Assignment 10

Q1. Consider each document in the zipcode collection has the following form:

{

"\_id": "10280",

"city": "NEW YORK",

"state": "NY",

"pop": 5574,

}

Return States with Populations above 10 Million

2. Display the department wise average salary

3. display the no. Of employees working in each department

4. Display the department wise total salary of departments having totalsalary greater than or equals to 50000/-

5. Write the queries using the different operators like max, min. Etc.

6. Create the simple index on roll\_no field

7. create unique index on any field for above given collections

8. create compound index on any fields for above given collections

9. Show all the indexes created in the database PCCOE

10. Show all the indexes created in above collections.

student@ubuntu:~$ mongo

MongoDB shell version: 2.6.12

connecting to: test

> db test

> use pccoe

switched to db pccoe

> show dbs

abc 0.078GB

admin (empty)

local 0.078GB

pccoe 0.078GB

> db pccoe

> db.Students.find()

{ "\_id" : ObjectId("5b8f606be700906764850600"), "Sname" : "anand", "roll": 166, "class" : "TEA" }

{ "\_id" : ObjectId("5b8f607ee700906764850601"), "Sname" : "kunal", "roll": 150, "class" : "TEA" }

{ "\_id" : ObjectId("5b8f608de700906764850602"), "Sname" : "drax", "roll": 235, "class" : "TEB" }

> db.Teachers.find()

{ "\_id" : ObjectId("5b8f5fcfe7009067648505fd"), "Tname" : "RPS", "dno" :101, "dname" : "COMP", "exp" : 5, "salary" : 100000, "date" : "26072007" }

{ "\_id" : ObjectId("5b8f6000e7009067648505fe"), "Tname" : "AVD", "dno" :201, "dname" : "COMP", "exp" : 8, "salary" : 80000, "date" : "5082004"}

{ "\_id" : ObjectId("5b8f6037e7009067648505ff"), "Tname" : "SVP", "dno" :110, "dname" : "COMP", "exp" : 10, "salary" : 80000, "date" : "1022009"}

{ "\_id" : ObjectId("5b8f6503d0f3efaf7b067864"), "Tname" : "PRAVEEN","exp" : 10 }

> ^C

bye

student@ubuntu:~$ clear

student@ubuntu:~$ mongo

MongoDB shell version: 2.6.12

connecting to: test

> use pccoe

switched to db pccoe

> db.Students.find()

{ "\_id" : ObjectId("5b8f606be700906764850600"), "Sname" : "anand", "roll": 166, "class" : "TEA" }

{ "\_id" : ObjectId("5b8f607ee700906764850601"), "Sname" : "kunal", "roll": 150, "class" : "TEA" }

{ "\_id" : ObjectId("5b8f608de700906764850602"), "Sname" : "drax", "roll": 235, "class" : "TEB" }

> ^C

bye

student@ubuntu:~$ clear

student@ubuntu:~$ mongo

MongoDB shell version: 2.6.12

connecting to: test

> use zipcodes

switched to db zipcodes

> show dbs

abc 0.078GB

admin (empty)

local 0.078GB

pccoe 0.078GB

> db.drop()

20180911T09:42:43.171+0530 TypeError: Property 'drop' of object

zipcodes is not a function

> db.zipcode.insert({'city':'NEW YORk','state':'NY','pop':5574})

WriteResult({ "nInserted" : 1 })

> db.zipcode.insert({'city':'PUNE','state':'MAHA','pop':55510074})

WriteResult({ "nInserted" : 1 })

> db.zipcode.insert({'city':'THIRU','state':'KARNA','pop':55510074})

WriteResult({ "nInserted" : 1 })

> db.zipcode.insert({'city':'NEW ORLEANS','state':'NO','pop':510074})

WriteResult({ "nInserted" : 1 })

>

db.zipcode.aggregate({$group:{\_id:'$state',total:{$sum:'$pop'}}},{$match:{total:{$gte:10000000}}})

{ "\_id" : "KARNA", "total" : 55510074 }

{ "\_id" : "MAHA", "total" : 55510074 }

> use pccoe

switched to db pccoe

> db.Students.find()

{ "\_id" : ObjectId("5b8f606be700906764850600"), "Sname" : "anand", "roll": 166, "class" : "TEA" }

{ "\_id" : ObjectId("5b8f607ee700906764850601"), "Sname" : "kunal", "roll": 150, "class" : "TEA" }

{ "\_id" : ObjectId("5b8f608de700906764850602"), "Sname" : "drax", "roll": 235, "class" : "TEB" }

> db.Teachers.find()

