

Group B : Lab Assignment no. 1

Title : Design and Develop MongoDB Queries using CRUD operations. (Use CRUD operations, SAVE method, logical operators)

```
dipti@dipti-VPCEG28FN:~$ mongo
MongoDB shell version v3.6.3
connecting to: mongodb://127.0.0.1:27017
MongoDB server version: 3.6.3
Server has startup warnings:
2020-10-15T14:26:28.786+0530 I STORAGE [initandlisten]
2020-10-15T14:26:28.786+0530 I STORAGE [initandlisten] ** WARNING:
Using the XFS filesystem is strongly recommended with the WiredTiger storage
engine
2020-10-15T14:26:28.786+0530 I STORAGE [initandlisten] **      See
http://dochub.mongodb.org/core/prodnotes-filesystem
2020-10-15T14:26:36.417+0530 I CONTROL [initandlisten]
2020-10-15T14:26:36.417+0530 I CONTROL [initandlisten] ** WARNING:
Access control is not enabled for the database.
2020-10-15T14:26:36.417+0530 I CONTROL [initandlisten] **      Read and
write access to data and configuration is unrestricted.
2020-10-15T14:26:36.417+0530 I CONTROL [initandlisten]
> use dbs;
switched to db dbs
> db.createCollection('Student');
{ "ok" : 1 }
> db.Student.insert({'Rno':'1','Name':'Piyush','Class':'TE COMP'});
WriteResult({ "nInserted" : 1 })
> db.Student.insert({'Rno':'2','Name':'Abhi','Class':'TE COMP'});
WriteResult({ "nInserted" : 1 })
> db.Student.insert({'Rno':'3','Name':'Ashley','Class':'TE COMP'});
WriteResult({ "nInserted" : 1 })
> db.Student.insert({'Rno':'4','Name':'Hitesh','Class':'TE COMP'});
WriteResult({ "nInserted" : 1 })
> db.Student.insert({'Rno':'5','Name':'Pratik','Class':'TE COMP'});
WriteResult({ "nInserted" : 1 })
> db.Student.insert({'Rno':'6','Name':'Pratik','Class':'TE COMP'});
WriteResult({ "nInserted" : 1 })
> db.Student.find();
{ "_id" : ObjectId("670fd9ae9b068d3e3cfcfd4f9"), "Rno" : "1", "Name" :
"Piyush", "Class" : "TE COMP" }
{ "_id" : ObjectId("670fd9af4b068d3e3cfcfd4fa"), "Rno" : "2", "Name" :
"Abhi", "Class" : "TE COMP" }
{ "_id" : ObjectId("670fd9affb068d3e3cfcfd4fb"), "Rno" : "3", "Name" :
```

