

# College Database System

Md Yaseen Ahmed

1BM19CS404

## Creating COLLEGE database

```
> show dbs;
admin      0.000GB
config     0.000GB
local      0.000GB
tshirt     0.001GB
> use college;
switched to db college
```

## Creating STUDENT collection

```
> db.createCollection("Student",{autoIndexID: true});
{
  "ok" : 0,
  "errmsg" : "BSON field 'create.autoIndexID' is an unknown field.",
  "code" : 40415,
  "codeName" : "Location40415"
}
```

## Inserting a document into the STUDENT collection

```
> db.Student.insert({ name: "Md Yaseen", usn: "1BM19CS404", sem: 6, dept: "CSE" });
WriteResult({ "nInserted" : 1 })
```

```
> db.Student.insert({ name: "John Doe", usn: "1BM19IS104", sem: 4, dept: "ISE" });
WriteResult({ "nInserted" : 1 })
> db.Student.insert({ name: "Virat", usn: "1BM18CS172", sem: 6, dept: "CSE" });
WriteResult({ "nInserted" : 1 })
> db.Student.insert({ name: "David", usn: "1BM18CS007", sem: 6, dept: "CSE" });
WriteResult({ "nInserted" : 1 })
```

## Reading the documents from the STUDENT collection

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```
> db.Student.find().pretty()
{
  "_id" : ObjectId("6078095738b4d4382aa108c2"),
  "name" : "Md Yaseen",
  "usn" : "1BM19CS404",
  "sem" : 6,
  "dept" : "CSE"
}
{
  "_id" : ObjectId("60780c8038b4d4382aa108c3"),
  "name" : "John Doe",
  "usn" : "1BM19IS104",
  "sem" : 4,
  "dept" : "ISE"
}
{
  "_id" : ObjectId("60780cac38b4d4382aa108c4"),
  "name" : "Virat",
  "usn" : "1BM18CS172",
  "sem" : 6,
  "dept" : "CSE"
}
{
  "_id" : ObjectId("60780cc238b4d4382aa108c5"),
  "name" : "David",
  "usn" : "1BM18CS007",
  "sem" : 6,
  "dept" : "CSE"
}
```

**Updating a document in the STUDENT collection (setting the semester as "7" where the student's name is "Md Yaseen")**

```
> db.Student.update({name: "Md Yaseen"},{$set:{sem: 7}});
WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })
```

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```
> db.Student.find({name:"Md Yaseen"}).pretty();
{
  "_id" : ObjectId("6078095738b4d4382aa108c2"),
  "name" : "Md Yaseen",
  "usn" : "1BM19CS404",
  "sem" : 7,
  "dept" : "CSE"
}
```

Deleting a document from the STUDENT collection whose name is "David"

```
> db.Student.remove({name:"David"});
WriteResult({ "nRemoved" : 1 })
```

```
> db.Student.find({name:"David"}).pretty()
> db.Student.find().pretty()
{
  "_id" : ObjectId("6078095738b4d4382aa108c2"),
  "name" : "Md Yaseen",
  "usn" : "1BM19CS404",
  "sem" : 7,
  "dept" : "CSE"
}
{
  "_id" : ObjectId("60780c8038b4d4382aa108c3"),
  "name" : "John Doe",
  "usn" : "1BM19IS104",
  "sem" : 4,
  "dept" : "ISE"
}
{
  "_id" : ObjectId("60780cac38b4d4382aa108c4"),
  "name" : "Virat",
  "usn" : "1BM18CS172",
  "sem" : 6,
  "dept" : "CSE"
}
```

FACULTY collection:

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```
> db.createCollection("faculty",{ autoIndexID: true });
{
  "ok" : 0,
  "errmsg" : "BSON field 'create.autoIndexID' is an unknown field.",
  "code" : 40415,
  "codeName" : "Location40415"
}
```

```
db.getCollection('faculty').find({})
```

faculty 0.002 sec.

	_id	name	faculty_id	experience	dept	salary
1	ObjectId("607812da38b4d4382aa108c6")	Morgan	3124.0	5 Years	CSE	75000.0
2	ObjectId("6078130438b4d4382aa108c7")	Tukaram	4512.0	6 Years	CSE	75000.0
3	ObjectId("607813d738b4d4382aa108c8")	Tukaram	4512.0	6 Years	CSE	65000.0
4	ObjectId("607813fc38b4d4382aa108c9")	Rahul	1145.0	8 Years	ISE	50000.0
5	ObjectId("6078144d38b4d4382aa108ca")	Virat	7654.0	3 Years	ISE	45000.0
6	ObjectId("6078145f38b4d4382aa108cb")	Rohit	7454.0	5 Years	ISE	45000.0

## COE collection:

