LAB – 2

NoSQL MongoDB

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Create a Collection with the following data:

EMPNO	ENAME	JOB	HIREDATE	MGR	SAL	COMM	DEPTNO
7369	SMITH	CLERK	17-DEC-80	7902	800		20
7499	ALLEN	SALESMAN	20-FEB-81	7698	1600	300	30
7521	WARD	SALESMAN	22-FEB-81	7698	1250	500	30
7566	JONES	MANAGER	02-APR-81	7839	2975		20
7654	MARTIN	SALESMAN	28-SEP-81	7698	1250	1400	30
7698	BLAKE	MANAGER	01-MAY-81	7839	2850		30
7782	CLARK	MANAGER	09-JUN-81	7839	2450		10
7788	SCOTT	ANALYST	19-APR-87	7566	3000		20
7839	KING	PRESIDENT	17-NOV-81		5000		10
7844	TURNER	SALESMAN	08-SEP-81	7698	1500	0	30
7876	ADAMS	CLERK	23-MAY-87	7788	1100		20
7900	JAMES	CLERK	03-DEC-81	7698	950		30
7902	FORD	ANALYST	03-DEC-81	7566	3000		20
7934	MILLER	CLERK	23-JAN-82	7782	1300		10

```
C:\Windows\System32\cmd.exe - mongo.exe
> db.employees.insert([
...    {
...       EMPNO: 7499,
...       ENAME: "ALLEN",
...       JOB:"SALESMAN",
...       HIREDATE:new Date("20-FEB-81"),
...       MGR:7698,
...       SAL:1600,
...       COMM:300,
...       DEPTNO:30
...    },
...    {
...       EMPNO: 7521,
...       ENAME: "WARD",
...       JOB:"SALESMAN",
...       HIREDATE:new Date("22-FEB-81"),
...       MGR:7698,
...       SAL:1250,
...       COMM:500,
...       DEPTNO:30
...    },
...    {
...       EMPNO: 7566,
...       ENAME: "JONES",
...       JOB:"MANAGER",
...       HIREDATE:new Date("02-APR-81"),
...       MGR:7839,
...       SAL:2975,
...       DEPTNO:20
...    },
...    {
...       EMPNO: 7654,
...       ENAME: "MARTIN",
...       JOB:"SALESMAN",
...       HIREDATE:new Date("28-SEP-81"),
...       MGR:7698,
...       SAL:1250,
...       COMM:1400,
...       DEPTNO:30
...    },
```

```
...    }},
...    {
...        EMPNO: 7698,
...        ENAME: "BLAKE",
...        JOB:"MANAGER",
...        HIREDATE:new Date("01-MAY-81"),
...        MGR:7839,
...        SAL:2850,
...        DEPTNO:30
...    },
...    {
...        EMPNO: 7782,
...        ENAME: "CLARK",
...        JOB:"MANAGER",
...        HIREDATE:new Date("09-JUN-81"),
...        MGR:7839,
...        SAL:2450,
...        DEPTNO:10
...    },
...    {
...        EMPNO: 7788,
...        ENAME: "SCOTT",
...        JOB:"ANALYST",
...        HIREDATE:new Date("19-APR-87"),
...        MGR:7698,
...        SAL:3000,
...        DEPTNO:20
...    },
...    {
...        EMPNO: 7439,
...        ENAME: "KING",
...        JOB:"PRESIDENT",
...        HIREDATE:new Date("17-NOV-81"),
...        SAL:5000,
...        DEPTNO:10
...    },
...    {
...        EMPNO: 7844,
...        ENAME: "TURNER",
...        JOB:"SALESMAN",
...        HIREDATE:new Date("08-SEP-81"),
...        MGR:7698,
...        SAL:1500,
...        COMM:0,
```

```
...        SAL:1500,
...        COMM:0,
...        DEPTNO:30
...       },
...    {
...        EMPNO: 7876,
...        ENAME: "ADAMS",
...        JOB:"CLERK",
...        HIREDATE:new Date("23-MAY-87"),
...        MGR:7288,
...        SAL:1100,
...        DEPTNO:20
...       },
...    {
...        EMPNO: 7902,
...        ENAME: "FORD",
...        JOB:"ANALYST",
...        HIREDATE:new Date("03-DEC-81"),
...        MGR:7698,
...        SAL:950,
...        DEPTNO:30
...       },
...    {
...        EMPNO: 7934,
...        ENAME: "MILLER",
...        JOB:"CLERK",
...        HIREDATE:new Date("23-JAN-82"),
...        MGR:7782,
...        SAL:1300,
...        DEPTNO:10
...       },
... ]
... )
BulkWriteResult({
        "writeErrors" : [ ],
        "writeConcernErrors" : [ ],
        "nInserted" : 12,
        "nUpserted" : 0,
        "nMatched" : 0,
        "nModified" : 0,
        "nRemoved" : 0,
        "upserted" : [ ]
})
>
>  db.employees.insertOne(
... ...    {
... ...       EMPNO: 7369,
... ...       ENAME: "SMITH",
... ...       JOB:"CLERK",
... ...       HIREDATE:new Date("17-DEC-80"),
... ...       MGR:7902,
... ...       SAL:800,
... ...       DEPTNO:20
... ...    }
... ... )
{
        "acknowledged" : true,
        "insertedId" : ObjectId("6020e85bb5f32a24509c4dba")
}
> db.employees.find()
{ "_id" : ObjectId("6020e85bb5f32a24509c4dba"), "EMPNO" : 7369, "ENAME" : "SMITH", "JOB" : "CLERK", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : 7902, "SAL" :
800, "DEPTNO" : 20 }
```