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"Ashley", "Class" : "TE COMP" }
{ "_id" : ObjectId("670fdb0ab068d3e3cfcfd4fc"), "Rno" : "4", "Name" :
"Hitesh", "Class" : "TE COMP" }
{ "_id" : ObjectId("670fdb13b068d3e3cfcfd4fd"), "Rno" : "5", "Name" :
"Pratik", "Class" : "TE COMP" }
{ "_id" : ObjectId("670fdb1db068d3e3cfcfd4fe"), "Rno" : "6", "Name" :
"Pratik", "Class" : "TE COMP" }
> db.Student.find().pretty();
{
  "_id" : ObjectId("670fdae9b068d3e3cfcfd4f9"),
  "Rno" : "1",
  "Name" : "Piyush",
  "Class" : "TE COMP"
}
{
  "_id" : ObjectId("670fdaf4b068d3e3cfcfd4fa"),
  "Rno" : "2",
  "Name" : "Abhi",
  "Class" : "TE COMP"
}
{
  "_id" : ObjectId("670fdaffb068d3e3cfcfd4fb"),
  "Rno" : "3",
  "Name" : "Ashley",
  "Class" : "TE COMP"
}
{
  "_id" : ObjectId("670fdb0ab068d3e3cfcfd4fc"),
  "Rno" : "4",
  "Name" : "Hitesh",
  "Class" : "TE COMP"
}
{
  "_id" : ObjectId("670fdb13b068d3e3cfcfd4fd"),
  "Rno" : "5",
  "Name" : "Pratik",
  "Class" : "TE COMP"
}
{
  "_id" : ObjectId("670fdb1db068d3e3cfcfd4fe"),
  "Rno" : "6",
  "Name" : "Pratik",
  "Class" : "TE COMP"
}
> db.Student.update({'Name':'Hitesh'},{$set: {'Name':'Henry'}});

```

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WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
> db.Student.find().pretty();
{
  "_id" : ObjectId("670fdae9b068d3e3cfcfd4f9"),
  "Rno" : "1",
  "Name" : "Piyush",
  "Class" : "TE COMP"
}
{
  "_id" : ObjectId("670fdaf4b068d3e3cfcfd4fa"),
  "Rno" : "2",
  "Name" : "Abhi",
  "Class" : "TE COMP"
}
{
  "_id" : ObjectId("670fdaffb068d3e3cfcfd4fb"),
  "Rno" : "3",
  "Name" : "Ashley",
  "Class" : "TE COMP"
}
{
  "_id" : ObjectId("670fdb0ab068d3e3cfcfd4fc"),
  "Rno" : "4",
  "Name" : "Henry",
  "Class" : "TE COMP"
}
{
  "_id" : ObjectId("670fdb13b068d3e3cfcfd4fd"),
  "Rno" : "5",
  "Name" : "Pratik",
  "Class" : "TE COMP"
}
{
  "_id" : ObjectId("670fdb1db068d3e3cfcfd4fe"),
  "Rno" : "6",
  "Name" : "Pratik",
  "Class" : "TE COMP"
}
> db.Student.remove({'ADD':'MP'});
WriteResult({ "nRemoved" : 0 })
> db.Student.find().pretty();
{
  "_id" : ObjectId("670fdae9b068d3e3cfcfd4f9"),
  "Rno" : "1",
  "Name" : "Piyush",

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    "Class" : "TE COMP"
  }
  {
    "_id" : ObjectId("670fdaf4b068d3e3cfcfd4fa"),
    "Rno" : "2",
    "Name" : "Abhi",
    "Class" : "TE COMP"
  }
  {
    "_id" : ObjectId("670fdaffb068d3e3cfcfd4fb"),
    "Rno" : "3",
    "Name" : "Ashley",
    "Class" : "TE COMP"
  }
  {
    "_id" : ObjectId("670fdb0ab068d3e3cfcfd4fc"),
    "Rno" : "4",
    "Name" : "Henry",
    "Class" : "TE COMP"
  }
  {
    "_id" : ObjectId("670fdb13b068d3e3cfcfd4fd"),
    "Rno" : "5",
    "Name" : "Pratik",
    "Class" : "TE COMP"
  }
  {
    "_id" : ObjectId("670fdb1db068d3e3cfcfd4fe"),
    "Rno" : "6",
    "Name" : "Pratik",
    "Class" : "TE COMP"
  }
}
>
db.Student.save({_id:ObjectId("5b8fad4ef00832a0a50b5036"),"RNO":"1","NAME":"PIYUSH","CLASS":"TE COMP","ADD":"MP"});
WriteResult({
  "nMatched" : 0,
  "nUpserted" : 1,
  "nModified" : 0,
  "_id" : ObjectId("5b8fad4ef00832a0a50b5036")
})
> db.Student.find().pretty();
{
