NodeJS Practical – 4

- ## Question : 3
- **3.1) Insert the following documents into the projects collection.**

  - Command :

```
db.projects.insertMany([
    {
        "title": "Inventory Management System",
        "description": "It is an Inventory Management System"
    },
    {
        "title": "Employee Management System",
        "description": "It is an Employee Management System"
    },
    {
        "title": "Project Management System",
        "description": "It is a Project Management System"
    },
    {
        "title": "Medical Information System",
        "description": "It is a Medical Information System"
    },
    {
        "title": "Online Food Ordering System",
        "description": "It is an Online Food Ordering System"
    }
])
```

- **3.2) Insert the following documents into the trainees collection.**

  - Command :

```
db.trainees.insertMany([
    {
        "_id" : ObjectId("6228fe5c3919bf8067d55dc8"),
        "fullName" : "Krushit Dudhat",
        "designation" : "Trainee Software Engineer",
        "department" : "NodeJS",
        "technologiesKnown" : [
            "NodeJS",
            "Javascript",
            "MongoDB"
        ],
        "projects" : [
            ObjectId("6228fbdb3919bf8067d55dc3"),
            ObjectId("6228fbdb3919bf8067d55dc4"),
            ObjectId("6228fbdb3919bf8067d55dc7")
        ],
        "academicDetails" : {
            "highestQualification" : "B.E/B.Tech.",
            "college" : "VGEC, Chandkheda",
            "university" : "GTU",
            "passoutYear" : 2022
        },
        "contactDetails" : {
            "primaryEmailID" : "krushit.dudhat@bacancy.com",
```

```
                "alternateEmailID" : "krushitdudhat2001@gmail.com"
            },
            "isArchived" : false
        }
        {
            "_id" : ObjectId("6228fe5c3919bf8067d55dc9"),
            "fullName" : "vinayak chavan",
            "designation" : "Trainee Software Engineer",
            "department" : "NodeJS",
            "technologiesKnown" : [
                "NodeJS",
                "Javascript"
            ],
            "projects" : [
                ObjectId("6228fbdb3919bf8067d55dc3"),
                ObjectId("6228fbdb3919bf8067d55dc4")
            ],
            "academicDetails" : {
                "highestQualification" : "B.E/B.Tech.",
                "college" : "VGEC, Chandkheda",
                "university" : "GTU",
                "passoutYear" : 2022
            },
            "contactDetails" : {
                "primaryEmailID" : "vinayak.chavan@bacancy.com",
                "alternateEmailID" : ""
            },
            "isArchived" : false
        }
])
```

- **3.3) Insert the following documents into the tasks collection.**

  - Command :

```
db.trainees.insertMany([
    {
        "title": "P1 - Task 1",
        "description": "P1 - Task 1",
        "projectID": ObjectId("6228fbdb3919bf8067d55dc3")
    },
    {
        "title": "P1 - Task 2",
        "description": "P1 - Task 2",
        "projectID": ObjectId("6228fbdb3919bf8067d55dc3")
    },
    {
        "title": "P2 - Task 2",
        "description": "P2 - Task 2",
        "projectID": ObjectId("6228fbdb3919bf8067d55dc4")
    },
    {
        "title": "P2 - Task 2",
        "description": "P2 - Task 2",
        "projectID": ObjectId("6228fbdb3919bf8067d55dc4")
    },
    {
        "title": "P3 - Task 2",
        "description": "P3 - Task 2",
        "projectID": ObjectId("6228fbdb3919bf8067d55dc5")
    },
```

```
    {
        "title": "P3 - Task 2",
        "description": "P1 - Task 2",
        "projectID": ObjectId("6228fbdb3919bf8067d55dc5")
    }
])
```

- **3.4.1) Fetch all the trainees with their project details, the result should only contain the fields: fullName, designation, department, technologiesKnown,projectDetails, primaryEmailID and also display the trainees in ascending order based on the fullName field.**

  - Command :

    db.trainees.aggregate([{$lookup: {from: "projects", localField: "projects", foreignField: "_id", as: "projectDetails"}}, {$project: {_id: 0, fullName: 1, designation:1, department:1, technologiesKnown: 1, "projectDetails.title":1, "projectDetails.description": 1, primaryEmailID:"$contactDetails.primaryEmailID"}}, {$sort: {fullName: 1}}]).pretty()

