

Show Databases on the local machine

```
> show databases;  
RDB    0.000GB  
admin  0.000GB  
local  0.000GB  
test   0.000GB
```

```
> show databases;  
RDB    0.000GB  
admin  0.000GB  
local  0.000GB  
test   0.000GB
```

Using the Database for further querying

```
> use RDB  
switched to db RDB
```

```
> use RDB  
switched to db RDB
```

Display the collections in the database

```
> show collections;  
DeptCollection  
ProjCollection
```

```
> show collections;  
DeptCollection  
ProjCollection
```

Select Document with pnumber as 1 from Project Collection

```
> db.ProjCollection.find({"Pnumber":"1"});  
{ "_id" : ObjectId("598e6c2ca2f6de14dc30faa4"), "Pnumber" : "1", "Pname" : "ProductX", "Dname" : "Research",  
  "employeeList" : [ { "fname" : "John", "lname" : "Smith", "hours" : "32.5" }, { "fname" : "Joyce", "lname" : "English",  
    "hours" : "20.0" } ] }
```

```
> db.ProjCollection.find({"Pnumber":"1"});  
{ "_id" : ObjectId("598e7cbda2f6de28c0af9c62"), "Pnumber" : "1", "Pname" : "ProductX", "Dname" : "Research", "employeeList" : [ { "fname" : "John", "lname" :  
  "Smith", "hours" : "32.5" }, { "fname" : "Joyce", "lname" : "English", "hours" : "20.0" } ] }
```

Select all documents in Project Collection having hours equal to 20

```
> db.ProjCollection.find({'employeeList.hours':"20.0"});  
{ "_id" : ObjectId("598e6c2ca2f6de14dc30faa4"), "Pnumber" : "1", "Pname" : "ProductX", "Dname" : "Research",  
  "employeeList" : [ { "fname" : "John", "lname" : "Smith", "hours" : "32.5" }, { "fname" : "Joyce", "lname" : "English",  
    "hours" : "20.0" } ] }
```

```
{ "_id" : ObjectId("598e6c2ca2f6de14dc30faa5"), "Pnumber" : "2", "Pname" : "ProductY", "Dname" : "Research",
"employeeList" : [ { "fname" : "John", "lname" : "Smith", "hours" : "7.5" }, { "fname" : "Franklin", "lname" : "Wong",
"hours" : "10.0" }, { "fname" : "Joyce", "lname" : "English", "hours" : "20.0" } ] }
{ "_id" : ObjectId("598e6c2ca2f6de14dc30faa9"), "Pnumber" : "11", "Pname" : "ConfigMgmt", "Dname" : "Software",
"employeeList" : [ { "fname" : "Debra", "lname" : "Hall", "hours" : "20.0" }, { "fname" : "Jake", "lname" : "Sheen", "hours"
: "25.0" } ] }
{ "_id" : ObjectId("598e6c2ca2f6de14dc30faae"), "Pnumber" : "30", "Pname" : "Newbenefits", "Dname" :
"Administration", "employeeList" : [ { "fname" : "Jennifer", "lname" : "Wallace", "hours" : "20.0" }, { "fname" : "Ahmad",
"lname" : "Jabbar", "hours" : "5.0" }, { "fname" : "Alicia", "lname" : "Zelaya", "hours" : "30.0" } ] }
```

```
> db.ProjCollection.find({'employeeList.hours':'20.0'});
{ "_id" : ObjectId("598e7cbda2f6de28c0af9c62"), "Pnumber" : "1", "Pname" : "ProductX", "Dname" : "Research", "employeeList" : [ { "fname" : "John", "lname" :
"Smith", "hours" : "32.5" }, { "fname" : "Joyce", "lname" : "English", "hours" : "20.0" } ] }
{ "_id" : ObjectId("598e7cbda2f6de28c0af9c63"), "Pnumber" : "2", "Pname" : "ProductY", "Dname" : "Research", "employeeList" : [ { "fname" : "John", "lname" :
"Smith", "hours" : "7.5" }, { "fname" : "Franklin", "lname" : "Wong", "hours" : "10.0" }, { "fname" : "Joyce", "lname" : "English", "hours" : "20.0" } ] }
{ "_id" : ObjectId("598e7cbda2f6de28c0af9c67"), "Pnumber" : "11", "Pname" : "ConfigMgmt", "Dname" : "Software", "employeeList" : [ { "fname" : "Debra", "lname"
: "Hall", "hours" : "20.0" }, { "fname" : "Jake", "lname" : "Sheen", "hours" : "25.0" } ] }
{ "_id" : ObjectId("598e7cbda2f6de28c0af9c6c"), "Pnumber" : "30", "Pname" : "Newbenefits", "Dname" : "Administration", "employeeList" : [ { "fname" : "Jennife
r", "lname" : "Wallace", "hours" : "20.0" }, { "fname" : "Ahmad", "lname" : "Jabbar", "hours" : "5.0" }, { "fname" : "Alicia", "lname" : "Zelaya", "hours" : "
30.0" } ] }
```