  "_id" : ObjectId("670fdae9b068d3e3cfcfd4f9"),
  "Rno" : "1",

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    "Name" : "Piyush",
    "Class" : "TE COMP"
  }
  {
    "_id" : ObjectId("670fdaf4b068d3e3cfcd4fa"),
    "Rno" : "2",
    "Name" : "Abhi",
    "Class" : "TE COMP"
  }
  {
    "_id" : ObjectId("670fdaffb068d3e3cfcd4fb"),
    "Rno" : "3",
    "Name" : "Ashley",
    "Class" : "TE COMP"
  }
  {
    "_id" : ObjectId("670fdb0ab068d3e3cfcd4fc"),
    "Rno" : "4",
    "Name" : "Henry",
    "Class" : "TE COMP"
  }
  {
    "_id" : ObjectId("670fdb13b068d3e3cfcd4fd"),
    "Rno" : "5",
    "Name" : "Pratik",
    "Class" : "TE COMP"
  }
  {
    "_id" : ObjectId("670fdb1db068d3e3cfcd4fe"),
    "Rno" : "6",
    "Name" : "Pratik",
    "Class" : "TE COMP"
  }
  {
    "_id" : ObjectId("5b8fad4ef00832a0a50b5036"),
    "RNO" : "1",
    "NAME" : "PIYUSH",
    "CLASS" : "TE COMP",
    "ADD" : "MP"
  }
}
> db.Student.find({$and:[{"Name":"Piyush"}, {"Rno":"2"}]});
> db.Student.find({$and:[{"Name":"Piyush"}, {"Rno":"1"}]}).pretty();
{
  "_id" : ObjectId("670fdae9b068d3e3cfcd4f9"),
  "Rno" : "1",

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    "Name" : "Piyush",
    "Class" : "TE COMP"
  }
> db.Student.find({$and:[{"Name":"Piyush"}, {"Rno":"2"}]}).pretty();
> db.Student.find({$or:[{"Name":"Piyush"}, {"Rno":"2"}]}).pretty();
{
  "_id" : ObjectId("670fdae9b068d3e3cfcfd4f9"),
  "Rno" : "1",
  "Name" : "Piyush",
  "Class" : "TE COMP"
}
{
  "_id" : ObjectId("670fdaf4b068d3e3cfcfd4fa"),
  "Rno" : "2",
  "Name" : "Abhi",
  "Class" : "TE COMP"
}
> db.Student.find({$or:[{"Name":"Piyush"}, {"Class":"TE COMP"}]}).pretty();
{
  "_id" : ObjectId("670fdae9b068d3e3cfcfd4f9"),
  "Rno" : "1",
  "Name" : "Piyush",
  "Class" : "TE COMP"
}
{
  "_id" : ObjectId("670fdaf4b068d3e3cfcfd4fa"),
  "Rno" : "2",
  "Name" : "Abhi",
  "Class" : "TE COMP"
}
{
  "_id" : ObjectId("670fdaffb068d3e3cfcfd4fb"),
  "Rno" : "3",
  "Name" : "Ashley",
  "Class" : "TE COMP"
}
{
  "_id" : ObjectId("670fdb0ab068d3e3cfcfd4fc"),
  "Rno" : "4",
  "Name" : "Henry",
  "Class" : "TE COMP"
}
{
  "_id" : ObjectId("670fdb13b068d3e3cfcfd4fd"),
  "Rno" : "5",

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    "Name" : "Pratik",
    "Class" : "TE COMP"
  }
  {
    "_id" : ObjectId("670fdb1db068d3e3cfcfd4fe"),
    "Rno" : "6",
    "Name" : "Pratik",
    "Class" : "TE COMP"
  }
> db.Student.find({$nor:[{"Name":"Piyush"}, {"Class":"TE
COMP"}]}).pretty();
{
  "_id" : ObjectId("5b8fad4ef00832a0a50b5036"),
  "RNO" : "1",
  "NAME" : "PIYUSH",
  "CLASS" : "TE COMP",
  "ADD" : "MP"
}
> db.Student.find({$nor:[{"Name":"Piyush"}, {"Rno":"2"}]}).pretty();
{
  "_id" : ObjectId("670fdaffb068d3e3cfcfd4fb"),
  "Rno" : "3",
  "Name" : "Ashley",
  "Class" : "TE COMP"
}
{
  "_id" : ObjectId("670fdb0ab068d3e3cfcfd4fc"),
  "Rno" : "4",
  "Name" : "Henry",
  "Class" : "TE COMP"
}
{
  "_id" : ObjectId("670fdb13b068d3e3cfcfd4fd"),
  "Rno" : "5",
  "Name" : "Pratik",
  "Class" : "TE COMP"
}
{
  "_id" : ObjectId("670fdb1db068d3e3cfcfd4fe"),
  "Rno" : "6",
  "Name" : "Pratik",
  "Class" : "TE COMP"
}
{
  "_id" : ObjectId("5b8fad4ef00832a0a50b5036"),