  - O/P :

```
{
        "fullName" : "Apexa Patel",
        "designation" : "Trainee Software Engineer",
        "department" : "NodeJS",
        "technologiesKnown" : [ "NodeJS", "Javascript" ],
        "projectDetails" : [
                { "title" : "Inventory Management System", "description" : "It is an Inventory Management System" },
                { "title" : "Online Food Ordering System", "description" : "It is an Online Food Ordering System" }],
        "primaryEmailID" : "apexa.patel@bacancy.com"
}
{
        "fullName" : "Jaykumar Bhatt",
        "designation" : "Trainee Software Engineer",
        "department" : "NodeJS",
        "technologiesKnown" : [ "NodeJS", "Javascript", "MySql", "C/C++" ],
        "projectDetails" : [
                { "title" : "Inventory Management System", "description" : "It is an Inventory Management System"},
                { "title" : "Employee Management System", "description" : "It is an Employee Management System"},
                { "title" : "Online Food Ordering System", "description" : "It is an Online Food Ordering System"}],
        "primaryEmailID" : "jaykumar.bhatt@bacancy.com"
}
{
        "fullName" : "Jinay Shah",
        "designation" : "Trainee Software Engineer",
        "department" : "NodeJS",
        "technologiesKnown" : [ "NodeJS", "JavaScript", "JAVA", "MYSql" ],
        "projectDetails" : [
                { "title" : "Employee Management System", "description" : "It is an Employee Management System"},
                { "title" : "Medical Information System", "description" : "It is a Medical Information System"}],
        "primaryEmailID" : "jinay.shah@bacancy.com"
}
{
        "fullName" : "Kirtan Gadhiya",
        "designation" : "Trainee Software Engineer",
        "department" : "NodeJS",
        "technologiesKnown" : [ "NodeJS", "Javascript" ],
        "projectDetails" : [
                {"title" : "Employee Management System", "description" : "It is an Employee Management System"},
                {"title" : "Medical Information System", "description" : "It is a Medical Information System"}],
        "primaryEmailID" : "kirtan.ghadiya@bacancy.com"
}
{
        "fullName" : "Krushit Dudhat",
        "designation" : "Trainee Software Engineer",
        "department" : "NodeJS",
        "technologiesKnown" : [ "NodeJS", "Javascript", "MongoDB" ],
        "projectDetails" : [
                {"title" : "Inventory Management System","description" : "It is an Inventory Management System"},
                {"title" : "Employee Management System","description" : "It is an Employee Management System"},
                {"title" : "Online Food Ordering System","description" : "It is an Online Food Ordering System"}],
        "primaryEmailID" : "krushit.dudhat@bacancy.com"
```

```
}
{
        "fullName" : "Lav Panchal",
        "designation" : "Trainee Software Engineer",
        "department" : "NodeJS",
        "technologiesKnown" : [ "NodeJS",          "Javascript" ],
        "projectDetails" : [
                {"title" : "Inventory Management System","description" : "It is an Inventory Management System"},
                {"title" : "Employee Management System","description" : "It is an Employee Management System"},
                {"title" : "Project Management System","description" : "It is a Project Management System"}],
        "primaryEmailID" : "lav.panchal@bacancy.com"
}
{
        "fullName" : "Manish Rathod",
        "designation" : "Trainee Software Engineer",
        "department" : "NodeJS",
        "technologiesKnown" : ["NodeJS", "MongoDB”],
        "projectDetails" : [
                {"title" : "Employee Management System","description" : "It is an Employee Management System"},
                {"title" : "Project Management System","description" : "It is a Project Management System"}],
        "primaryEmailID" : "manish.rathod@bacancy.com"
}
{
        "fullName" : "vinayak chavan",
        "designation" : "Trainee Software Engineer",
        "department" : "NodeJS",
        "technologiesKnown" : [ "NodeJS", "Javascript" ],
        "projectDetails" : [
                {"title" : "Inventory Management System","description" : "It is an Inventory Management System"},
                {"title" : "Employee Management System","description" : "It is an Employee Management System"}],
        "primaryEmailID" : "vinayak.chavan@bacancy.com"
}
```


- **3.4.2) Get the count of all the documents of tasks collection w/o using aggregation.**

  - Command :
    db.tasks.count()
    db.tasks.find().count() // If we want to find number of document that matches condition

  - O/P :
    10

- **3.4.3) Get the count of all the documents of tasks collection using aggregation.**

  - Command :
    db.tasks.aggregate([{$count: "Total number of documents in tasks collection: "}])

  - O/P :
    { "Total number of documents in tasks collection: " : 10 }

- **3.4.4) Fetch all the documents of the tasks collection grouped by the projectID field using aggregation.**

  - Command :

db.tasks.aggregate([{$group: {_id: "$projectID", tasks: {$push: {title: "$title", description:"$description"}}}}]).pretty()

- O/P :


```
{
        "_id" : ObjectId("6228fbdb3919bf8067d55dc7"),
        "tasks" : [
                {"title" : "P4 - Task 1", "description" : "P4 - Task 1" },
                { "title" : "P4 - Task 1", "description" : "P1 - Task 2" }]
}
{
        "_id" : ObjectId("6228fbdb3919bf8067d55dc6"),
        "tasks" : [
                { "title" : "P4 - Task 1", "description" : "P4 - Task 1" },
                { "title" : "P4 - Task 1", "description" : "P1 - Task 2"}]
}
{
        "_id" : ObjectId("6228fbdb3919bf8067d55dc5"),
                "tasks" : [
                { "title" : "P3 - Task 2", "description" : "P3 - Task 2" },
                { "title" : "P3 - Task 2", "description" : "P1 - Task 2" }]
}
{
        "_id" : ObjectId("6228fbdb3919bf8067d55dc4"),
        "tasks" : [
                { "title" : "P2 - Task 2", "description" : "P2 - Task 2"},
                { "title" : "P2 - Task 2", "description" : "P2 - Task 2"}]
}
{
        "_id" : ObjectId("6228fbdb3919bf8067d55dc3"),
        "tasks" : [
                { "title" : "P1 - Task 1", "description" : "P1 - Task 1" },
                { "title" : "P1 - Task 2", "description" : "P1 - Task 2" }]
}
```