

INSERTING DOCUMENTS

```
1) db.Employee.insertOne({emono: 111,ename: "Deepali Vaidya",sal:
40000.00,dept: { deptno: 12, dname: "Hr", dloc: "Mumbai" },Desg:"Analyst",mgr:
{ name: "Satish", num: 111 },project: [{ name: "Project-1", Hrs: 4 }, { name:
"project-2", Hrs: 4 }]});
```

```
2) db.Employee.insertOne({emono: 112,ename: "Rajesh Prasad",sal:
55000.00,dept: { deptno: 10, dname: "Sales", dloc: "Pune" },Desg: "CLERK",mgr: {
name: "Rajan", num: 222 },project: [{ name: "project-1", Hrs: 2 }, { name: "project-
4", Hrs: 3 }]});
```

```
3) db.Employee.insertMany([{emono: 113,ename: "Priya Shah",sal:
28000.00,dept: { deptno: 15, dname: "Finance", dloc: "Mumbai" },Desg:
"Analyst",mgr: { name: "Tushar", num: 333 },project: [{ name: "project-2", Hrs: 4
}, { name: "project-3", Hrs: 2 }]}, {emono: 114,ename: "Deepak Kumar",sal:
8000.00,dept: { deptno: 18, dname: "IT", dloc: "Bangalore" },Desg: "CLERK",mgr: {
name: "Revati", num: 444 },project: [{ name: "project-1", Hrs: 5 }, { name:
"project-2", Hrs: 4 }]}]);
```

```
4)db.Employee.insertOne({emono: 115,ename: "Sneha Deshmukh",sal:
32000.00,dept: { deptno: 12, dname: "Hr", dloc: "Mumbai" },Desg:
"Manager",mgr: { name: "Tushar", num: 333 },project: [{ name: "project-3", Hrs: 4
}, { name: "project-4", Hrs: 2 }]});
```

mongosh mongod://127.0.0.1 x + v

shoppingapp> db.Employee.find()

```
[
  {
    _id: ObjectId("64e4dcbe2e23fc9a70b678f7"),
    emono: 111,
    ename: 'Deepali Vaidya',
    sal: 40000,
    dept: { deptno: 12, dname: 'Hr', dloc: 'Mumbai' },
    Desg: 'Analyst',
    mgr: { name: 'Satish', num: 111 },
    project: [ { name: 'Project-1', Hrs: 4 }, { name: 'project-2', Hrs: 4 } ]
  },
  {
    _id: ObjectId("64e4dd112e23fc9a70b678f8"),
    emono: 112,
    ename: 'Rajesh Prasad',
    sal: 55000,
    dept: { deptno: 10, dname: 'Sales', dloc: 'Pune' },
    Desg: 'CLERK',
    mgr: { name: 'Rajan', num: 222 },
    project: [ { name: 'project-1', Hrs: 2 }, { name: 'project-4', Hrs: 3 } ]
  },
  {
    _id: ObjectId("64e4e177fe84c4ae2f0ec66a"),
    emono: 113,
    ename: 'Priya Shah',
    sal: 28000,
    dept: { deptno: 15, dname: 'Finance', dloc: 'Mumbai' },
    Desg: 'Analyst',
    mgr: { name: 'Tushar', num: 333 },
    project: [ { name: 'project-2', Hrs: 4 }, { name: 'project-3', Hrs: 2 } ]
  },
  {
    _id: ObjectId("64e4e19bfe84c4ae2f0ec66b"),
    emono: 114,
    ename: 'Deepak Kumar',
    sal: 8000,
    dept: { deptno: 18, dname: 'IT', dloc: 'Bangalore' },
    Desg: 'CLERK',
    mgr: { name: 'Revati', num: 444 },
    project: [ { name: 'project-1', Hrs: 5 }, { name: 'project-2', Hrs: 4 } ]
  },
  {
    _id: ObjectId("64e4e1a6fe84c4ae2f0ec66c"),
    emono: 115,
    ename: 'Sneha Deshmukh',
    sal: 32000,
    dept: { deptno: 12, dname: 'Hr', dloc: 'Mumbai' },
    Desg: 'Manager',
    mgr: { name: 'Tushar', num: 333 },
    project: [ { name: 'project-3', Hrs: 4 }, { name: 'project-4', Hrs: 2 } ]
  }
]
```