```

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    "RNO" : "1",
    "NAME" : "PIYUSH",
    "CLASS" : "TE COMP",
    "ADD" : "MP"
  }
> db.Student.find( {"Rno": { $not:{$lt:"3"}}}).pretty();
{
  "_id" : ObjectId("670fdaffb068d3e3cfcfd4fb"),
  "Rno" : "3",
  "Name" : "Ashley",
  "Class" : "TE COMP"
}
{
  "_id" : ObjectId("670fdb0ab068d3e3cfcfd4fc"),
  "Rno" : "4",
  "Name" : "Henry",
  "Class" : "TE COMP"
}
{
  "_id" : ObjectId("670fdb13b068d3e3cfcfd4fd"),
  "Rno" : "5",
  "Name" : "Pratik",
  "Class" : "TE COMP"
}
{
  "_id" : ObjectId("670fdb1db068d3e3cfcfd4fe"),
  "Rno" : "6",
  "Name" : "Pratik",
  "Class" : "TE COMP"
}
{
  "_id" : ObjectId("5b8fad4ef00832a0a50b5036"),
  "RNO" : "1",
  "NAME" : "PIYUSH",
  "CLASS" : "TE COMP",
  "ADD" : "MP"
}
> db.Student.find( {"Rno": { $eq:"5"}}).pretty();
{
  "_id" : ObjectId("670fdb13b068d3e3cfcfd4fd"),
  "Rno" : "5",
  "Name" : "Pratik",
  "Class" : "TE COMP"
}
> db.Student.find( {"Rno": { $ne:"5"}}).pretty();

```



```

{
  "_id" : ObjectId("670fdae9b068d3e3cfcfd4f9"),
  "Rno" : "1",
  "Name" : "Piyush",
  "Class" : "TE COMP"
}
{
  "_id" : ObjectId("670fdaf4b068d3e3cfcfd4fa"),
  "Rno" : "2",
  "Name" : "Abhi",
  "Class" : "TE COMP"
}
{
  "_id" : ObjectId("670fdaffb068d3e3cfcfd4fb"),
  "Rno" : "3",
  "Name" : "Ashley",
  "Class" : "TE COMP"
}
{
  "_id" : ObjectId("670fdb0ab068d3e3cfcfd4fc"),
  "Rno" : "4",
  "Name" : "Henry",
  "Class" : "TE COMP"
}
{
  "_id" : ObjectId("670fdb1db068d3e3cfcfd4fe"),
  "Rno" : "6",
  "Name" : "Pratik",
  "Class" : "TE COMP"
}
{
  "_id" : ObjectId("5b8fad4ef00832a0a50b5036"),
  "RNO" : "1",
  "NAME" : "PIYUSH",
  "CLASS" : "TE COMP",
  "ADD" : "MP"
}
> db.Student.find( {"Rno": { $gt:"5" }}).pretty();
{
  "_id" : ObjectId("670fdb1db068d3e3cfcfd4fe"),
  "Rno" : "6",
  "Name" : "Pratik",
  "Class" : "TE COMP"
}
> db.Student.find( {"Rno": { $gte:"5" }}).pretty();

```

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{
  "_id" : ObjectId("670fdb13b068d3e3cfcfd4fd"),
  "Rno" : "5",
  "Name" : "Pratik",
  "Class" : "TE COMP"
}
{
  "_id" : ObjectId("670fdb1db068d3e3cfcfd4fe"),
  "Rno" : "6",
  "Name" : "Pratik",
  "Class" : "TE COMP"
}
> db.Student.find( {"Rno": { $lt:"5"}}).pretty();
{
  "_id" : ObjectId("670fdae9b068d3e3cfcfd4f9"),
  "Rno" : "1",
  "Name" : "Piyush",
  "Class" : "TE COMP"
}
{
  "_id" : ObjectId("670fdaf4b068d3e3cfcfd4fa"),
  "Rno" : "2",
  "Name" : "Abhi",
  "Class" : "TE COMP"
}
{
  "_id" : ObjectId("670fdaffb068d3e3cfcfd4fb"),
  "Rno" : "3",
  "Name" : "Ashley",
  "Class" : "TE COMP"
}
{
  "_id" : ObjectId("670fdb0ab068d3e3cfcfd4fc"),
  "Rno" : "4",
  "Name" : "Henry",
  "Class" : "TE COMP"
}
> db.Student.find( {"Rno": { $lte:"5"}}).pretty();
{
  "_id" : ObjectId("670fdae9b068d3e3cfcfd4f9"),
  "Rno" : "1",
  "Name" : "Piyush",
  "Class" : "TE COMP"
}
{

