Assignment 1

1. **Insert 10 Records in the database.**

* **db.Student.find().pretty()**

{

"\_id" : 1,

"StudName" : "Maitrak Nirmal", "Grade" : "I",

"Hobbies" : "Playing", "DOJ" : "14/06/2021",

"Address" : "Naroda",

"StuRoll" : "123"

}

{

"\_id" : 2,

"StudName" : "Ajay Rathod", "Grade" : "VII",

"Hobbies" : "Chess",

"DOJ" : "12/12/2021",

"StuRoll" : "160"

}

{

"\_id" : 3,

"StudName" : "Himanshu Mehta", "Grade" : "IV",

"Hobbies" : "Playing", "DOJ" : "10/06/2021",

"StuRoll" : "160"

}

{

"\_id" : 4,

"StudName" : "Himanshu Mehta", "Grade" : "III",

"Hobbies" : "Dancing", "DOJ" : "30/01/2020",

"StuRoll" : "180"

}

{

"\_id" : 5,

"StudName" : "Smit", "Grade" : "II", "Hobbies" : "Dancing", "DOJ" : "30/01/2020",

"StuRoll" : "060"

}

{

"\_id" : 6,

"StudName" : "Mahesh",

"Grade" : "VI",

"Hobbies" : "Chess",

"DOJ" : "05/11/2020",

"StuRoll" : "050"

}

{

"\_id" : 7,

"StudName" : "Harsh", "Grade" : "I",

"Hobbies" : "Playing", "DOJ" : "22/09/2020",

"StuRoll" : "055"

}

{

"\_id" : 8, "StudName" : "Maitrak",

"Grade" : "III",

"Hobbies" : "Chess",

"DOJ" : "23/12/2020",

"StuRoll" : "199"

}

{

"\_id" : 9,

"StudName" : "Usaid",

"Grade" : "V", "Hobbbies" : "Playing", "DOJ" : "23/12/2021",

"StuRoll" : "124"

}

{

"\_id" : ObjectId("6022a93ebe979eda83057bc0"), "StudName" : "Harsh",

"Grade" : "IV",

"Hobbies" : "Chess",

"DOJ" : "23/12/2021",

"Address" : "Bapunagar", "StuRoll" : "100"

}

1. **Find the document wherein the “StudName” has value “Ajay Rathod”.**

* **db.Student.find({StudName:"Ajay Rathod"})**

{ "\_id" : 2, "StudName" : "Ajay Rathod", "Grade" : "VII", "Hobbies" :

"Chess", "DOJ" : "12/12/2021", "StuRoll" : "160" }

1. **Find all documents in proper format. (Without \_Id field)**

* **db.Student.find({}, {\_id:0}).pretty()**

{

"StudName" : "Maitrak Nirmal", "Grade" : "I",

"Hobbies" : "Playing",

"DOJ" : "14/06/2021",

"Address" : "Naroda",

"StuRoll" : "123"

}

{

"StudName" : "Ajay Rathod", "Grade" : "VII",

"Hobbies" : "Chess",

"DOJ" : "12/12/2021",

"StuRoll" : "160"

}

{

"StudName" : "Himanshu Mehta", "Grade" : "IV",

"Hobbies" : "Playing", "DOJ" : "10/06/2021",

"StuRoll" : "160"

}

{

"StudName" : "Himanshu Mehta", "Grade" : "III",

"Hobbies" : "Dancing", "DOJ" : "30/01/2020",

"StuRoll" : "180"

}

{

"StudName" : "Smit",

"Grade" : "II", "Hobbies" : "Dancing", "DOJ" : "30/01/2020",

"StuRoll" : "060"

}

{

"StudName" : "Mahesh", "Grade" : "VI",

"Hobbies" : "Chess",

"DOJ" : "05/11/2020",

"StuRoll" : "050"

}

{

"StudName" : "Harsh", "Grade" : "I",

"Hobbies" : "Playing", "DOJ" : "22/09/2020",

"StuRoll" : "055"

