Assignment No.11

FAQS:-Write command for following

1. **Create a hypothetical sports club database that contains a users collection that tracks the user's join dates, sport preferences, and stores these data in documents and perform the following operation on it using aggregation**

```
> use SportsClub
switched to db SportsClub

>
> db.users.insertMany([
...    { name: "John", joinDate: ISODate("2023-05-10"), sportPreferences: ["Tennis", "Football"] },
...    { name: "Emma", joinDate: ISODate("2023-01-22"), sportPreferences: ["Basketball"] },
...    { name: "Sophia", joinDate: ISODate("2023-03-15"), sportPreferences: ["Swimming", "Football"] },
...    { name: "Nick", joinDate: ISODate("2023-07-08"), sportPreferences: ["Cricket"] },
...    { name: "Lucas", joinDate: ISODate("2023-12-19"), sportPreferences: ["Badminton", "Basketball"] }
... ])
{
      "acknowledged" : true,
      "insertedIds" : [
            ObjectId("66ff6f9b9ca237ba9c820735"),
            ObjectId("66ff6f9b9ca237ba9c820736"),
            ObjectId("66ff6f9b9ca237ba9c820737"),
            ObjectId("66ff6f9b9ca237ba9c820738"),
            ObjectId("66ff6f9b9ca237ba9c820739")
      ]
}
>
```

2. **Returns user names in upper case and in alphabetical order.**

```
> db.users.aggregate([
...    {
...      $project: {
...        name: { $toUpper: "$name" }
...      }
...    },
...    {
...      $sort: { name: 1 }
...    }
... ])
{ "_id" : ObjectId("66ff6f9b9ca237ba9c820736"), "name" : "EMMA" }
{ "_id" : ObjectId("66ff6f9b9ca237ba9c820735"), "name" : "JOHN" }
{ "_id" : ObjectId("66ff6f9b9ca237ba9c820739"), "name" : "LUCAS" }
{ "_id" : ObjectId("66ff6f9b9ca237ba9c820738"), "name" : "NICK" }
{ "_id" : ObjectId("66ff6f9b9ca237ba9c820737"), "name" : "SOPHIA" }
>
```

3. **Returns user names sorted by the month they joined.**

```
> db.users.aggregate([
...   {
...     $addFields: {
...       monthJoined: { $month: "$joinDate" }
...     }
...   },
...   {
...     $sort: { monthJoined: 1 }
...   },
...   {
...     $project: {
...       name: 1,
...       monthJoined: 1
...     }
...   }
... ])
{ "_id" : ObjectId("66ff6f9b9ca237ba9c820736"), "name" : "Emma", "monthJoined" : 1 }
{ "_id" : ObjectId("66ff6f9b9ca237ba9c820737"), "name" : "Sophia", "monthJoined" : 3 }
{ "_id" : ObjectId("66ff6f9b9ca237ba9c820735"), "name" : "John", "monthJoined" : 5 }
{ "_id" : ObjectId("66ff6f9b9ca237ba9c820738"), "name" : "Nick", "monthJoined" : 7 }
{ "_id" : ObjectId("66ff6f9b9ca237ba9c820739"), "name" : "Lucas", "monthJoined" : 12 }
>
```

4. **Show how many people joined each month of the year.**

```
> db.users.aggregate([
...   {
...     $group: {
...       _id: { $month: "$joinDate" },
...       count: { $sum: 1 }
...     }
...   },
...   {
...     $sort: { _id: 1 }
...   }
... ])
{ "_id" : 1, "count" : 1 }
{ "_id" : 3, "count" : 1 }
{ "_id" : 5, "count" : 1 }
{ "_id" : 7, "count" : 1 }
{ "_id" : 12, "count" : 1 }
>
```