```
> db.createCollection("COE",{autoIndexID:true});
{
  "ok" : 0,
  "errmsg" : "BSON field 'create.autoIndexID' is an unknown field.",
  "code" : 40415,
  "codeName" : "Location40415"
}
```

```
> db.COE.insert({
... designation: "head",
... name: "Basvaraj"
... });
WriteResult({ "nInserted" : 1 })
> db.COE.insert({ designation: "vicehead", name: "Prasad" });
WriteResult({ "nInserted" : 1 })
> db.COE.insert({ designation: "staff", name: "Reddy" });
WriteResult({ "nInserted" : 1 })
> db.COE.insert({ designation: "staff", name: "Rahul" });
WriteResult({ "nInserted" : 1 })
```

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```
> db.COE.find().pretty();
{
  "_id" : ObjectId("6078152738b4d4382aa108cc"),
  "designation" : "head",
  "name" : "Basvaraj"
}
{
  "_id" : ObjectId("6078153e38b4d4382aa108cd"),
  "designation" : "vicehead",
  "name" : "Prasad"
}
{
  "_id" : ObjectId("6078154e38b4d4382aa108ce"),
  "designation" : "staff",
  "name" : "Reddy"
}
{
  "_id" : ObjectId("6078155938b4d4382aa108cf"),
  "designation" : "staff",
  "name" : "Rahul"
}
```

db.getCollection('COE').find({})		
COE 0.002 sec.		
Key	Value	Type
▼ (1) ObjectId("6078152738b4d4382aa108cc")	{ 3 fields }	Object
_id	ObjectId("6078152738b4d4382aa108cc")	ObjectId
designation	head	String
name	Basvaraj	String
▼ (2) ObjectId("6078153e38b4d4382aa108cd")	{ 3 fields }	Object
_id	ObjectId("6078153e38b4d4382aa108cd")	ObjectId
designation	vicehead	String
name	Prasad	String
▼ (3) ObjectId("6078154e38b4d4382aa108ce")	{ 3 fields }	Object
_id	ObjectId("6078154e38b4d4382aa108ce")	ObjectId
designation	staff	String
name	Reddy	String
▼ (4) ObjectId("6078155938b4d4382aa108cf")	{ 3 fields }	Object
_id	ObjectId("6078155938b4d4382aa108cf")	ObjectId
designation	staff	String
name	Rahul	String

## LIBRARY collection

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```
> db.createCollection("library",{ autoIndexID: true});
{
  "ok" : 0,
  "errmsg" : "BSON field 'create.autoIndexID' is an unknown field.",
  "code" : 40415,
  "codeName" : "Location40415"
}
```

```
> db.library.insert({
... book_id: 1287,
... book_name: "BDA",
... borrower_name: "Md Yaseen"
... });
WriteResult({ "nInserted" : 1 })
> db.library.insert({ book_id: 9887, book_name: "ML", borrower_name: "Ahmed" });
WriteResult({ "nInserted" : 1 })
> db.library.insert({ book_id: 9897, book_name: "OOMD", borrower_name: "John" });
WriteResult({ "nInserted" : 1 })
> db.library.insert({ book_id: 7897, book_name: "DM", borrower_name: "James" });
WriteResult({ "nInserted" : 1 })
```

```
db.getCollection('library').find({})
```

library 0.003 sec.				
	_id	book_id	book_name	borrower_name
1	<input type="checkbox"/> ObjectId("607815a638b4d4382aa108d0")	<input type="checkbox"/> 1287.0	<input type="checkbox"/> BDA	<input type="checkbox"/> Md Yaseen
2	<input type="checkbox"/> ObjectId("607815b638b4d4382aa108d1")	<input type="checkbox"/> 9887.0	<input type="checkbox"/> ML	<input type="checkbox"/> Ahmed
3	<input type="checkbox"/> ObjectId("607815c638b4d4382aa108d2")	<input type="checkbox"/> 9897.0	<input type="checkbox"/> OOMD	<input type="checkbox"/> John
4	<input type="checkbox"/> ObjectId("607815d638b4d4382aa108d3")	<input type="checkbox"/> 7897.0	<input type="checkbox"/> DM	<input type="checkbox"/> James

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```
> db.library.find().pretty();
{
  "_id" : ObjectId("607815a638b4d4382aa108d0"),
  "book_id" : 1287,
  "book_name" : "BDA",
  "borrower_name" : "Md Yaseen"
}
{
  "_id" : ObjectId("607815b638b4d4382aa108d1"),
  "book_id" : 9887,
  "book_name" : "ML",
  "borrower_name" : "Ahmed"
}
{
  "_id" : ObjectId("607815c638b4d4382aa108d2"),
  "book_id" : 9897,
  "book_name" : "OOMD",
  "borrower_name" : "John"
}
{
  "_id" : ObjectId("607815d638b4d4382aa108d3"),
  "book_id" : 7897,
  "book_name" : "DM",
  "borrower_name" : "James"
}
```