1. Display all the employee details

2. Display the ENAME of all the employees (Hint: use find() method)

3. Display the ENAME, JOB of all the employees (Hint: use find() method)

4. Display EMPNO, ENAME, JOB, HIREDATE of all the employees (Hint: use find() method)

```
> db.employees.find({},{"EMPNP":1,"ENAME":1,"JOB":1,"HIREDATE":1})
{ "_id" : ObjectId("6020d557b5f32a24509c4dad"), "ENAME" : "SMITH", "JOB" : "CLERK", "HIREDATE" : ISODate("1970-01-01T00:00:00Z") }
{ "_id" : ObjectId("6020dc23b5f32a24509c4dae"), "ENAME" : "ALLEN", "JOB" : "SALESMAN", "HIREDATE" : ISODate("1970-01-01T00:00:00Z") }
{ "_id" : ObjectId("6020dc23b5f32a24509c4daf"), "ENAME" : "WARD", "JOB" : "SALESMAN", "HIREDATE" : ISODate("1970-01-01T00:00:00Z") }
{ "_id" : ObjectId("6020dc23b5f32a24509c4db0"), "ENAME" : "JONES", "JOB" : "MANAGER", "HIREDATE" : ISODate("1970-01-01T00:00:00Z") }
{ "_id" : ObjectId("6020dc23b5f32a24509c4db1"), "ENAME" : "MARTIN", "JOB" : "SALESMAN", "HIREDATE" : ISODate("1970-01-01T00:00:00Z") }
{ "_id" : ObjectId("6020dc23b5f32a24509c4db2"), "ENAME" : "BLAKE", "JOB" : "MANAGER", "HIREDATE" : ISODate("1970-01-01T00:00:00Z") }
{ "_id" : ObjectId("6020dc23b5f32a24509c4db3"), "ENAME" : "CLARK", "JOB" : "MANAGER", "HIREDATE" : ISODate("1970-01-01T00:00:00Z") }
{ "_id" : ObjectId("6020dc23b5f32a24509c4db4"), "ENAME" : "SCOTT", "JOB" : "ANALYST", "HIREDATE" : ISODate("1970-01-01T00:00:00Z") }
{ "_id" : ObjectId("6020dc23b5f32a24509c4db5"), "ENAME" : "KING", "JOB" : "PRESIDENT", "HIREDATE" : ISODate("1970-01-01T00:00:00Z") }
{ "_id" : ObjectId("6020dc23b5f32a24509c4db6"), "ENAME" : "TURNER", "JOB" : "SALESMAN", "HIREDATE" : ISODate("1970-01-01T00:00:00Z") }
{ "_id" : ObjectId("6020dc23b5f32a24509c4db7"), "ENAME" : "ADAMS", "JOB" : "CLERK", "HIREDATE" : ISODate("1970-01-01T00:00:00Z") }
{ "_id" : ObjectId("6020dc23b5f32a24509c4db8"), "ENAME" : "FORD", "JOB" : "ANALYST", "HIREDATE" : ISODate("1970-01-01T00:00:00Z") }
{ "_id" : ObjectId("6020dc23b5f32a24509c4db9"), "ENAME" : "MILLER", "JOB" : "CLERK", "HIREDATE" : ISODate("1970-01-01T00:00:00Z") }
```