{ "\_id" : ObjectId("5b8f5fcfe7009067648505fd"), "Tname" : "RPS", "dno" :101, "dname" : "COMP", "exp" : 5, "salary" : 100000, "date" : "26072007" }

{ "\_id" : ObjectId("5b8f6000e7009067648505fe"), "Tname" : "AVD", "dno" :

201, "dname" : "COMP", "exp" : 8, "salary" : 80000, "date" : "5082004"}

{ "\_id" : ObjectId("5b8f6037e7009067648505ff"), "Tname" : "SVP", "dno" :110, "dname" : "COMP", "exp" : 10, "salary" : 80000, "date" : "1022009"}

{ "\_id" : ObjectId("5b8f6503d0f3efaf7b067864"), "Tname" : "PRAVEEN","exp" : 10 }

> db.emp.insert({'name':'abc','sal':10000,'dept':'comp'})

WriteResult({ "nInserted" : 1 })

> db.emp.insert({'name':'pqr','sal':8000,'dept':'entc'})

WriteResult({ "nInserted" : 1 })

> db.emp.insert({'name':'xyz','sal':7000,'dept':'it'})

WriteResult({ "nInserted" : 1 })

> db.emp.aggregate({$group:{\_id:'$dept',avgSal:{$avg:'$sal'}}})

{ "\_id" : "it", "avgSal" : 7000 }

{ "\_id" : "entc", "avgSal" : 8000 }

{ "\_id" : "comp", "avgSal" : 10000 }

> db.emp.aggregate({$group:{\_id:'$dept':{$avg:'$sal'}}})

20180911T10:03:09.459+0530 SyntaxError: Unexpected token :

> db.emp.aggregate({$group:{\_id:'$dept':{$avg:'$sal'}})

^C

> db.emp.aggregate({$group:{\_id:'$dept',avgSal:{$avg:'$sal'}}})

{ "\_id" : "it", "avgSal" : 7000 }

{ "\_id" : "entc", "avgSal" : 8000 }

{ "\_id" : "comp", "avgSal" : 10000 }

> db.emp.insert({'name':'ak','sal':100000,'dept':'comp'})

WriteResult({ "nInserted" : 1 })

> db.emp.insert({'name':'gfg','sal':50000,'dept':'comp'})

WriteResult({ "nInserted" : 1 })

> db.emp.insert({'name':'kkg','sal':50000,'dept':'entc'})

WriteResult({ "nInserted" : 1 })

> db.emp.insert({'name':'ghh','sal':80000,'dept':'it'})

WriteResult({ "nInserted" : 1 })

> db.emp.find({dept:'comp'}.count())

20180911T10:14:18.762+0530 TypeError: Object #<Object> has no method'count'

> db.emp.find({dept:'comp'}).count()

3

> db.emp.find({dept:'entc'}).count()

2

> db.emp.find({dept:'it'}).count()

2

> db.emp.find({dept:'it',dept:'comp',dept:'entc'}).count()

2

> db.emp.find({dept:'it',dept:'comp',dept:'entc'}).count()

2

>

db.emp.aggregate({$group:{\_id:'$dept',avgSal:{$avg:'$sal'}}},{$match:{avgSal:{$gte:50000}}})

{ "\_id" : "comp", "avgSal" : 53333.333333333336 }

>

db.emp.aggregate({$group:{\_id:'$dept',avgSal:{$sum:'$sal'}}},{$match:{avgSal:{$gte:50000}}})

{ "\_id" : "it", "avgSal" : 87000 }

{ "\_id" : "entc", "avgSal" : 58000 }

{ "\_id" : "comp", "avgSal" : 160000 }

> db.emp.aggregate([{$group:{\_id:'$sal',minSal:{$min:'sal'}}}])

{ "\_id" : 80000, "minSal" : "sal" }

{ "\_id" : 50000, "minSal" : "sal" }

{ "\_id" : 100000, "minSal" : "sal" }

{ "\_id" : 7000, "minSal" : "sal" }

{ "\_id" : 8000, "minSal" : "sal" }

{ "\_id" : 10000, "minSal" : "sal" }

> db.emp.aggregate([{$group:{\_id:'$dept',minSal:{$min:'sal'}}}])

{ "\_id" : "it", "minSal" : "sal" }

{ "\_id" : "entc", "minSal" : "sal" }

{ "\_id" : "comp", "minSal" : "sal" }

> db.emp.aggregate([{$group:{\_id:'$dept',minSal:{$min:'$sal'}}}])