1. All Employee's with the desg as 'CLERK' are now called as (AO) Administrative Officers. Update the Employee collection for this.

```
db.Employee.updateMany({ Desg: 'CLERK' }, { $set: { Desg: 'AO' } });
```

```
shoppingapp> db.Employee.updateMany({ Desg: 'CLERK' }, { $set: { Desg: 'AO' } });
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 2,
  modifiedCount: 2,
  upsertedCount: 0
}
```

2. Change the number of hours for project-1 to 5 for all employees with designation analyst.

```
db.Employee.updateMany({ Desg: 'Analyst', 'project.name': 'Project-1' }, { $set: { 'project.$.Hrs': 5 } });
```

```
shoppingapp> db.Employee.updateMany({ Desg: 'Analyst', 'project.name': 'Project-1' }, { $set: { 'project.$.Hrs': 5 } });
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}
shoppingapp> db.Employee.find()
[
  {
    _id: ObjectId("64e4dcbe2e23fc9a70b678f7"),
    emono: 111,
    ename: 'Deepali Vaidya',
    sal: 40000,
    dept: { deptno: 12, dname: 'Hr', dloc: 'Mumbai' },
    Desg: 'Analyst',
    mgr: { name: 'Satish', num: 111 },
    project: [ { name: 'Project-1', Hrs: 5 }, { name: 'project-2', Hrs: 4 } ]
  },
  ...
]
```

3. Add 2 projects project-3 and project-4 for employee whose name starts with "Deep" with 2 hrs

db.Employee.updateMany({ ename: /^Deep/ },{\$push: {project: { \$each: [{ name: "project-3", Hrs: 2 }, { name: "project-4", Hrs: 2 }]}}});

```
shoppingapp> db.Employee.updateMany({ ename: /^Deep/ },{$push: {project: { $each: [{ name: "project-3", Hrs: 2 }, { name: "project-4", Hrs: 2 } ]}}});
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 2,
  modifiedCount: 2,
  upsertedCount: 0
}
```

4. Add bonus Rs 2000 for all employees with salary > 50000 and 1500 if salary <50000 and >30000 otherwise bonus will be 1000

(i) db.Employee.updateMany({ sal: { \$gt: 50000 } },{ \$set: { bonus: 2000 } });

(ii) db.Employee.updateMany({ sal: { \$lt: 50000, \$gt: 30000 } },{ \$set: { bonus: 1500 } });

(iii) db.Employee.updateMany({ sal: { \$lt: 30000 } }, { \$set: { bonus: 1000 } });

```
shoppingapp> db.Employee.updateMany({ sal: { $gt: 50000 } },{ $set: { bonus: 2000 } });
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}
shoppingapp> db.Employee.updateMany({ sal: { $lt: 50000, $gt: 30000 } },{ $set: { bonus: 1500 } });
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 2,
  modifiedCount: 2,
  upsertedCount: 0
}
shoppingapp> db.Employee.updateMany({ sal: { $lt: 30000 } }, { $set: { bonus: 1000 } });
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 2,
  modifiedCount: 2,
  upsertedCount: 0
}
```

5. Change manager name to Tushar for all employees whose manager is currently "satish" And manager number to 3333

```
db.Employee.updateMany({ 'mgr.name': 'Satish' }, { $set: { 'mgr.name': 'Tushar', 'mgr.num': 3333 } });
```

```
shoppingapp> db.Employee.updateMany({ 'mgr.name': 'Satish' }, { $set: { 'mgr.name': 'Tushar', 'mgr.num': 3333 } });
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}
```