}

{

"StudName" : "Maitrak",

"Grade" : "III",

"Hobbies" : "Chess",

"DOJ" : "23/12/2020",

"StuRoll" : "199"

}

{

"StudName" : "Usaid",

"Grade" : "V", "Hobbbies" : "Playing", "DOJ" : "23/12/2021",

"StuRoll" : "124"

}

{

"StudName" : "Harsh",

"Grade" : "IV",

"Hobbies" : "Chess",

"DOJ" : "23/12/2021",

"Address" : "Bapunagar", "StuRoll" : "100"

}

1. **Retrieve only Student Name and Grade.**

* **db.Student.find({}, {StudName:1, Grade:1, \_id:0})**

{ "StudName" : "Maitrak Nirmal", "Grade" : "I" }

{ "StudName" : "Ajay Rathod", "Grade" : "VII" }

{ "StudName" : "Himanshu Mehta", "Grade" : "IV" }

{ "StudName" : "Himanshu Mehta", "Grade" : "III" }

{ "StudName" : "Smit", "Grade" : "II" }

{ "StudName" : "Mahesh", "Grade" : "VI" }

{ "StudName" : "Harsh", "Grade" : "I" }

{ "StudName" : "Maitrak", "Grade" : "III" }

{ "StudName" : "Usaid", "Grade" : "V" }

{ "StudName" : "Harsh", "Grade" : "IV" }

1. **Retrieve Student Name and Grade of student who is having \_id column is 1.**

* **db.Student.find({\_id:1}, {StudName:1, Grade:1})**

{ "\_id" : 1, "StudName" : "Maitrak Nirmal", "Grade" : "I" }

1. **Add new field “Address” in Student Collection.**

* **db.Student.update({\_id:1}, {$set:{Address:"Naroda"}}, {upsert:true}) WriteResult({ "nMatched" : 1, "nUpserted" : 0, "nModified" : 1 })**

1. **Find those documents where the Grade is set to ‘VII’.**

* **db.Student.find({Grade:"VII"})**

{ "\_id" : 2, "StudName" : "Ajay Rathod", "Grade" : "VII", "Hobbies" :

"Chess", "DOJ" : "12/12/2021", "StuRoll" : "160" }

1. **Find those documents where the Grade is not set to ‘VII’.**

* **db.Student.find({Grade:{$ne:"VII"}})**

{ "\_id" : 1, "StudName" : "Maitrak Nirmal", "Grade" : "I", "Hobbies" : "Playing",

"DOJ" : "14/06/2021", "Address" : "Naroda", "StuRoll" : "123" }

{ "\_id" : 3, "StudName" : "Himanshu Mehta", "Grade" : "IV", "Hobbies" :

"Playing", "DOJ" : "10/06/2021", "StuRoll" : "160" }

{ "\_id" : 4, "StudName" : "Himanshu Mehta", "Grade" : "III", "Hobbies" :

"Dancing", "DOJ" : "30/01/2020", "StuRoll" : "180" }

{ "\_id" : 5, "StudName" : "Smit", "Grade" : "II", "Hobbies" : "Dancing", "DOJ" : "30/01/2020", "StuRoll" : "060" }

{ "\_id" : 6, "StudName" : "Mahesh", "Grade" : "VI", "Hobbies" : "Chess", "DOJ" : "05/11/2020", "StuRoll" : "050" }

{ "\_id" : 7, "StudName" : "Harsh", "Grade" : "I", "Hobbies" : "Playing", "DOJ" : "22/09/2020", "StuRoll" : "055" }

{ "\_id" : 8, "StudName" : "Maitrak", "Grade" : "III", "Hobbies" : "Chess", "DOJ" : "23/12/2020", "StuRoll" : "199" }

{ "\_id" : 9, "StudName" : "Usaid", "Grade" : "V", "Hobbbies" : "Playing", "DOJ" : "23/12/2021", "StuRoll" : "124" }