5. Display the details of all the employees in the ascending order of EMPNO (Hint: use sort() method)

```
> db.employees.aggregate(
...    [
...       { $sort : { EMPNO : 1 } }
...    ]
... )
{ "_id" : ObjectId("6020d557b5f32a24509c4dad"), "EMPNO" : "7369", "ENAME" : "SMITH", "JOB" : "CLERK", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : "7902", "SAL
" : "800", "DEPTNO" : "20" }
{ "_id" : ObjectId("6020dc23b5f32a24509c4db5"), "EMPNO" : "7439", "ENAME" : "KING", "JOB" : "PRESIDENT", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "SAL" : "5000", "
DEPTNO" : "10" }
{ "_id" : ObjectId("6020dc23b5f32a24509c4dae"), "EMPNO" : "7499", "ENAME" : "ALLEN", "JOB" : "SALESMAN", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : "7698", "
SAL" : "1600", "COMM" : "300", "DEPTNO" : "30" }
{ "_id" : ObjectId("6020dc23b5f32a24509c4daf"), "EMPNO" : "7521", "ENAME" : "WARD", "JOB" : "SALESMAN", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : "7698", "S
AL" : "1250", "COMM" : "500", "DEPTNO" : "30" }
{ "_id" : ObjectId("6020dc23b5f32a24509c4db0"), "EMPNO" : "7566", "ENAME" : "JONES", "JOB" : "MANAGER", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : "7839", "S
AL" : "2975", "DEPTNO" : "20" }
{ "_id" : ObjectId("6020dc23b5f32a24509c4db1"), "EMPNO" : "7654", "ENAME" : "MARTIN", "JOB" : "SALESMAN", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : "7698",
"SAL" : "1250", "COMM" : "1400", "DEPTNO" : "30" }
{ "_id" : ObjectId("6020dc23b5f32a24509c4db2"), "EMPNO" : "7698", "ENAME" : "BLAKE", "JOB" : "MANAGER", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : "7839", "S
AL" : "2850", "DEPTNO" : "30" }
{ "_id" : ObjectId("6020dc23b5f32a24509c4db3"), "EMPNO" : "7782", "ENAME" : "CLARK", "JOB" : "MANAGER", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : "7839", "S
AL" : "2450", "DEPTNO" : "10" }
{ "_id" : ObjectId("6020dc23b5f32a24509c4db4"), "EMPNO" : "7788", "ENAME" : "SCOTT", "JOB" : "ANALYST", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : "7698", "S
AL" : "3000", "DEPTNO" : "20" }
{ "_id" : ObjectId("6020dc23b5f32a24509c4db6"), "EMPNO" : "7844", "ENAME" : "TURNER", "JOB" : "SALESMAN", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : "7698",
"SAL" : "1500", "COMM" : "0", "DEPTNO" : "30" }
{ "_id" : ObjectId("6020dc23b5f32a24509c4db7"), "EMPNO" : "7876", "ENAME" : "ADAMS", "JOB" : "CLERK", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : "7288", "SAL
" : "1100", "DEPTNO" : "20" }
{ "_id" : ObjectId("6020dc23b5f32a24509c4db8"), "EMPNO" : "7902", "ENAME" : "FORD", "JOB" : "ANALYST", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : "7698", "SA
L" : "950", "DEPTNO" : "30" }
{ "_id" : ObjectId("6020dc23b5f32a24509c4db9"), "EMPNO" : "7934", "ENAME" : "MILLER", "JOB" : "CLERK", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : "7782", "SA
L" : "1300", "DEPTNO" : "10" }
```

6. Display the details of all the employees in the ascending order of SAL (Hint: use sort() method)

```
> db.employees.aggregate(
...    [
...       { $sort : { SAL : 1 } }
...    ]
... )
{ "_id" : ObjectId("6020dc23b5f32a24509c4db7"), "EMPNO" : "7876", "ENAME" : "ADAMS", "JOB" : "CLERK", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : "7288", "SAL
" : "1100", "DEPTNO" : "20" }
{ "_id" : ObjectId("6020dc23b5f32a24509c4daf"), "EMPNO" : "7521", "ENAME" : "WARD", "JOB" : "SALESMAN", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : "7698", "S
AL" : "1250", "COMM" : "500", "DEPTNO" : "30" }
{ "_id" : ObjectId("6020dc23b5f32a24509c4db1"), "EMPNO" : "7654", "ENAME" : "MARTIN", "JOB" : "SALESMAN", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : "7698",
"SAL" : "1250", "COMM" : "1400", "DEPTNO" : "30" }
{ "_id" : ObjectId("6020dc23b5f32a24509c4db9"), "EMPNO" : "7934", "ENAME" : "MILLER", "JOB" : "CLERK", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : "7782", "SA
L" : "1300", "DEPTNO" : "10" }
{ "_id" : ObjectId("6020dc23b5f32a24509c4db6"), "EMPNO" : "7844", "ENAME" : "TURNER", "JOB" : "SALESMAN", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : "7698",
"SAL" : "1500", "COMM" : "0", "DEPTNO" : "30" }
{ "_id" : ObjectId("6020dc23b5f32a24509c4dae"), "EMPNO" : "7499", "ENAME" : "ALLEN", "JOB" : "SALESMAN", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : "7698", "
SAL" : "1600", "COMM" : "300", "DEPTNO" : "30" }
{ "_id" : ObjectId("6020dc23b5f32a24509c4db3"), "EMPNO" : "7782", "ENAME" : "CLARK", "JOB" : "MANAGER", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : "7839", "S
AL" : "2450", "DEPTNO" : "10" }
{ "_id" : ObjectId("6020dc23b5f32a24509c4db2"), "EMPNO" : "7698", "ENAME" : "BLAKE", "JOB" : "MANAGER", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : "7839", "S
AL" : "2850", "DEPTNO" : "30" }
{ "_id" : ObjectId("6020dc23b5f32a24509c4db0"), "EMPNO" : "7566", "ENAME" : "JONES", "JOB" : "MANAGER", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : "7839", "S
AL" : "2975", "DEPTNO" : "20" }
{ "_id" : ObjectId("6020dc23b5f32a24509c4db4"), "EMPNO" : "7788", "ENAME" : "SCOTT", "JOB" : "ANALYST", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : "7698", "S
AL" : "3000", "DEPTNO" : "20" }
{ "_id" : ObjectId("6020dc23b5f32a24509c4db5"), "EMPNO" : "7439", "ENAME" : "KING", "JOB" : "PRESIDENT", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "SAL" : "5000", "
DEPTNO" : "10" }
{ "_id" : ObjectId("6020d557b5f32a24509c4dad"), "EMPNO" : "7369", "ENAME" : "SMITH", "JOB" : "CLERK", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : "7902", "SAL
" : "800", "DEPTNO" : "20" }
{ "_id" : ObjectId("6020dc23b5f32a24509c4db8"), "EMPNO" : "7902", "ENAME" : "FORD", "JOB" : "ANALYST", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : "7698", "SA
L" : "950", "DEPTNO" : "30" }
```