6. Increase the salary of all employees from "purchase department" by 15000.

```
db.Employee.updateMany({ 'dept.dname': 'purchase' }, { $inc: { sal: 15000 } });
```

```
shoppingapp> db.Employee.updateMany({ 'dept.dname': 'purchase' }, { $inc: { sal: 15000 } });
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 0,
  modifiedCount: 0,
  upsertedCount: 0
}
```

7. Decrease the number of hours by 2 for all employees who are working on 'project-2'.

```
db.Employee.updateMany({ 'project.name': 'project-2' }, { $inc: { 'project.$.Hrs': -2 } });
```

```
shoppingapp> db.Employee.updateMany({ 'project.name': 'project-2' }, { $inc: { 'project.$.Hrs': -2 } });
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 3,
  modifiedCount: 3,
  upsertedCount: 0
}
```

8. Delete 'project-2' from all employee documents if they are working on the project for 4 hrs.

```
db.Employee.updateMany({ 'project.name': 'project-2', 'project.Hrs': 4 }, { $pull: { project: { name: 'project-2' } } });
```

```
shoppingapp> db.Employee.updateMany({ 'project.name': 'project-2', 'project.Hrs': 4 }, { $pull: { project: { name: 'project-2' } } });
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 0,
  modifiedCount: 0,
  upsertedCount: 0
}
```

9. Change the salary of employees to 10000 only if their salary is < 10000

```
db.Employee.updateMany({ sal: { $lt: 10000 } }, { $set: { sal: 10000 } });
```

```
shoppingapp> db.Employee.updateMany({ sal: { $lt: 10000 } }, { $set: { sal: 10000 } });
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}
```

10. Increase the bonus of all employees by 500 if the bonus is < 2000, or their salary is < 20000, or if they belong to the sales department.

```
db.Employee.updateMany({$or: [{ bonus: { $lt: 2000 } }, { sal: { $lt: 20000 } }, { 'dept.dname': 'sales' } ]}, { $inc: { bonus: 500 } });
```

```
shoppingapp> db.Employee.updateMany({$or: [{ bonus: { $lt: 2000 } }, { sal: { $lt: 20000 } }, { 'dept.dname': 'sales' } ]}, { $inc: { bonus: 500 } });
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 4,
  modifiedCount: 4,
  upsertedCount: 0
}
```

11. Add 2 new projects at position 2 for all employees with the designation 'Analyst' or salary equal to either 30000 or 33000 or 35000

```
db.Employee.updateMany({$or: [{ Desg: 'Analyst' }, { sal: { $in: [30000, 33000, 35000] } } ]}, {$push: {project: { $each: [{ name: 'New-Project-1', Hrs: 0 }, { name: 'New-Project-2', Hrs: 0 }], $position: 1}}});
```

```
shoppingapp> db.Employee.updateMany({$or: [{ Desg: 'Analyst' }, { sal: { $in: [30000, 33000, 35000] } } ]}, {$push: {project: { $each: [{ name: 'New-Project-1', Hrs: 0 }, { name: 'New-Project-2', Hrs: 0 }], $position: 1}}});
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 2,
  modifiedCount: 2,
  upsertedCount: 0
}
```

12. Delete the last project of all employees with the department name "HR" and if the location is Mumbai.

```
db.Employee.updateMany({'dept.dname': 'HR', 'dept.dloc': 'Mumbai'}, {$pop: {project: 1}});
```

```
shoppingapp> db.Employee.updateMany({'dept.dname': 'HR', 'dept.dloc': 'Mumbai'}, {$pop: {project: 1}});
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 0,
  modifiedCount: 0,
  upsertedCount: 0
}
```

