NAME – Kartik Pingale
CLASS – TE-IT
BATCH - T2
ROLL NO – 7048

3. Execute at least 10 queries on any suitable MongoDB database that demonstrates the following:
   - $ where queries
   - Cursors (Limits, skips, sorts, advanced query options)
   - Database commands

1. List the total salary paid to the employees

```
> db.employees.aggregate( { $group: { _id:"ID", total_salary:
{$sum: "$Salary"}}})
{ "_id" : "ID", "total_salary" : 1820000 }
```

2. List the maximum, minimum and average salary in the company

```
> db.employees.aggregate({$group: {_id:"ID", minimum_sal:
{$min:"$Salary"}, maximum_sal: {$max: "$Salary"}, average_sal:
{$avg:"$Salary"}}})
{ "_id" : "ID", "minimum_sal" : 40000, "maximum_sal" : 250000,
"average_sal" : 151666.66666666666 }
```

3. List the details of employee whose salary is maximum in the company

```
> db.employees.find({}).sort({"Salary":-1}).limit(1)
{ "_id" : ObjectId("5d8e4ab54f5e86a76906931a"), "ID" : "1",
"Name" : "Mark", "Designation" : "CEO", "Skills" : [
"Management", "Strategy" ], "Salary" : 250000 }
```

4. List the details of employees whose salary is 4th & 5th top most in the company

```
> db.employees.find({}).sort({"Salary":-1}).limit(2).skip(3)
{ "_id" : ObjectId("5d8edbba4f5e86a769069320"), "ID" : "6",
"Name" : "John", "Designation" : "COO", "Salary" : 200000 }
```

```
{ "_id" : ObjectId("5d8f06934f5e86a769069323"), "ID" : "9",
"Name" : "Mohit", "Designation" : "CMO", "Skills" : [
"Strategy", "Copywriting" ], "Salary" : 200000 }
```

5. List the 2nd lowermost salary paid employee from company

```
> db.employees.find({}).sort({"Salary":1}).limit(1).skip(1)
{ "_id" : ObjectId("5d8f06934f5e86a769069325"), "ID" : "11",
"Name" : "Andy", "Designation" : "Software Engineer", "Skills" :
[ "Java", "C++", ".NET" ], "Salary" : 50000 }
```

6. List the top three salary paid employee from the company

```
> db.employees.find({}).sort({"Salary":-1}).limit(3)
{ "_id" : ObjectId("5d8e4ab54f5e86a76906931a"), "ID" : "1",
"Name" : "Mark", "Designation" : "CEO", "Skills" : [
"Management", "Strategy" ], "Salary" : 250000 }
{ "_id" : ObjectId("5d8e4cf44f5e86a76906931b"), "ID" : "2",
"Name" : "Eduardo", "Designation" : "CFO", "Skills" : [
"Financial Analysis", "Accounting" ], "Salary" : 200000 }
{ "_id" : ObjectId("5d8e4d844f5e86a76906931d"), "ID" : "4",
"Name" : "Rohit", "Designation" : "Senior VP", "Skills" : [
"PHP", ".NET" ], "Salary" : 200000 }
```

7. List all the employees in ascending order of their names

```
> db.employees.find({}).sort({"Name":1}).pretty()
{ "_id" : ObjectId("5d8f0be04f5e86a769069326"), "ID" : "1" }
{
        "_id" : ObjectId("5d8f06934f5e86a769069325"),
        "ID" : "11",
        "Name" : "Andy",
        "Designation" : "Software Engineer",
        "Skills" : [
                "Java",
                "C++",
                ".NET"
        ],
        "Salary" : 50000
}
{
        "_id" : ObjectId("5d8ede384f5e86a769069321"),
        "ID" : "7",
        "Name" : "Bill",
        "Designation" : "Software Engineer",
```

```
        "Skills" : [
                "Python",
                "DBMS",
                "Java"
        ],
        "Salary" : 150000
}
{

        "_id" : ObjectId("5d8f0d524f5e86a769069328"),
        "ID" : "12",
        "Name" : "Dwight",
        "Designation" : "Sales Executive",
        "Salary" : 40000
}
{

        "_id" : ObjectId("5d8e4cf44f5e86a76906931b"),
        "ID" : "2",
        "Name" : "Eduardo",
        "Designation" : "CFO",
        "Skills" : [
                "Financial Analysis",
                "Accounting"
        ],
        "Salary" : 200000
}
{

        "_id" : ObjectId("5d8edbba4f5e86a769069320"),
        "ID" : "6",
        "Name" : "John",
        "Designation" : "COO",
        "Salary" : 200000
}
{

        "_id" : ObjectId("5d8e4ab54f5e86a76906931a"),
        "ID" : "1",
        "Name" : "Mark",
        "Designation" : "CEO",
        "Skills" : [
                "Management",
                "Strategy"
        ],
        "Salary" : 250000
}
{

        "_id" : ObjectId("5d8f06934f5e86a769069323"),
```

```json
        "ID" : "9",
        "Name" : "Mohit",
        "Designation" : "CMO",
        "Skills" : [
            "Strategy",
            "Copywriting"
        ],
        "Salary" : 200000
}
{

        "_id" : ObjectId("5d8f06934f5e86a769069324"),
        "ID" : "10",
        "Name" : "Pam",
        "Designation" : "Web Developer",
        "Skills" : [
            "HTML",
            "Bootstrap",
            "PHP",
            "Javascript",
            "React",
            "Java"
        ],
        "Salary" : 80000
}
{

        "_id" : ObjectId("5d8e4d844f5e86a76906931d"),
        "ID" : "4",
        "Name" : "Rohit",
        "Designation" : "Senior VP",
        "Skills" : [
            "PHP",
            ".NET"
        ],
        "Salary" : 200000
}
{

        "_id" : ObjectId("5d8ede554f5e86a769069322"),
        "ID" : "8",
        "Name" : "Steve",
        "Designation" : "Software Engineer",
        "Skills" : [
            "Python",
            "DBMS",
            "Java"
        ],
```

```
        "Salary" : 150000
}
{
        "_id" : ObjectId("5d8e4d844f5e86a76906931c"),
        "ID" : "3",
        "Name" : "Tyler",
        "Designation" : "Product Manager",
        "Skills" : [
                "Management",
                "SCRUM",
                "Java"
        ],
        "Salary" : 150000
}
{
        "_id" : ObjectId("5d8edba14f5e86a76906931f"),
        "ID" : "5",
        "Name" : "Vikram",
        "Designation" : "Product Designer",
        "Skills" : [
                "Prototyping",
                "CAD"
        ],
        "Salary" : 150000
}
```