```

```

    "_id" : ObjectId("670fdaf4b068d3e3cfcfd4fa"),
    "Rno" : "2",
    "Name" : "Abhi",
    "Class" : "TE COMP"
  }
  {
    "_id" : ObjectId("670fdaffb068d3e3cfcfd4fb"),
    "Rno" : "3",
    "Name" : "Ashley",
    "Class" : "TE COMP"
  }
  {
    "_id" : ObjectId("670fdb0ab068d3e3cfcfd4fc"),
    "Rno" : "4",
    "Name" : "Henry",
    "Class" : "TE COMP"
  }
  {
    "_id" : ObjectId("670fdb13b068d3e3cfcfd4fd"),
    "Rno" : "5",
    "Name" : "Pratik",
    "Class" : "TE COMP"
  }
}
> db.Student.find( {"Rno": { $lt:"5",$gt:"2"}}).pretty();
{
  "_id" : ObjectId("670fdaffb068d3e3cfcfd4fb"),
  "Rno" : "3",
  "Name" : "Ashley",
  "Class" : "TE COMP"
}
{
  "_id" : ObjectId("670fdb0ab068d3e3cfcfd4fc"),
  "Rno" : "4",
  "Name" : "Henry",
  "Class" : "TE COMP"
}
> db.Student.find( {"Rno": { $lte:"5",$gte:"2"}}).pretty();
{
  "_id" : ObjectId("670fdaf4b068d3e3cfcfd4fa"),
  "Rno" : "2",
  "Name" : "Abhi",
  "Class" : "TE COMP"
}
{
  "_id" : ObjectId("670fdaffb068d3e3cfcfd4fb"),

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```

    "Rno" : "3",
    "Name" : "Ashley",
    "Class" : "TE COMP"
  }
  {
    "_id" : ObjectId("670fdb0ab068d3e3cfcfd4fc"),
    "Rno" : "4",
    "Name" : "Henry",
    "Class" : "TE COMP"
  }
  {
    "_id" : ObjectId("670fdb13b068d3e3cfcfd4fd"),
    "Rno" : "5",
    "Name" : "Pratik",
    "Class" : "TE COMP"
  }
}
> db.Student.find( {"Rno": { $lte:"5",$gt:"2"}}).pretty();
{
  "_id" : ObjectId("670fdaffb068d3e3cfcfd4fb"),
  "Rno" : "3",
  "Name" : "Ashley",
  "Class" : "TE COMP"
}
{
  "_id" : ObjectId("670fdb0ab068d3e3cfcfd4fc"),
  "Rno" : "4",
  "Name" : "Henry",
  "Class" : "TE COMP"
}
{
  "_id" : ObjectId("670fdb13b068d3e3cfcfd4fd"),
  "Rno" : "5",
  "Name" : "Pratik",
  "Class" : "TE COMP"
}
}
> db.Student.find( {"Rno": { $lt:"5",$gte:"2"}}).pretty();
{
  "_id" : ObjectId("670fdaf4b068d3e3cfcfd4fa"),
  "Rno" : "2",
  "Name" : "Abhi",
  "Class" : "TE COMP"
}
{
  "_id" : ObjectId("670fdaffb068d3e3cfcfd4fb"),
  "Rno" : "3",

```

```
"Name" : "Ashley",  
"Class" : "TE COMP"  
}  
{  
  "_id" : ObjectId("670fdb0ab068d3e3cfcfd4fc"),  
  "Rno" : "4",  
  "Name" : "Henry",  
  "Class" : "TE COMP"  
}
```