{ "\_id" : ObjectId("6022a93ebe979eda83057bc0"), "StudName" : "Harsh", "Grade" : "IV", "Hobbies" : "Chess", "DOJ" : "23/12/2021", "Address" : "Bapunagar", "StuRoll" : "100" }

1. **Find those documents where the Hobbies is set to either ‘Chess’or is set to ‘Dancing”.**

* **db.Student.find({Hobbies:{$in:["Chess", "Dancing"]}})**

{ "\_id" : 2, "StudName" : "Ajay Rathod", "Grade" : "VII", "Hobbies" :

"Chess", "DOJ" : "12/12/2021", "StuRoll" : "160" }

{ "\_id" : 4, "StudName" : "Himanshu Mehta", "Grade" : "III", "Hobbies" :

"Dancing", "DOJ" : "30/01/2020", "StuRoll" : "180" }

{ "\_id" : 5, "StudName" : "Smit", "Grade" : "II", "Hobbies" : "Dancing", "DOJ" : "30/01/2020", "StuRoll" : "060" }

{ "\_id" : 6, "StudName" : "Mahesh", "Grade" : "VI", "Hobbies" : "Chess", "DOJ" : "05/11/2020", "StuRoll" : "050" }

{ "\_id" : 8, "StudName" : "Maitrak", "Grade" : "III", "Hobbies" : "Chess", "DOJ" : "23/12/2020", "StuRoll" : "199" }

{ "\_id" : ObjectId("6022a93ebe979eda83057bc0"), "StudName" : "Harsh", "Grade" : "IV", "DOJ" : "23/12/2021", "Address" : "Bapunagar", "StuRoll" : "100", "Hobbies" : "Chess" }

1. **Find those documents where the Hobbies is set neither to ‘Chess’ nor is set to ‘Dancing”.**

* **db.Student.find({Hobbies:{$nin:["Chess", "Dancing"]}})**

{ "\_id" : 1, "StudName" : "Maitrak Nirmal", "Grade" : "I", "Hobbies" : "Playing",

"DOJ" : "14/06/2021", "Address" : "Naroda", "StuRoll" : "123" }

{ "\_id" : 3, "StudName" : "Himanshu Mehta", "Grade" : "IV", "Hobbies" :

"Playing", "DOJ" : "10/06/2021", "StuRoll" : "160" }

{ "\_id" : 7, "StudName" : "Harsh", "Grade" : "I", "Hobbies" : "Playing", "DOJ" : "22/09/2020", "StuRoll" : "055" }

{ "\_id" : 9, "StudName" : "Usaid", "Grade" : "V", "Hobbbies" : "Playing", "DOJ" : "23/12/2021", "StuRoll" : "124" }

1. **Find those documents where the student name begins with ‘M’.**

* **db.Student.find({StudName:/^M/})**

{ "\_id" : 5, "StudName" : "Smit", "Grade" : "II", "Hobbies" : "Dancing", "DOJ" : "30/01/2020", "StuRoll" : "060" }

{ "\_id" : 6, "StudName" : "Mahesh", "Grade" : "VI", "Hobbies" : "Chess", "DOJ" : "05/11/2020", "StuRoll" : "050" }

1. **Find those documents where the student name has an “e” in any**

position.

* **db.Student.find({StudName:/.\*e.\*/})**

{ "\_id" : 1, "StudName" : "Maitrak Nirmal", "Grade" : "I", "Hobbies" : "Playing",

"DOJ" : "14/06/2021", "Address" : "Naroda", "StuRoll" : "123" }

{ "\_id" : 3, "StudName" : "Himanshu Mehta", "Grade" : "IV", "Hobbies" :

"Playing", "DOJ" : "10/06/2021", "StuRoll" : "160" }

{ "\_id" : 4, "StudName" : "Himanshu Mehta", "Grade" : "III", "Hobbies" :

"Dancing", "DOJ" : "30/01/2020", "StuRoll" : "180" }

{ "\_id" : 6, "StudName" : "Mahesh", "Grade" : "VI", "Hobbies" : "Chess", "DOJ" : "05/11/2020", "StuRoll" : "050" }