8. List all the employees in decreasing order of their salaries

```
> db.employees.find({}).sort({"Salary":-1}).pretty()
{
        "_id" : ObjectId("5d8e4ab54f5e86a76906931a"),
        "ID" : "1",
        "Name" : "Mark",
        "Designation" : "CEO",
        "Skills" : [
                "Management",
                "Strategy"
        ],
        "Salary" : 250000
}
{
        "_id" : ObjectId("5d8e4cf44f5e86a76906931b"),
        "ID" : "2",
        "Name" : "Eduardo",
        "Designation" : "CFO",
```

```
        "Skills" : [
            "Financial Analysis",
            "Accounting"
        ],
        "Salary" : 200000
}
{

        "_id" : ObjectId("5d8e4d844f5e86a76906931d"),
        "ID" : "4",
        "Name" : "Rohit",
        "Designation" : "Senior VP",
        "Skills" : [
            "PHP",
            ".NET"
        ],
        "Salary" : 200000
}
{

        "_id" : ObjectId("5d8edbba4f5e86a769069320"),
        "ID" : "6",
        "Name" : "John",
        "Designation" : "COO",
        "Salary" : 200000
}
{

        "_id" : ObjectId("5d8f06934f5e86a769069323"),
        "ID" : "9",
        "Name" : "Mohit",
        "Designation" : "CMO",
        "Skills" : [
            "Strategy",
            "Copywriting"
        ],
        "Salary" : 200000
}
{

        "_id" : ObjectId("5d8e4d844f5e86a76906931c"),
        "ID" : "3",
        "Name" : "Tyler",
        "Designation" : "Product Manager",
        "Skills" : [
            "Management",
            "SCRUM",
            "Java"
        ],
```

```
        "Salary" : 150000
}
{

        "_id" : ObjectId("5d8edba14f5e86a76906931f"),
        "ID" : "5",
        "Name" : "Vikram",
        "Designation" : "Product Designer",
        "Skills" : [
            "Prototyping",
            "CAD"
        ],
        "Salary" : 150000
}
{

        "_id" : ObjectId("5d8ede384f5e86a769069321"),
        "ID" : "7",
        "Name" : "Bill",
        "Designation" : "Software Engineer",
        "Skills" : [
            "Python",
            "DBMS",
            "Java"
        ],
        "Salary" : 150000
}
{

        "_id" : ObjectId("5d8ede554f5e86a769069322"),
        "ID" : "8",
        "Name" : "Steve",
        "Designation" : "Software Engineer",
        "Skills" : [
            "Python",
            "DBMS",
            "Java"
        ],
        "Salary" : 150000
}
{

        "_id" : ObjectId("5d8f06934f5e86a769069324"),
        "ID" : "10",
        "Name" : "Pam",
        "Designation" : "Web Developer",
        "Skills" : [
            "HTML",
            "Bootstrap",
```

```
                "PHP",
                "Javascript",
                "React",
                "Java"
        ],
        "Salary" : 80000
}
{

        "_id" : ObjectId("5d8f06934f5e86a769069325"),
        "ID" : "11",
        "Name" : "Andy",
        "Designation" : "Software Engineer",
        "Skills" : [
                "Java",
                "C++",
                ".NET"
        ],
        "Salary" : 50000
}
{

        "_id" : ObjectId("5d8f0d524f5e86a769069328"),
        "ID" : "12",
        "Name" : "Dwight",
        "Designation" : "Sales Executive",
        "Salary" : 40000
}
```