7. Display the details of all the employees in the ascending order of ENAME (Hint: use sort() method)

8. Display the details of all the employees in the descending order of JOB (Hint: use sort() method)

9. Display the details of all the employees in the descending order of DEPTNO (Hint: use sort() method)

```
> db.employees.aggregate(
...    [
...        { $sort : { DEPTNO : -1 } }
...    ]
... )
{ "_id" : ObjectId("6020dc23b5f32a24509c4dae"), "EMPNO" : "7499", "ENAME" : "ALLEN", "JOB" : "SALESMAN", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : "7698", "
SAL" : "1600", "COMM" : "300", "DEPTNO" : "30" }
{ "_id" : ObjectId("6020dc23b5f32a24509c4daf"), "EMPNO" : "7521", "ENAME" : "WARD", "JOB" : "SALESMAN", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : "7698", "S
AL" : "1250", "COMM" : "500", "DEPTNO" : "30" }
{ "_id" : ObjectId("6020dc23b5f32a24509c4db1"), "EMPNO" : "7654", "ENAME" : "MARTIN", "JOB" : "SALESMAN", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : "7698",
"SAL" : "1250", "COMM" : "1400", "DEPTNO" : "30" }
{ "_id" : ObjectId("6020dc23b5f32a24509c4db2"), "EMPNO" : "7698", "ENAME" : "BLAKE", "JOB" : "MANAGER", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : "7839", "S
AL" : "2850", "DEPTNO" : "30" }
{ "_id" : ObjectId("6020dc23b5f32a24509c4db6"), "EMPNO" : "7844", "ENAME" : "TURNER", "JOB" : "SALESMAN", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : "7698",
"SAL" : "1500", "COMM" : "0", "DEPTNO" : "30" }
{ "_id" : ObjectId("6020dc23b5f32a24509c4db8"), "EMPNO" : "7902", "ENAME" : "FORD", "JOB" : "ANALYST", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : "7698", "SA
L" : "950", "DEPTNO" : "30" }
{ "_id" : ObjectId("6020d557b5f32a24509c4dad"), "EMPNO" : "7369", "ENAME" : "SMITH", "JOB" : "CLERK", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : "7902", "SAL
" : "800", "DEPTNO" : "20" }
{ "_id" : ObjectId("6020dc23b5f32a24509c4db0"), "EMPNO" : "7566", "ENAME" : "JONES", "JOB" : "MANAGER", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : "7839", "S
AL" : "2975", "DEPTNO" : "20" }
{ "_id" : ObjectId("6020dc23b5f32a24509c4db4"), "EMPNO" : "7788", "ENAME" : "SCOTT", "JOB" : "ANALYST", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : "7698", "S
AL" : "3000", "DEPTNO" : "20" }
{ "_id" : ObjectId("6020dc23b5f32a24509c4db7"), "EMPNO" : "7876", "ENAME" : "ADAMS", "JOB" : "CLERK", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : "7288", "SAL
" : "1100", "DEPTNO" : "20" }
{ "_id" : ObjectId("6020dc23b5f32a24509c4db3"), "EMPNO" : "7782", "ENAME" : "CLARK", "JOB" : "MANAGER", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : "7839", "S
AL" : "2450", "DEPTNO" : "10" }
{ "_id" : ObjectId("6020dc23b5f32a24509c4db5"), "EMPNO" : "7439", "ENAME" : "KING", "JOB" : "PRESIDENT", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "SAL" : "5000", "
DEPTNO" : "10" }
{ "_id" : ObjectId("6020dc23b5f32a24509c4db9"), "EMPNO" : "7934", "ENAME" : "MILLER", "JOB" : "CLERK", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : "7782", "SA
L" : "1300", "DEPTNO" : "10" }
```

