INSERTING DATA

```
mongosh mongodb://127.0.0.1:27017/?directConnection=true&serverSelectionTimeoutMS=2000
...         {"name": "Project-6", "Hrs": 8}
...       ]
...     },
...     {
...       "emono": 114,
...       "ename": "Neha Kapoor",
...       "sal": 49000.00,
...       "dept": {
...         "deptno": 18,
...         "dname": "Marketing",
...         "dloc": "Mumbai"
...       },
...       "Desg": "Marketing Specialist",
...       "mgr": {
...         "name": "Rajesh",
...         "num": 118
...       },
...       "project": [
...         {"name": "Project-7", "Hrs": 3},
...         {"name": "Project-8", "Hrs": 5}
...       ]
...     },
...     {
...       "emono": 115,
...       "ename": "Amit Verma",
...       "sal": 72000.00,
...       "dept": {
...         "deptno": 31,
...         "dname": "Finance",
...         "dloc": "Delhi"
...       },
...       "Desg": "Financial Analyst",
...       "mgr": {
...         "name": "Aparna",
...         "num": 119
...       },
...       "project": [
...         {"name": "Project-9", "Hrs": 7},
...         {"name": "Project-10", "Hrs": 6}
...       ]
...     }
... ]);
{
  acknowledged: true,
  insertedIds: {
    '0': ObjectId("64e5f717219bba1838118666"),
    '1': ObjectId("64e5f717219bba1838118667"),
    '2': ObjectId("64e5f717219bba1838118668"),
    '3': ObjectId("64e5f717219bba1838118669"),
    '4': ObjectId("64e5f717219bba183811866a")
  }
}
```

QUESTIONS

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

```
company> db.employee.updateMany(
...      { Desg: "CLERK" },
...      { $set: { Desg: "Administrative Officer (AO)" } }
... )
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 0,
  modifiedCount: 0,
  upsertedCount: 0
}
company>
```

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

```
company> db.employee.updateMany(
...      { Desg: "Analyst" },
...      { $set: { "project.$[proj].Hrs": 5 } },
...      { arrayFilters: [{ "proj.name": "Project-1" }] }
... )
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}
company>
```

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

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

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

```
company> db.employee.updateMany(
...     { },
...     [
...         {
...             $set: {
...                 bonus: {
...                     $cond: {
...                         if: { $gt: ["$sal", 50000] },
...                         then: 2000,
...                         else: {
...                             $cond: {
...                                 if: { $gt: ["$sal", 30000] },
...                                 then: 1500,
...                                 else: 1000
...                             }
...                         }
...                     }
...                 }
...             }
...         }
...     ]
... )
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 5,
  modifiedCount: 5,
  upsertedCount: 0
}
company>
```

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

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

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

```
company> db.employee.updateMany(
...     { "dept.dname": "purchase department" },
...     { $inc: { sal: 15000 } }
... )
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 0,
  modifiedCount: 0,
  upsertedCount: 0
}
company>
```

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

```
company> db.employee.updateMany(
...     { "project.name": "Project-2" },
...     { $inc: { "project.$[proj].Hrs": -2 } },
...     { arrayFilters: [{ "proj.name": "Project-2" }] }
... )
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 1,
  modifiedCount: 1,
  upsertedCount: 0
}
company>
```

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

```
company> db.employee.updateMany(
...     { "project.name": "Project-2", "project.Hrs": 4 },
...     { $pull: { project: { name: "Project-2", Hrs: 4 } } } )
... )
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 0,
  modifiedCount: 0,
  upsertedCount: 0
}
company> _
```

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

```
company> db.employee.updateMany(
...     { sal: { $lt: 10000 } },
...     { $set: { sal: { $max: 10000 } } } )
... )
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 0,
  modifiedCount: 0,
  upsertedCount: 0
}
company>
```

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

```
company> db.employee.updateMany(
...     { $or: [ { bonus: { $lt: 2000 } }, { sal: { $lt: 20000 } }, { "dept.dname": "sales department" } ] },
...     { $inc: { bonus: 500 } } )
... )
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 0,
  modifiedCount: 0,
  upsertedCount: 0
}
company> _
```

11. Add 2 new project at position 2 for all employees with designation analyst or salary is equal to either 30000 or 33000 or 35000.