Select all documents in Project Collection having hours less than 30 and Department name as Research

```
> db.ProjCollection.find({'employeeList.hours':{$lt:"30.0"},"Dname":"Research"});
{ "_id" : ObjectId("598e6c2ca2f6de14dc30faa4"), "Pnumber" : "1", "Pname" : "ProductX", "Dname" : "Research",
"employeeList" : [ { "fname" : "John", "lname" : "Smith", "hours" : "32.5" }, { "fname" : "Joyce", "lname" : "English",
"hours" : "20.0" } ] }
{ "_id" : ObjectId("598e6c2ca2f6de14dc30faa5"), "Pnumber" : "2", "Pname" : "ProductY", "Dname" : "Research",
"employeeList" : [ { "fname" : "John", "lname" : "Smith", "hours" : "7.5" }, { "fname" : "Franklin", "lname" : "Wong",
"hours" : "10.0" }, { "fname" : "Joyce", "lname" : "English", "hours" : "20.0" } ] }
{ "_id" : ObjectId("598e6c2ca2f6de14dc30faa6"), "Pnumber" : "3", "Pname" : "ProductZ", "Dname" : "Research",
"employeeList" : [ { "fname" : "Franklin", "lname" : "Wong", "hours" : "10.0" }, { "fname" : "Andrea", "lname" :
"Sondrini", "hours" : "45.0" }, { "fname" : "Ramesh", "lname" : "Narayan", "hours" : "40.0" } ] }
{ "_id" : ObjectId("598e6c2ca2f6de14dc30faa7"), "Pnumber" : "4", "Pname" : "EntityAnnot", "Dname" : "Research",
"employeeList" : [ { "fname" : "Michael", "lname" : "Morgan", "hours" : "11.0" } ] }
```

```
> db.ProjCollection.find({'employeeList.hours':{$lt:"30.0"},"Dname":"Research"});
{ "_id" : ObjectId("598e7cbda2f6de28c0af9c62"), "Pnumber" : "1", "Pname" : "ProductX", "Dname" : "Research", "employeeList" : [ { "fname" : "John", "lname" :
"Smith", "hours" : "32.5" }, { "fname" : "Joyce", "lname" : "English", "hours" : "20.0" } ] }
{ "_id" : ObjectId("598e7cbda2f6de28c0af9c63"), "Pnumber" : "2", "Pname" : "ProductY", "Dname" : "Research", "employeeList" : [ { "fname" : "John", "lname" :
"Smith", "hours" : "7.5" }, { "fname" : "Franklin", "lname" : "Wong", "hours" : "10.0" }, { "fname" : "Joyce", "lname" : "English", "hours" : "20.0" } ] }
{ "_id" : ObjectId("598e7cbda2f6de28c0af9c64"), "Pnumber" : "3", "Pname" : "ProductZ", "Dname" : "Research", "employeeList" : [ { "fname" : "Franklin", "lname"
: "Wong", "hours" : "10.0" }, { "fname" : "Andrea", "lname" : "Sondrini", "hours" : "45.0" }, { "fname" : "Ramesh", "lname" : "Narayan", "hours" : "40.0" }
] }
{ "_id" : ObjectId("598e7cbda2f6de28c0af9c65"), "Pnumber" : "4", "Pname" : "EntityAnnot", "Dname" : "Research", "employeeList" : [ { "fname" : "Michael", "lna
me" : "Morgan", "hours" : "11.0" } ] }
```

