LAB PROGRAM

```
 1 use test
 2 db.students.insertMany([
 3     {roll_no: 101, name: "Aarav Kumar", age: 20, course: "Computer Science",marks: 88, city: "Delhi"},
 4     {roll_no: 102, name: "Anika Sharma", age: 21, course: "Artificial Intelligence",marks: 92, city: "Mumbai"},
 5     {roll_no: 103, name: "Ravi Patel", age: 22, course: "Data Science",marks: 85, city: "Ahmedabad"},
 6     {roll_no: 104, name: "Meera Das", age: 20, course: "Cyber Security",marks: 90, city: "Kolkata"},
 7     {roll_no: 105, name: "Saanvi Reddy", age: 23, course: "Information Technology",marks: 87, city: "Hyderabad"}
 8 ])
 9 db.students.find().sort({marks: -1}).limit(1)
10 db.students.aggregate([
11     {
12         $group: {
13             _id: null,
14             avgMarks: {$avg: "$marks"}
15         }
16     }
17 ])
18 db.students.updateOne(
19     {name: "Anika Sharma"},
20     {$set: {marks: 98}}
21 )
22 db.students.find(
23     {marks: {$gt: 85}},
24     {name: 1,marks: 1, _id: 0}
25 )
26 db.students.find(
27     {city: "Mumbai"},
28     {name:1,course: 1,_id:0}
29 )
30 db.students.find(
31     {}.
db.students.find(
    {city: "Mumbai"},
    {name:1,course: 1,_id:0}
)
db.students.find(
    {},
    {name:1,marks:1,_id:0}
)
db.students.aggregate([
    {
        $group: {
            _id: null,
            totalMarks: {$sum: "$marks"}
        }
    }
])
```

```
test> ... ... ... ... ... ... {
  acknowledged: true,
  insertedIds: {
    '0': ObjectId('692a83f293469ecaf86b128c'),
    '1': ObjectId('692a83f293469ecaf86b128d'),
    '2': ObjectId('692a83f293469ecaf86b128e'),
    '3': ObjectId('692a83f293469ecaf86b128f'),
    '4': ObjectId('692a83f293469ecaf86b1290')
  }
}
test> [
  {
    _id: ObjectId('692a83f293469ecaf86b128d'),
    roll_no: 102,
    name: 'Anika Sharma',
    age: 21,
    course: 'Artificial Intelligence',
    marks: 92,
    city: 'Mumbai'
  }
]
test> ... ... ... ... ... ... ...[ { _id: null, avgMarks: 88.4 } ]
test> ... ... ... {
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}
test> ... ... ... [
  { name: 'Aarav Kumar', marks: 88 },
  { name: 'Anika Sharma', marks: 98 },
  { name: 'Meera Das', marks: 90 },
  { name: 'Saanvi Reddy', marks: 87 }
]
test> ... ... ... [ { name: 'Anika Sharma', course: 'Artificial Intelligence' } ]
test> ... ... ... [
  { name: 'Aarav Kumar', marks: 88 },
  { name: 'Anika Sharma', marks: 98 },
  { name: 'Ravi Patel', marks: 85 },
  { name: 'Meera Das', marks: 90 },
  { name: 'Saanvi Reddy', marks: 87 }
]
test> ... ... ... ... ... ... ... [ { _id: null, totalMarks: 448 } ]
test>
```