{ "\_id" : 7, "StudName" : "Harsh", "Grade" : "I", "Hobbies" : "Playing", "DOJ" : "22/09/2020", "StuRoll" : "055" }

{ "\_id" : ObjectId("6022a93ebe979eda83057bc0"), "StudName" : "Harsh", "Grade" : "IV", "DOJ" : "23/12/2021", "Address" : "Bapunagar", "StuRoll" : "100", "Hobbies" : "Chess" }

1. **Find those documents where the student name ends in “a”.**

* **db.Student.find({StudName:/a$/})**

{ "\_id" : 3, "StudName" : "Himanshu Mehta", "Grade" : "IV", "Hobbies" :

"Playing", "DOJ" : "10/06/2021", "StuRoll" : "160" }

{ "\_id" : 4, "StudName" : "Himanshu Mehta", "Grade" : "III", "Hobbies" :

"Dancing", "DOJ" : "30/01/2020", "StuRoll" : "180" }

1. **Find total number of documents.**

* **db.Student.find().count() 10**

1. **Find total the number of documents where Grade is ‘VII’.**

* **db.Student.find({Grade:"VII"}).count() 1**

1. **Sort the documents in ascending order of student name.**

* **db.Student.find().sort({StudName:1})**

{ "\_id" : 2, "StudName" : "Ajay Rathod", "Grade" : "VII", "Hobbies" :

"Chess", "DOJ" : "12/12/2021", "StuRoll" : "160" }

{ "\_id" : 7, "StudName" : "Harsh", "Grade" : "I", "Hobbies" : "Playing", "DOJ" : "22/09/2020", "StuRoll" : "055" }

{ "\_id" : 6, "StudName" : "Mahesh", "Grade" : "VI", "Hobbies" : "Chess", "DOJ" : "05/11/2020", "StuRoll" : "050" }

{ "\_id" : 5, "StudName" : "Smit", "Grade" : "II", "Hobbies" : "Dancing", "DOJ" : "30/01/2020", "StuRoll" : "060" }

{ "\_id" : ObjectId("6022a93ebe979eda83057bc0"), "StudName" : "Harsh", "Grade" : "IV", "DOJ" : "23/12/2021", "Address" : "Bapunagar", "StuRoll" : "100", "Hobbies" : "Chess" }

{ "\_id" : 8, "StudName" : "Maitrak", "Grade" : "III", "Hobbies" : "Chess", "DOJ" : "23/12/2020", "StuRoll" : "199" }

{ "\_id" : 1, "StudName" : "Maitrak Nirmal", "Grade" : "I", "Hobbies" : "Playing",

"DOJ" : "14/06/2021", "Address" : "Naroda", "StuRoll" : "123" }

{ "\_id" : 9, "StudName" : "Usaid", "Grade" : "V", "Hobbbies" : "Playing", "DOJ" : "23/12/2021", "StuRoll" : "124" }

{ "\_id" : 3, "StudName" : "Himanshu Mehta", "Grade" : "IV", "Hobbies" :

"Playing", "DOJ" : "10/06/2021", "StuRoll" : "160" }

{ "\_id" : 4, "StudName" : "Himanshu Mehta", "Grade" : "III", "Hobbies" :

"Dancing", "DOJ" : "30/01/2020", "StuRoll" : "180" }

1. **Display the last two records.**

* **db.Student.find().skip(db.Student.count() - 2)**

{ "\_id" : 9, "StudName" : "Usaid", "Grade" : "V", "Hobbbies" : "Playing", "DOJ" : "23/12/2021", "StuRoll" : "124" }

{ "\_id" : ObjectId("6022a93ebe979eda83057bc0"), "StudName" : "Harsh", "Grade" : "IV", "DOJ" : "23/12/2021", "Address" : "Bapunagar", "StuRoll" : "100", "Hobbies" : "Chess" }