10. Display the details of all the employees in the descending order of ENAME(Hint: use sort() method)

```
> db.employees.aggregate(
...    [
...        { $sort : { ENAME : -1 } }
...    ]
... )
{ "_id" : ObjectId("6020dc23b5f32a24509c4daf"), "EMPNO" : "7521", "ENAME" : "WARD", "JOB" : "SALESMAN", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : "7698", "S
AL" : "1250", "COMM" : "500", "DEPTNO" : "30" }
{ "_id" : ObjectId("6020dc23b5f32a24509c4db6"), "EMPNO" : "7844", "ENAME" : "TURNER", "JOB" : "SALESMAN", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : "7698",
"SAL" : "1500", "COMM" : "0", "DEPTNO" : "30" }
{ "_id" : ObjectId("6020d557b5f32a24509c4dad"), "EMPNO" : "7369", "ENAME" : "SMITH", "JOB" : "CLERK", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : "7902", "SAL
" : "800", "DEPTNO" : "20" }
{ "_id" : ObjectId("6020dc23b5f32a24509c4db4"), "EMPNO" : "7788", "ENAME" : "SCOTT", "JOB" : "ANALYST", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : "7698", "S
AL" : "3000", "DEPTNO" : "20" }
{ "_id" : ObjectId("6020dc23b5f32a24509c4db9"), "EMPNO" : "7934", "ENAME" : "MILLER", "JOB" : "CLERK", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : "7782", "SA
L" : "1300", "DEPTNO" : "10" }
{ "_id" : ObjectId("6020dc23b5f32a24509c4db1"), "EMPNO" : "7654", "ENAME" : "MARTIN", "JOB" : "SALESMAN", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : "7698",
"SAL" : "1250", "COMM" : "1400", "DEPTNO" : "30" }
{ "_id" : ObjectId("6020dc23b5f32a24509c4db5"), "EMPNO" : "7439", "ENAME" : "KING", "JOB" : "PRESIDENT", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "SAL" : "5000", "
DEPTNO" : "10" }
{ "_id" : ObjectId("6020dc23b5f32a24509c4db0"), "EMPNO" : "7566", "ENAME" : "JONES", "JOB" : "MANAGER", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : "7839", "S
AL" : "2975", "DEPTNO" : "20" }
{ "_id" : ObjectId("6020dc23b5f32a24509c4db8"), "EMPNO" : "7902", "ENAME" : "FORD", "JOB" : "ANALYST", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : "7698", "SA
L" : "950", "DEPTNO" : "30" }
{ "_id" : ObjectId("6020dc23b5f32a24509c4db3"), "EMPNO" : "7782", "ENAME" : "CLARK", "JOB" : "MANAGER", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : "7839", "S
AL" : "2450", "DEPTNO" : "10" }
{ "_id" : ObjectId("6020dc23b5f32a24509c4db2"), "EMPNO" : "7698", "ENAME" : "BLAKE", "JOB" : "MANAGER", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : "7839", "S
AL" : "2850", "DEPTNO" : "30" }
{ "_id" : ObjectId("6020dc23b5f32a24509c4dae"), "EMPNO" : "7499", "ENAME" : "ALLEN", "JOB" : "SALESMAN", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : "7698", "
SAL" : "1600", "COMM" : "300", "DEPTNO" : "30" }
{ "_id" : ObjectId("6020dc23b5f32a24509c4db7"), "EMPNO" : "7876", "ENAME" : "ADAMS", "JOB" : "CLERK", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : "7288", "SAL
" : "1100", "DEPTNO" : "20" }
```

11. Display the sum of the salaries of all the employees (Hint: use aggregate() method)

```
>
> db.employees.aggregate([ {
...       $group: {
...           _id: null,
...           totalsalary: {
...               $sum: "$SAL"
...           }
...       }
... } ] )
{ "_id" : null, "totalsalary" : 26025 }
>
```

12. Display the average salary of all the employees (Hint: use aggregate() method)

```
>
> db.employees.aggregate([ {
...     $group: {
...         _id: null,
...         totalsalary: {
...             $avg: "$SAL"
...         }
...     }
... } ] )
{ "_id" : null, "totalsalary" : 2001.923076923077 }
>
```

13. Display the maximum salary of all the employees (Hint: use aggregate() method)

```
>
> db.employees.aggregate([ {
...     $group: {
...         _id: null,
...         maxsalary: {
...             $max: "$SAL"
...         }
...     }
... } ] )
{ "_id" : null, "maxsalary" : 5000 }
>
```

14. Display the minimum salary of all the employees (Hint: use aggregate() method)

```
>
>
> db.employees.aggregate([ {
...     $group: {
...         _id: null,
...         mainsalary: {
...             $min: "$SAL"
...         }
...     }
... } ] )
{ "_id" : null, "mainsalary" : 800 }
>
```

