```
omii@omii:~$ sudo service mongod start
[sudo] password for omii:
omii@omii:~$ mongosh
Current Mongosh Log ID:      65271deb3364066931fdd77a
Connecting to:
        mongodb://127.0.0.1:27017/?directConnection=true&serverSelectionTimeoutMS=2000&ap
pName=mongosh+2.0.1
Using MongoDB:              7.0.2
Using Mongosh:              2.0.1

For mongosh info see: https://docs.mongodb.com/mongodb-shell/

------
   The server generated these startup warnings when booting
   2023-10-12T03:42:56.864+05:30: Using the XFS filesystem is strongly recommended with the
WiredTiger storage engine. See http://dochub.mongodb.org/core/prodnotes-filesystem
   2023-10-12T03:42:57.197+05:30: Access control is not enabled for the database. Read and write
access to data and configuration is unrestricted
   2023-10-12T03:42:57.197+05:30: vm.max_map_count is too low
------

test> show dbs;
admin     40.00 KiB
collage   40.00 KiB
config    108.00 KiB
local     72.00 KiB
test> use collage;
switched to db collage
collage> db.student.insert({Rollno:1,
... name:"Anjali",
... class:"T.E",
... Div:"B",
... Subject:"Toc",
... Marks:90,
... Address:"Pune"});
DeprecationWarning: Collection.insert() is deprecated. Use insertOne, insertMany, or bulkWrite.
{
  acknowledged: true,
  insertedIds: { '0': ObjectId("6526d1973364066931fdd77b") }
}
collage> db.student.insert({ Rollno: 2, name: "Om", class: "T.E", Div: "B", Subject: "Toc", Marks:
85, Address: "Pune" });
{
  acknowledged: true,
  insertedIds: { '0': ObjectId("6526d1eb3364066931fdd77c") }
}
collage> db.student.insert({ Rollno: 3, name: "Kalpesh", class: "T.E", Div: "A", Subject: "Dbms",
Marks: 87, Address: "Mumbai" });
{
  acknowledged: true,
  insertedIds: { '0': ObjectId("6526d21b3364066931fdd77d") }
}
```

```
collage> db.student.insert({ Rollno: 4, name: "Dipali", class: "S.E", Div: "A", Subject: "Dbms",
Marks: 80, Address: "Nashik" });
{
  acknowledged: true,
  insertedIds: { '0': ObjectId("6526d2553364066931fdd77e") }
}
collage> db.student.insert({ Rollno: 5, name: "Mayur", class: "S.E", Div: "B", Subject: "SPOS",
Marks: 72, Address: "Delhi" });
{
  acknowledged: true,
  insertedIds: { '0': ObjectId("6526d2963364066931fdd77f") }
}
collage> db.student.insert({ Rollno: 6, name: "Rohini", class: "T.E", Div: "A", Subject: "SPOS",
Marks: 77, Address: "Pune" });
{
  acknowledged: true,
  insertedIds: { '0': ObjectId("6526d2df3364066931fdd780") }
}
collage> db.student.insert({ Rollno: 7, name: "Sonu", class: "S.E", Div: "A", Subject: "SPM",
Marks: 55, Address: "Mumbai" });
{
  acknowledged: true,
  insertedIds: { '0': ObjectId("6526d32e3364066931fdd781") }
}
collage> db.student.insert({ Rollno: 8, name: "Pratik", class: "T.E", Div: "B", Subject: "CN",
Marks: 69, Address: "Nagar" });
{
  acknowledged: true,
  insertedIds: { '0': ObjectId("6526d3703364066931fdd782") }
}
collage> db.student.insert({ Rollno: 9, name: "yash", class: "T.E", Div: "B", Subject: "Dbms",
Marks: 26, Address: "Nagar" });
{
  acknowledged: true,
  insertedIds: { '0': ObjectId("6526d58f3364066931fdd783") }
}

1.
collage> db.student.aggregate([
... {$match:{Subject:"Toc"}},
... {$group:{_id:null,avgMarks:{$avg:"$Marks"}}}
... ]);
[ { _id: null, avgMarks: 87.5 } ]

2.
collage> db.student.aggregate([
... { $group: { _id: "$Div", count: { $sum: 1 } } }
... ]);
[
  { _id: 'B', count: 4 },
  { _id: null, count: 1 },
  { _id: 'A', count: 4 }
```

]

3.
collage> db.student.aggregate([{ $match: { Div: "B", Subject: "Dbms" } }, { $group: { _id: null, minMarks: { $min: "$Marks" } } }]);
[{ _id: null, minMarks: 26 }]

4.
collage> db.student.aggregate([
... { $match: { Address: "Pune", Subject: "SPOS" } },
...   { $group: { _id: null, totalMarks: { $sum: "$Marks" } } }
...]);
[{ _id: null, totalMarks: 77 }]

5.
collage> db.student.aggregate([
... { $group: { _id: { Div: "$Div", Subject: "DBMS" }, count: { $sum: 1 } } }
...]);
[
  { _id: { Subject: 'DBMS' }, count: 1 },
  { _id: { Div: 'A', Subject: 'DBMS' }, count: 4 },
  { _id: { Div: 'B', Subject: 'DBMS' }, count: 5 }
]

6.
collage> db.student.aggregate([{ $group: { _id: { Div: "$Div", Subject: "DBMS" }, count: { $sum: 1 }}}]);
[
  { _id: { Subject: 'DBMS' }, count: 1 },
  { _id: { Div: 'A', Subject: 'DBMS' }, count: 4 },
  { _id: { Div: 'B', Subject: 'DBMS' }, count: 5 }
]

7.
collage> db.student.aggregate([{ $match: { Subject: "CN" } }, { $group: { _id: "$Address", maxMarks: { $max: "$Marks" } }}]);
[{ _id: 'Nagar', maxMarks: 69 }]

8.
collage> db.student.aggregate([{ $group: { _id: null, avgMarks: { $avg: "$Marks" } }}]);
[{ _id: null, avgMarks: 71.22222222222223 }]

9.
collage> db.student.updateMany({}, { $push: { Grades: "A" } });
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 10,
  modifiedCount: 10,
  upsertedCount: 0

}

10.
collage> db.student.createIndex({ Name: 1, Class: 1 });
Name_1_Class_1

11.
collage> db.student.createIndex({ Name: 1 });
Name_1

12.
collage> db.student.dropIndex({ Name: 1 });
{ nIndexesWas: 3, ok: 1 }
collage>
(To exit, press Ctrl+C again or Ctrl+D or type .exit)
collage>