## ADMISSION collection:

```
> db.createCollection("admission",{autoIndexID:true});
{
  "ok" : 0,
  "errmsg" : "BSON field 'create.autoIndexID' is an unknown field.",
  "code" : 40415,
  "codeName" : "Location40415"
}
```

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```
> db.admission.insert({
... admission_id: 201900238,
... type: "DCET",
... amount_paid: 25300
... });
WriteResult({ "nInserted" : 1 })
> db.admission.insert({ admission_id: 201800987, type: "KCET", amount_paid: 35300 });
WriteResult({ "nInserted" : 1 })
> db.admission.insert({ admission_id: 201800351, type: "COMEDK", amount_paid: 24631 });
WriteResult({ "nInserted" : 1 })
> db.admission.insert({ admission_id: 201900231, type: "DCET", amount_paid: 25463 });
WriteResult({ "nInserted" : 1 })
```

```
> db.admission.find().pretty();
{
  "_id" : ObjectId("6078164938b4d4382aa108d4"),
  "admission_id" : 201900238,
  "type" : "DCET",
  "amount_paid" : 25300
}
{
  "_id" : ObjectId("6078165c38b4d4382aa108d5"),
  "admission_id" : 201800987,
  "type" : "KCET",
  "amount_paid" : 35300
}
{
  "_id" : ObjectId("6078167038b4d4382aa108d6"),
  "admission_id" : 201800351,
  "type" : "COMEDK",
  "amount_paid" : 24631
}
{
  "_id" : ObjectId("6078168b38b4d4382aa108d7"),
  "admission_id" : 201900231,
  "type" : "DCET",
  "amount_paid" : 25463
}
```

COLLEGE FESTIVAL collection:



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```
> db.createCollection("festival",{autoIndexID: true});
{
  "ok" : 0,
  "errmsg" : "BSON field 'create.autoIndexID' is an unknown field.",
  "code" : 40415,
  "codeName" : "Location40415"
}
```

```
> db.festival.insert({ organiser: "Md Yaseen", year: 2020, location: "Auditorium Hall - 2", capacity: "Half" });
WriteResult({ "nInserted" : 1 })
> db.festival.insert({ organiser: "John", year: 2021, location: "Auditorium Hall - 1", capacity: "Full" });
WriteResult({ "nInserted" : 1 })
> db.festival.insert({ organiser: "James", year: 2019, location: "Auditorium Hall - 1", capacity: "Full" });
WriteResult({ "nInserted" : 1 })
> db.festival.insert({ organiser: "Virat", year: 2016, location: "Seminar Hall CSE - 2", capacity: "Full" });
WriteResult({ "nInserted" : 1 })
```

```
> db.festival.find().pretty();
{
  "_id" : ObjectId("6078171838b4d4382aa108d8"),
  "organiser" : "Md Yaseen",
  "year" : 2020,
  "location" : "Auditorium Hall - 2",
  "capacity" : "Half"
}
{
  "_id" : ObjectId("6078172c38b4d4382aa108d9"),
  "organiser" : "John",
  "year" : 2021,
  "location" : "Auditorium Hall - 1",
  "capacity" : "Full"
}
{
  "_id" : ObjectId("6078173738b4d4382aa108da"),
  "organiser" : "James",
  "year" : 2019,
  "location" : "Auditorium Hall - 1",
  "capacity" : "Full"
}
{
  "_id" : ObjectId("6078175338b4d4382aa108db"),
  "organiser" : "Virat",
  "year" : 2016,
  "location" : "Seminar Hall CSE - 2",
  "capacity" : "Full"
}
```