15. Display the First three rows of the employee details (Hint: use limit() method)

```
> db.employees.find({}).limit(3);
{ "_id" : ObjectId("6020e85bb5f32a24509c4dba"), "EMPNO" : 7369, "ENAME" : "SMITH", "JOB" : "CLERK", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : 7902, "SAL" :
800, "DEPTNO" : 20 }
{ "_id" : ObjectId("6020e8fdb5f32a24509c4dbb"), "EMPNO" : 7499, "ENAME" : "ALLEN", "JOB" : "SALESMAN", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : 7698, "SAL"
: 1600, "COMM" : 300, "DEPTNO" : 30 }
{ "_id" : ObjectId("6020e8fdb5f32a24509c4dbc"), "EMPNO" : 7521, "ENAME" : "WARD", "JOB" : "SALESMAN", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : 7698, "SAL"
: 1250, "COMM" : 500, "DEPTNO" : 30 }
>
```

16. Display the First row of the employee details (Hint: use limit() method)

```
> db.employees.find({}).limit(1);
{ "_id" : ObjectId("6020e85bb5f32a24509c4dba"), "EMPNO" : 7369, "ENAME" : "SMITH", "JOB" : "CLERK", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : 7902, "SAL" :
800, "DEPTNO" : 20 }
```

17. Display the employee details except first five rows (Hint: use skip() method)

```
> db.employees.find({}).skip(5);
{ "_id" : ObjectId("6020e8fdb5f32a24509c4dbf"), "EMPNO" : 7698, "ENAME" : "BLAKE", "JOB" : "MANAGER", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : 7839, "SAL"
: 2850, "DEPTNO" : 30 }
{ "_id" : ObjectId("6020e8fdb5f32a24509c4dc0"), "EMPNO" : 7782, "ENAME" : "CLARK", "JOB" : "MANAGER", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : 7839, "SAL"
: 2450, "DEPTNO" : 10 }
{ "_id" : ObjectId("6020e8fdb5f32a24509c4dc1"), "EMPNO" : 7788, "ENAME" : "SCOTT", "JOB" : "ANALYST", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : 7698, "SAL"
: 3000, "DEPTNO" : 20 }
{ "_id" : ObjectId("6020e8fdb5f32a24509c4dc2"), "EMPNO" : 7439, "ENAME" : "KING", "JOB" : "PRESIDENT", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "SAL" : 5000, "DEPT
NO" : 10 }
{ "_id" : ObjectId("6020e8fdb5f32a24509c4dc3"), "EMPNO" : 7844, "ENAME" : "TURNER", "JOB" : "SALESMAN", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : 7698, "SAL
" : 1500, "COMM" : 0, "DEPTNO" : 30 }
{ "_id" : ObjectId("6020e8fdb5f32a24509c4dc4"), "EMPNO" : 7876, "ENAME" : "ADAMS", "JOB" : "CLERK", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : 7288, "SAL" :
1100, "DEPTNO" : 20 }
{ "_id" : ObjectId("6020e8fdb5f32a24509c4dc5"), "EMPNO" : 7902, "ENAME" : "FORD", "JOB" : "ANALYST", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : 7698, "SAL" :
950, "DEPTNO" : 30 }
{ "_id" : ObjectId("6020e8fdb5f32a24509c4dc6"), "EMPNO" : 7934, "ENAME" : "MILLER", "JOB" : "CLERK", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : 7782, "SAL" :
1300, "DEPTNO" : 10 }
>
>
```

18. Display the employee details by skipping the first three rows (Hint: use skip() method)

```
> db.employees.find({}).skip(3);
{ "_id" : ObjectId("6020e8fdb5f32a24509c4dbd"), "EMPNO" : 7566, "ENAME" : "JONES", "JOB" : "MANAGER", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : 7839, "SAL"
: 2975, "DEPTNO" : 20 }
{ "_id" : ObjectId("6020e8fdb5f32a24509c4dbe"), "EMPNO" : 7654, "ENAME" : "MARTIN", "JOB" : "SALESMAN", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : 7698, "SAL
" : 1250, "COMM" : 1400, "DEPTNO" : 30 }
{ "_id" : ObjectId("6020e8fdb5f32a24509c4dbf"), "EMPNO" : 7698, "ENAME" : "BLAKE", "JOB" : "MANAGER", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : 7839, "SAL"
: 2850, "DEPTNO" : 30 }
{ "_id" : ObjectId("6020e8fdb5f32a24509c4dc0"), "EMPNO" : 7782, "ENAME" : "CLARK", "JOB" : "MANAGER", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : 7839, "SAL"
: 2450, "DEPTNO" : 10 }
{ "_id" : ObjectId("6020e8fdb5f32a24509c4dc1"), "EMPNO" : 7788, "ENAME" : "SCOTT", "JOB" : "ANALYST", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : 7698, "SAL"
: 3000, "DEPTNO" : 20 }
{ "_id" : ObjectId("6020e8fdb5f32a24509c4dc2"), "EMPNO" : 7439, "ENAME" : "KING", "JOB" : "PRESIDENT", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "SAL" : 5000, "DEPT
NO" : 10 }
{ "_id" : ObjectId("6020e8fdb5f32a24509c4dc3"), "EMPNO" : 7844, "ENAME" : "TURNER", "JOB" : "SALESMAN", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : 7698, "SAL
" : 1500, "COMM" : 0, "DEPTNO" : 30 }
{ "_id" : ObjectId("6020e8fdb5f32a24509c4dc4"), "EMPNO" : 7876, "ENAME" : "ADAMS", "JOB" : "CLERK", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : 7288, "SAL" :
1100, "DEPTNO" : 20 }
{ "_id" : ObjectId("6020e8fdb5f32a24509c4dc5"), "EMPNO" : 7902, "ENAME" : "FORD", "JOB" : "ANALYST", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : 7698, "SAL" :
950, "DEPTNO" : 30 }
{ "_id" : ObjectId("6020e8fdb5f32a24509c4dc6"), "EMPNO" : 7934, "ENAME" : "MILLER", "JOB" : "CLERK", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : 7782, "SAL" :
1300, "DEPTNO" : 10 }
```