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

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

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

13. Change Designation for all employees to senior programmer if they are working on name:"Project-1" for 4hrs

```
switched to db company
company> db.employee.updateMany(
...     { "project.name": "Project-1", "project.Hrs": 4 },
...     { $set: { Desg: "Senior Programmer" } }
... )
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 0,
  modifiedCount: 0,
  upsertedCount: 0
}
company>
```

14. Add list of hobbies in all employees document whose manager is Rajan or Revati

```
company> db.employee.updateMany(
...     { "mgr.name": { $in: ["Rajan", "Revati"] } },
...     { $set: { hobbies: ["Hobby-1", "Hobby-2"] } }
... )
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 0,
  modifiedCount: 0,
  upsertedCount: 0
}
company>
```

15. Add list of skill-set in all employee documents who are working on project-4 for 3 hrs or on project-3 for 4 hrs

```
company> db.employee.updateMany(
...     {
...         $or: [
...             { "project.name": "Project-4", "project.Hrs": 3 },
...             { "project.name": "Project-3", "project.Hrs": 4 }
...         ]
...     },
...     { $set: { skillset: ["Skill-1", "Skill-2"] } }
... )
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 0,
  modifiedCount: 0,
  upsertedCount: 0
}
company> _
```

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

```
company> db.employee.updateMany( { ename: { $regex: /^[RP].*[JS]$/ } }, { $push: { hobbies: { $each: ["blogging"], $position: 2 } } } )
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 0,
  modifiedCount: 0,
  upsertedCount: 0
}
company> _
```

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

```
company> const bulkOps = [];

company>

company> // Increase salary by 10000 for employees working on specified projects

company> bulkOps.push({
...     updateMany: {
...         filter: { "project.name": { $in: ["Project-1", "Project-2", "Project-3"] } },
...         update: { $inc: { sal: 10000 } }
...     }
... });
1
company>

company> // Decrease bonus by 1000 and increase salary by 1000 for employees in Mumbai

company> bulkOps.push({
...     updateMany: {
...         filter: { "dept.dloc": "Mumbai" },
...         update: { $inc: { bonus: -1000, sal: 1000 } }
...     }
... });
2
company>

company> // Execute the bulk operations

company> db.employee.bulkWrite(bulkOps);
{
  acknowledged: true,
  insertedCount: 0,
  insertedIds: {},
  matchedCount: 4,
  modifiedCount: 4,
  deletedCount: 0,
  upsertedCount: 0,
  upsertedIds: {}
}
company>
```

18. Remove all employees working on project-1

```
company> db.employee.deleteMany(
...     { "project.name": "Project-1" }
... )
{ acknowledged: true, deletedCount: 1 }
company>
```

19. Replace document of employee with name "Deepak" to some new document

```
company> db.employee.replaceOne(
...     { ename: "Deepak" },
...     {
...         "emono": 123,
...         "ename": "New Employee",
...         "sal": 55000.00,
...         "dept": {
...             "deptno": 10,
...             "dname": "IT",
...             "dloc": "Bengaluru"
...         },
...         "Desg": "Manager",
...         "mgr": {
...             "name": "Rajan",
...             "num": 111
...         },
...         "project": [
...             {"name": "Project-11", "Hrs": 8},
...             {"name": "Project-12", "Hrs": 6}
...         ]
...     }
... )
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 0,
  modifiedCount: 0,
  upsertedCount: 0
}
company>
```

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

```
company> db.employee.updateMany(
...     { "skillset": { $regex: /python/i } },
...     { $set: { "skillset.$": "python 3.8" } }
... )
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 0,
  modifiedCount: 0,
  upsertedCount: 0
}
company>
```