Sort the Department Collection by Last name in Ascending order

```
> db.DeptCollection.find().sort({"lname":1});
{ "_id" : ObjectId("598e6c2ca2f6de14dc30fab6"), "Dnumber" : "1", "Dname" : "Headquarters", "lname" : "Borg",
"locationList" : [ { "lname" : "Houston" } ] }
{ "_id" : ObjectId("598e6c2da2f6de14dc30faba"), "Dnumber" : "7", "Dname" : "Hardware", "lname" : "Freed",
"locationList" : [ { "lname" : "Milwaukee" } ] }
{ "_id" : ObjectId("598e6c2da2f6de14dc30fab9"), "Dnumber" : "6", "Dname" : "Software", "lname" : "James",
"locationList" : [ { "lname" : "Atlanta" }, { "lname" : "Sacramento" } ] }
{ "_id" : ObjectId("598e6c2da2f6de14dc30fabb"), "Dnumber" : "8", "Dname" : "Sales", "lname" : "James", "locationList"
: [ { "lname" : "Chicago" }, { "lname" : "Dallas" }, { "lname" : "Miami" }, { "lname" : "Philadelphia" }, { "lname" : "Seattle" } ]
}
```

```
{ "_id" : ObjectId("598e6c2da2f6de14dc30fab7"), "Dnumber" : "9", "Dname" : "HR", "Lname" : "Linda", "locationList" : [ {
  "lname" : "Arlington" } ] }
{ "_id" : ObjectId("598e6c2da2f6de14dc30fab8"), "Dnumber" : "4", "Dname" : "Administration", "Lname" : "Wallace",
  "locationList" : [ { "lname" : "Stafford" } ] }
{ "_id" : ObjectId("598e6c2da2f6de14dc30fab9"), "Dnumber" : "5", "Dname" : "Research", "Lname" : "Wong",
  "locationList" : [ { "lname" : "Bellaire" }, { "lname" : "Houston" }, { "lname" : "Sugarland" } ] }
```

```
> db.DeptCollection.find().sort({"Lname":1});
{ "_id" : ObjectId("598e7cbda2f6de28c0af9c74"), "Dnumber" : "1", "Dname" : "Headquarters", "Lname" : "Borg", "locationList" : [ { "lname" : "Houston" } ] }
{ "_id" : ObjectId("598e7cbda2f6de28c0af9c78"), "Dnumber" : "7", "Dname" : "Hardware", "Lname" : "Freed", "locationList" : [ { "lname" : "Milwaukee" } ] }
{ "_id" : ObjectId("598e7cbda2f6de28c0af9c77"), "Dnumber" : "6", "Dname" : "Software", "Lname" : "James", "locationList" : [ { "lname" : "Atlanta" }, { "lname" : "Sacramento" } ] }
{ "_id" : ObjectId("598e7cbda2f6de28c0af9c79"), "Dnumber" : "8", "Dname" : "Sales", "Lname" : "James", "locationList" : [ { "lname" : "Chicago" }, { "lname" : "Dallas" }, { "lname" : "Miami" }, { "lname" : "Philadelphia" }, { "lname" : "Seattle" } ] }
{ "_id" : ObjectId("598e7cbda2f6de28c0af9c7a"), "Dnumber" : "9", "Dname" : "HR", "Lname" : "Linda", "locationList" : [ { "lname" : "Arlington" } ] }
{ "_id" : ObjectId("598e7cbda2f6de28c0af9c75"), "Dnumber" : "4", "Dname" : "Administration", "Lname" : "Wallace", "locationList" : [ { "lname" : "Stafford" } ] }
{ "_id" : ObjectId("598e7cbda2f6de28c0af9c76"), "Dnumber" : "5", "Dname" : "Research", "Lname" : "Wong", "locationList" : [ { "lname" : "Bellaire" }, { "lname" : "Houston" }, { "lname" : "Sugarland" } ] }
```

Query the number of documents from Department collection

```
> db.DeptCollection.count();
```

```
7
```

```
> db.DeptCollection.count();
7
```

Deleting the Project Collection

```
> db.ProjCollection.drop();
```

```
true
```

```
> db.ProjCollection.drop();
true
```