13. Change the designation of all employees to 'Senior Programmer' if they are working on 'Project-1' for 4 hrs.

```
db.Employee.updateMany({ 'project.name': 'Project-1', 'project.Hrs': 4 }, { $set: { Desg: 'Senior Programmer' } });
```

```
shoppingapp> db.Employee.updateMany({ 'project.name': 'Project-1', 'project.Hrs': 4 }, { $set: { Desg: 'Senior Programmer' } });
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 0,
  modifiedCount: 0,
  upsertedCount: 0
}
```

14. Add a list of hobbies to all employee documents whose manager is 'Rajan' or 'Revati'.

```
db.Employee.updateMany({ 'mgr.name': { $in: ['Rajan', 'Revati'] } }, { $set: { hobbies: ['hobby1', 'hobby2'] } });
```

```
shoppingapp> db.Employee.updateMany({ 'mgr.name': { $in: ['Rajan', 'Revati'] } }, { $set: { hobbies: ['hobby1', 'hobby2'] } });
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 2,
  modifiedCount: 2,
  upsertedCount: 0
}
```

15. Add a list of skillset to all employee documents who are working on 'project-4' for 3 hrs or on 'project-3' for 4 hrs.

```
db.Employee.updateMany({$or: [{ 'project.name': 'project-4', 'project.Hrs': 3 }, { 'project.name': 'project-3', 'project.Hrs': 4 } ]}, { $set: { skillset: ['skill1', 'skill2'] } });
```

```
shoppingapp> db.Employee.updateMany({$or: [{ 'project.name': 'project-4', 'project.Hrs': 3 }, { 'project.name': 'project-3', 'project.Hrs': 4 } ]}, { $set: { skillset: ['skill1', 'skill2'] } });
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 2,
  modifiedCount: 2,
  upsertedCount: 0
}
```

16. Add a new hobby 'blogging' at the 3rd position in the hobbies array for all employees whose name starts with 'R' or 'P' and ends with 'J' or 'S'.

```
db.Employee.updateMany({$or: [{ ename: { $regex: /^[RP].*[JS]$/ } } ]}, {$push: { hobbies: { $each: ['blogging'], $position: 2 } } });
```

```
shoppingapp> db.Employee.updateMany({$or: [{ ename: { $regex: /^[RP].*[JS]$/ } } ]}, {$push: { hobbies: { $each: ['blogging'], $position: 2 } } });
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 0,
  modifiedCount: 0,
  upsertedCount: 0
}
```


17. Increase the salary by 10000 for all employees who are working on 'project-2' or 'project-3' or 'project-1'. Decrease the bonus by 1000 rs and increase the salary by 1000 rs for all employees whose department location is 'Mumbai'.

(i) `db.Employee.updateMany({ "project.name": { $in: ["project-1", "project-2", "project-3"] } }, { $inc: { "sal": 10000 } });`

(ii) `db.Employee.updateMany({ "dept.dloc": "Mumbai" }, { $inc: { "bonus": -1000, "sal": 1000 } });`

```
shoppingapp> db.Employee.updateMany({ "project.name": { $in: ["project-1", "project-2", "project-3"] } }, { $inc: { "sal": 10000 } });
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 5,
  modifiedCount: 5,
  upsertedCount: 0
}
shoppingapp> db.Employee.updateMany({ "dept.dloc": "Mumbai" }, { $inc: { "bonus": -1000, "sal": 1000 } });
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 3,
  modifiedCount: 3,
  upsertedCount: 0
}
```

18. Remove all employees working on 'project-1'.

`db.Employee.updateMany({ 'project.name': 'project-1' }, { $pull: { project: { name: 'project-1' } } });`

```
shoppingapp> db.Employee.updateMany({ 'project.name': 'project-1' }, { $pull: { project: { name: 'project-1' } } });
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 2,
  modifiedCount: 2,
  upsertedCount: 0
}
```