19. Display the employee details by skipping the first three rows (Hint: use skip() method)

```
> db.employees.find({}).skip(3);
{ "_id" : ObjectId("6020e8fdb5f32a24509c4dbd"), "EMPNO" : 7566, "ENAME" : "JONES", "JOB" : "MANAGER", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : 7839, "SAL"
: 2975, "DEPTNO" : 20 }
{ "_id" : ObjectId("6020e8fdb5f32a24509c4dbe"), "EMPNO" : 7654, "ENAME" : "MARTIN", "JOB" : "SALESMAN", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : 7698, "SAL
" : 1250, "COMM" : 1400, "DEPTNO" : 30 }
{ "_id" : ObjectId("6020e8fdb5f32a24509c4dbf"), "EMPNO" : 7698, "ENAME" : "BLAKE", "JOB" : "MANAGER", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : 7839, "SAL"
: 2850, "DEPTNO" : 30 }
{ "_id" : ObjectId("6020e8fdb5f32a24509c4dc0"), "EMPNO" : 7782, "ENAME" : "CLARK", "JOB" : "MANAGER", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : 7839, "SAL"
: 2450, "DEPTNO" : 10 }
{ "_id" : ObjectId("6020e8fdb5f32a24509c4dc1"), "EMPNO" : 7788, "ENAME" : "SCOTT", "JOB" : "ANALYST", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : 7698, "SAL"
: 3000, "DEPTNO" : 20 }
{ "_id" : ObjectId("6020e8fdb5f32a24509c4dc2"), "EMPNO" : 7439, "ENAME" : "KING", "JOB" : "PRESIDENT", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "SAL" : 5000, "DEPT
NO" : 10 }
{ "_id" : ObjectId("6020e8fdb5f32a24509c4dc3"), "EMPNO" : 7844, "ENAME" : "TURNER", "JOB" : "SALESMAN", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : 7698, "SAL
" : 1500, "COMM" : 0, "DEPTNO" : 30 }
{ "_id" : ObjectId("6020e8fdb5f32a24509c4dc4"), "EMPNO" : 7876, "ENAME" : "ADAMS", "JOB" : "CLERK", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : 7288, "SAL" :
1100, "DEPTNO" : 20 }
{ "_id" : ObjectId("6020e8fdb5f32a24509c4dc5"), "EMPNO" : 7902, "ENAME" : "FORD", "JOB" : "ANALYST", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : 7698, "SAL" :
950, "DEPTNO" : 30 }
{ "_id" : ObjectId("6020e8fdb5f32a24509c4dc6"), "EMPNO" : 7934, "ENAME" : "MILLER", "JOB" : "CLERK", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : 7782, "SAL" :
1300, "DEPTNO" : 10 }
```

20. Display only the eighth document (row) of the employees (Hint: use limit(), skip() methods)

```
> db.employees.find({}).skip(7).limit(1);
{ "_id" : ObjectId("6020e8fdb5f32a24509c4dc1"), "EMPNO" : 7788, "ENAME" : "SCOTT", "JOB" : "ANALYST", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : 7698, "SAL"
: 3000, "DEPTNO" : 20 }
```