21. Add 2 skills Mongo DB and Perl at the end of the skillset array for all employees who are working at Pune location

```
company> db.employee.updateMany(
...     { "dept.dloc": "Pune" },
...     { $push: { skillset: { $each: ["MongoDb", "Perl"] } } } )
... )
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 0,
  modifiedCount: 0,
  upsertedCount: 0
}
company> _
```

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

```
company> db.employee.updateMany(
...     { $or: [ { "project.name": "Project-1" }, { "project.name": "Project-2" } ] },
...     { $pop: { hobbies: -1 } }
... )
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 0,
  modifiedCount: 0,
  upsertedCount: 0
}
company>
```

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

```
company> db.employee.updateMany(
...     { "project.1.Hrs": 4 },
...     { $pop: { hobbies: 1 } }
... )
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 0,
  modifiedCount: 0,
  upsertedCount: 0
}
company> _
```

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

```
company> db.employee.updateMany(
...      { "skillset": { $in: ["Perl", "python"] } },
...      { $push: { project: { $each: [{ name: "New-Project-1", Hrs: 5 }, { name: "New-Project-2", Hrs: 6 }] } } } )
... )
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 0,
  modifiedCount: 0,
  upsertedCount: 0
}
company>
```

25. Change hrs to 6 for project-1 for all employees if they are working on the project-1 for <6 hrs, otherwise keep the existing value

```
company> db.employee.updateMany(
...      { "project.name": "Project-1", "project.Hrs": { $lt: 6 } },
...      { $set: { "project.$[proj].Hrs": 6 } },
...      { arrayFilters: [{ "proj.name": "Project-1" }] }
... )
{
  acknowledged: true,
  insertedId: null,
  matchedCount: 0,
  modifiedCount: 0,
  upsertedCount: 0
}
company>
```

DATA AT THE END

```
company> db.employee.find();
[
  {
    _id: ObjectId("64e5f85fb438df20e0a1118c"),
    emono: 112,
    ename: 'Priya Patel',
    sal: 68000,
    dept: { deptno: 23, dname: 'Engineering', dloc: 'Bengaluru' },
    Desg: 'Engineer',
    mgr: { name: 'Sneha', num: 113 },
    project: [ { name: 'Project-3', Hrs: 6 }, { name: 'Project-4', Hrs: 5 } ],
    bonus: 2000
  },
  {
    _id: ObjectId("64e5f85fb438df20e0a1118d"),
    emono: 113,
    ename: 'Sneha Menon',
    sal: 64000,
    dept: { deptno: 23, dname: 'Engineering', dloc: 'Bengaluru' },
    Desg: 'Manager',
    mgr: { name: 'Ankur', num: 111 },
    project: [ { name: 'Project-5', Hrs: 7 }, { name: 'Project-6', Hrs: 8 } ],
    bonus: 2000
  },
  {
    _id: ObjectId("64e5f85fb438df20e0a1118e"),
    emono: 114,
    ename: 'Neha Kapoor',
    sal: 50000,
    dept: { deptno: 18, dname: 'Marketing', dloc: 'Mumbai' },
    Desg: 'Marketing Specialist',
    mgr: { name: 'Rajesh', num: 118 },
    project: [ { name: 'Project-7', Hrs: 3 }, { name: 'Project-8', Hrs: 5 } ],
    bonus: 1000
  },
  {
    _id: ObjectId("64e5f85fb438df20e0a1118f"),
    emono: 115,
    ename: 'Amit Verma',
    sal: 72000,
    dept: { deptno: 31, dname: 'Finance', dloc: 'Delhi' },
    Desg: 'Financial Analyst',
    mgr: { name: 'Aparna', num: 119 },
    project: [ { name: 'Project-9', Hrs: 7 }, { name: 'Project-10', Hrs: 6 } ],
    bonus: 2000
  }
]
company>
```