{ "\_id" : "it", "minSal" : 7000 }

{ "\_id" : "entc", "minSal" : 8000 }

{ "\_id" : "comp", "minSal" : 10000 }

> db.emp.aggregate([{$group:{\_id:'$comp',minSal:{$min:'$sal'}}}])

{ "\_id" : null, "minSal" : 7000 }

> db.emp.aggregate([{$group:{\_id:'$dept',minSal:{$min:'$sal'}}}])

{ "\_id" : "it", "minSal" : 7000 }

{ "\_id" : "entc", "minSal" : 8000 }

{ "\_id" : "comp", "minSal" : 10000 }

> db.emp.aggregate([{$group:{\_id:'$sal',minSal:{$min:'$sal'}}}])

{ "\_id" : 80000, "minSal" : 80000 }

{ "\_id" : 50000, "minSal" : 50000 }

{ "\_id" : 100000, "minSal" : 100000 }

{ "\_id" : 7000, "minSal" : 7000 }

{ "\_id" : 8000, "minSal" : 8000 }

{ "\_id" : 10000, "minSal" : 10000 }

> db.emp.find()

{ "\_id" : ObjectId("5b9744beee9dd5ad710bc74a"), "name" : "abc", "sal" :10000, "dept" : "comp" }

{ "\_id" : ObjectId("5b9744d9ee9dd5ad710bc74b"), "name" : "pqr", "sal" :8000, "dept" : "entc" }

{ "\_id" : ObjectId("5b9744efee9dd5ad710bc74c"), "name" : "xyz", "sal" :7000, "dept" : "it" }

{ "\_id" : ObjectId("5b97464bee9dd5ad710bc74d"), "name" : "ak", "sal" :100000, "dept" : "comp" }

{ "\_id" : ObjectId("5b97465bee9dd5ad710bc74e"), "name" : "gfg", "sal" :50000, "dept" : "comp" }

{ "\_id" : ObjectId("5b974669ee9dd5ad710bc74f"), "name" : "kkg", "sal" :50000, "dept" : "entc" }

{ "\_id" : ObjectId("5b974678ee9dd5ad710bc750"), "name" : "ghh", "sal" :80000, "dept" : "it" }

> db.emp.aggregate([{$group:{\_id:'$name',minSal:{$min:'$sal'}}}])

{ "\_id" : "kkg", "minSal" : 50000 }

{ "\_id" : "gfg", "minSal" : 50000 }

{ "\_id" : "ak", "minSal" : 100000 }

{ "\_id" : "xyz", "minSal" : 7000 }

{ "\_id" : "ghh", "minSal" : 80000 }

{ "\_id" : "pqr", "minSal" : 8000 }

{ "\_id" : "abc", "minSal" : 10000 }

> db.emp.aggregate([{$group:{\_id:'$sal',minSal:{$min:'$name'}}}])

{ "\_id" : 80000, "minSal" : "ghh" }

{ "\_id" : 50000, "minSal" : "gfg" }

{ "\_id" : 100000, "minSal" : "ak" }

{ "\_id" : 7000, "minSal" : "xyz" }

{ "\_id" : 8000, "minSal" : "pqr" }

{ "\_id" : 10000, "minSal" : "abc" }

> db.emp.aggregate([{$group:{\_id:'$sal',minSal:{$min:'$sal'}}}])

{ "\_id" : 80000, "minSal" : 80000 }

{ "\_id" : 50000, "minSal" : 50000 }

{ "\_id" : 100000, "minSal" : 100000 }

{ "\_id" : 7000, "minSal" : 7000 }

{ "\_id" : 8000, "minSal" : 8000 }

{ "\_id" : 10000, "minSal" : 10000 }

> db.emp.aggregate([{$group:{\_id:'$sal',minSal:{$max:'$sal'}}}])

{ "\_id" : 80000, "minSal" : 80000 }

{ "\_id" : 50000, "minSal" : 50000 }

{ "\_id" : 100000, "minSal" : 100000 }

{ "\_id" : 7000, "minSal" : 7000 }

{ "\_id" : 8000, "minSal" : 8000 }

{ "\_id" : 10000, "minSal" : 10000 }

> db.emp.aggregate([{$group:{\_id:'$dept',minSal:{$max:'$sal'}}}])

{ "\_id" : "it", "minSal" : 80000 }

{ "\_id" : "entc", "minSal" : 50000 }

{ "\_id" : "comp", "minSal" : 100000 }

> db.emp.aggregate([{$group:{\_id:'$dept',minSal:{$min:'$sal'}}}])

{ "\_id" : "it", "minSal" : 7000 }

{ "\_id" : "entc", "minSal": 8000 }

{ "\_id" : "comp", "minSal" : 10000}