21. Display all the employee details whose salary is greater than 1500 (Hint: use find() method)

```
>
> db.employees.find( { SAL: { $gt: 1500 } } )
{ "_id" : ObjectId("6020e8fdb5f32a24509c4dbb"), "EMPNO" : 7499, "ENAME" : "ALLEN", "JOB" : "SALESMAN", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : 7698, "SAL"
 : 1600, "COMM" : 300, "DEPTNO" : 30 }
{ "_id" : ObjectId("6020e8fdb5f32a24509c4dbd"), "EMPNO" : 7566, "ENAME" : "JONES", "JOB" : "MANAGER", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : 7839, "SAL"
 : 2975, "DEPTNO" : 20 }
{ "_id" : ObjectId("6020e8fdb5f32a24509c4dbf"), "EMPNO" : 7698, "ENAME" : "BLAKE", "JOB" : "MANAGER", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : 7839, "SAL"
 : 2850, "DEPTNO" : 30 }
{ "_id" : ObjectId("6020e8fdb5f32a24509c4dc0"), "EMPNO" : 7782, "ENAME" : "CLARK", "JOB" : "MANAGER", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : 7839, "SAL"
 : 2450, "DEPTNO" : 10 }
{ "_id" : ObjectId("6020e8fdb5f32a24509c4dc1"), "EMPNO" : 7788, "ENAME" : "SCOTT", "JOB" : "ANALYST", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : 7698, "SAL"
 : 3000, "DEPTNO" : 20 }
{ "_id" : ObjectId("6020e8fdb5f32a24509c4dc2"), "EMPNO" : 7439, "ENAME" : "KING", "JOB" : "PRESIDENT", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "SAL" : 5000, "DEPT
NO" : 10 }
>
```

22. Display all the employee details whose salary is less than 1200 (Hint: use find() method)

```
>
> db.employees.find( { SAL: { $lt: 1200 } } )
{ "_id" : ObjectId("6020e85bb5f32a24509c4dba"), "EMPNO" : 7369, "ENAME" : "SMITH", "JOB" : "CLERK", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : 7902, "SAL" :
800, "DEPTNO" : 20 }
{ "_id" : ObjectId("6020e8fdb5f32a24509c4dc4"), "EMPNO" : 7876, "ENAME" : "ADAMS", "JOB" : "CLERK", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : 7288, "SAL" :
1100, "DEPTNO" : 20 }
{ "_id" : ObjectId("6020e8fdb5f32a24509c4dc5"), "EMPNO" : 7902, "ENAME" : "FORD", "JOB" : "ANALYST", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : 7698, "SAL" :
 950, "DEPTNO" : 30 }
>
```

23. Display all the employee details whose salary is equal to 2450 (Hint: use find() method)

```
>
> db.employees.find( { SAL: { $eq: 2450 } } )
{ "_id" : ObjectId("6020e8fdb5f32a24509c4dc0"), "EMPNO" : 7782, "ENAME" : "CLARK", "JOB" : "MANAGER", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : 7839, "SAL"
 : 2450, "DEPTNO" : 10 }
>
```

 24. Display all the employee details whose salary is greater than 2500 and job is manager (Hint: use find() method)

```
>
> db.employees.find( { SAL: { $gt: 2500 }, JOB:"MANAGER" } )
{ "_id" : ObjectId("6020e8fdb5f32a24509c4dbd"), "EMPNO" : 7566, "ENAME" : "JONES", "JOB" : "MANAGER", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : 7839, "SAL"
 : 2975, "DEPTNO" : 20 }
{ "_id" : ObjectId("6020e8fdb5f32a24509c4dbf"), "EMPNO" : 7698, "ENAME" : "BLAKE", "JOB" : "MANAGER", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : 7839, "SAL"
 : 2850, "DEPTNO" : 30 }
>
```

25. Display all the employee details whose salary is less than 1500 or job is clerk (Hint: use find() method)

```
>
> db.employees.find( { $or: [ { SAL: { $lt: 1500 } }, { JOB: "CLERK" } ] } )
{ "_id" : ObjectId("6020e85bb5f32a24509c4dba"), "EMPNO" : 7369, "ENAME" : "SMITH", "JOB" : "CLERK", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : 7902, "SAL" :
800, "DEPTNO" : 20 }
{ "_id" : ObjectId("6020e8fdb5f32a24509c4dbc"), "EMPNO" : 7521, "ENAME" : "WARD", "JOB" : "SALESMAN", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : 7698, "SAL"
 : 1250, "COMM" : 500, "DEPTNO" : 30 }
{ "_id" : ObjectId("6020e8fdb5f32a24509c4dbe"), "EMPNO" : 7654, "ENAME" : "MARTIN", "JOB" : "SALESMAN", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : 7698, "SAL
" : 1250, "COMM" : 1400, "DEPTNO" : 30 }
{ "_id" : ObjectId("6020e8fdb5f32a24509c4dc4"), "EMPNO" : 7876, "ENAME" : "ADAMS", "JOB" : "CLERK", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : 7288, "SAL" :
1100, "DEPTNO" : 20 }
{ "_id" : ObjectId("6020e8fdb5f32a24509c4dc5"), "EMPNO" : 7902, "ENAME" : "FORD", "JOB" : "ANALYST", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : 7698, "SAL" :
 950, "DEPTNO" : 30 }
{ "_id" : ObjectId("6020e8fdb5f32a24509c4dc6"), "EMPNO" : 7934, "ENAME" : "MILLER", "JOB" : "CLERK", "HIREDATE" : ISODate("1970-01-01T00:00:00Z"), "MGR" : 7782, "SAL" :
 1300, "DEPTNO" : 10 }
>
```