19. Replace the document of the employee with the name "Deepak" with a new document.

```
db.Employee.replaceOne({ ename: "Deepak " },{emono: 120,ename: "New Employee",sal: 60000.00,dept: { deptno: 18, dname: "Finance", dloc: "Mumbai" },Desg: "Manager",mgr: { name: "Rajan", num: 777 },project: [{ name: "Project-5", Hrs: 5 },{ name: "Project-6", Hrs: 6 }],hobbies: ["reading", "travelling"],skillset: ["Java", "SQL"]});
```

```
shoppingapp> db.Employee.replaceOne({ ename: "Deepak " },{emono: 120,ename: "New Employee",sal: 60000.00,dept: { deptno: 18, dname: "Finance", dloc: "Mumbai" },Desg: "Manager",mgr: { name: "Rajan", num: 777 },project: [{ name: "Project-5", Hrs: 5 },{ name: "Project-6", Hrs: 6 }],hobbies: ["reading", "travelling"],skillset: ["Java", "SQL"]});
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 0,
  modifiedCount: 0,
  upsertedCount: 0
}
```

20. Change the skill "python" to "python 3.8" for all employees if "python" is in the skillset.

```
db.Employee.updateMany({ skillset: "python" },{ $set: { "skillset.$": "python 3.8" } });
```

```
shoppingapp> db.Employee.updateMany({ skillset: "python" },{ $set: { "skillset.$": "python 3.8" } });
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 0,
  modifiedCount: 0,
  upsertedCount: 0
}
```

21. Add two skills "MongoDB" and "Perl" at the end of the skillset array for all employees who are working at Pune location.

```
db.Employee.updateMany({ 'dept.dloc': 'Pune' },{ $push: { skillset: { $each: ['MongoDB', 'Perl'] } } });
```

```
shoppingapp> db.Employee.updateMany({ 'dept.dloc': 'Pune' }, { $push: { skillset: { $each: ['MongoDB', 'Perl'] } } });
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}
```

22. Delete the first hobby from the hobby array for all employees who are working on 'project-1' or 'project-2'.

```
db.Employee.updateMany({ 'project.name': { $in: ['project-1', 'project-2'] } }, {
  $pop: { hobbies: -1 } });
```

```
shoppingapp> db.Employee.updateMany({ 'project.name': { $in: ['project-1', 'project-2'] } }, { $pop: { hobbies: -1 } });
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 2,
  modifiedCount: 0,
  upsertedCount: 0
}
```

23. Delete the last hobby from the hobbies array for all employees who are working on the project that is at the 2nd position in the projects array for 4 hrs.

```
db.Employee.updateMany({ 'project.1.Hrs': 4 }, { $pop: { hobbies: 1 } });
```

```
shoppingapp> db.Employee.updateMany({ 'project.1.Hrs': 4 }, { $pop: { hobbies: 1 } });
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 0,
  modifiedCount: 0,
  upsertedCount: 0
}
```

24. Add 2 new projects at the end of the array for all employees whose skillset contains "Perl" or "python".

```
db.Employee.updateMany({ skillset: { $in: ['Perl', 'python'] } }, { $push: { project: {
  $each: [{ name: 'New-Project-3', Hrs: 0 }, { name: 'New-Project-4', Hrs: 0 } ] } } });
```

```
shoppingapp> db.Employee.updateMany({ skillset: { $in: ['Perl', 'python'] } }, { $push: { project: { $each: [{ name: 'New-Project-3', Hrs: 0 }, { name: 'New-Project-4', Hrs: 0 }] } } });
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}
```

25. Change Hrs to 6 for 'project-1' for all employees if they are working on 'project-1' for less than 6 hrs. Otherwise keep the existing value.

```
db.Employee.updateMany({ 'project.name': 'Project-1', 'project.Hrs': { $lt: 6 } }, {
  $set: { 'project.$.Hrs': 6 } });
```

```
shoppingapp> db.Employee.updateMany({ 'project.name': 'Project-1', 'project.Hrs': { $lt: 6 } }, { $set: { 'project.$.Hrs': 6 } });
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}
```