : "Shree", "lastname" : "K", "age" : 34, "salary" : 21000, "d
esignation" : "recruiter", "role" : "manager" }
{ "_id" : ObjectId("62987964ab1f2779ce0709f8"), "firstname" : "Vishwa", "middlename" : "Nath", "lastname" : "A", "age" : 28, "salary" : 27000, "d
esignation" : "recruiter", "role" : "manager" }
{ "_id" : ObjectId("62987964ab1f2779ce0709f9"), "firstname" : "Swathi", "middlename" : "S", "lastname" : "Reddy", "age" : 28, "salary" : 34000, "
designation" : "teacher", "role" : "software developer" }
{ "_id" : ObjectId("62987a97ab1f2779ce0709fb"), "firstname" : "Ashwini", "middlename" : "R", "lastname" : "Shetty", "age" : 34, "salary" : 55650,
"designation" : "PA", "role" : "team lead" }
{ "_id" : ObjectId("62987a97ab1f2779ce0709fc"), "firstname" : "Veera", "middlename" : "N", "lastname" : "Shetty", "age" : 31, "salary" : 55650, "
designation" : "HR", "role" : "team lead" }
> □
```

## QUERY 8:

**Group all the Employees by their age(common age should be there) and calculate the average salary obtained in each group.**

```
> db.nams.aggregate([{$group:{"_id":"$age",Average:{$avg:"$salary"}}}])
```

```
{ "_id" : 35, "Average" : 70000 }
{ "_id" : 26, "Average" : 50000 }
{ "_id" : 34, "Average" : 44100 }
{ "_id" : 27, "Average" : 55650 }
{ "_id" : 33, "Average" : 34000 }
{ "_id" : 31, "Average" : 55650 }
{ "_id" : 28, "Average" : 47330 }
```

```
> db.nams.aggregate([{$group:{"_id":"$age",Average:{$avg:"$salary"}}}])
{ "_id" : 35, "Average" : 70000 }
{ "_id" : 26, "Average" : 50000 }
{ "_id" : 34, "Average" : 44100 }
{ "_id" : 27, "Average" : 55650 }
{ "_id" : 33, "Average" : 34000 }
{ "_id" : 31, "Average" : 55650 }
{ "_id" : 28, "Average" : 47330 }
> □
```

## QUERY 9:

**Apply the map-reduce to perform the above operation and obtain the results.**

```
> var mapfunction=function(){emit(this.age,this.salary)}
> var reducefunction=function(key,values){return Array.avg(values)}
> db.nams.mapReduce(mapfunction,reducefunction,{ 'out':'result' })
{ "result" : "result", "ok" : 1 }
> db.result.find()
```

```
{ "_id" : 35, "value" : 70000 }
{ "_id" : 28, "value" : 47330 }
{ "_id" : 34, "value" : 44100 }
{ "_id" : 33, "value" : 34000 }
{ "_id" : 27, "value" : 55650 }
{ "_id" : 31, "value" : 55650 }
{ "_id" : 26, "value" : 50000 }
```

```
> var mapfunction=function(){emit(this.age,this.salary)}
> var reducefunction=function(key,values){return Array.avg(values)}
> db.nams.mapReduce(mapfunction,reducefunction,{ 'out':'result' })
{ "result" : "result", "ok" : 1 }
```

```
> db.result.find()
{ "_id" : 35, "value" : 70000 }
{ "_id" : 28, "value" : 47330 }
{ "_id" : 34, "value" : 44100 }
{ "_id" : 33, "value" : 34000 }
{ "_id" : 27, "value" : 55650 }
{ "_id" : 31, "value" : 55650 }
{ "_id" : 26, "value" : 50000 }
> □
```