[Practical-4]

Perform MongoDB [Aggregate | Indexes | Utilities] Operations.

1. Display the Names of the Students who play Cricket

2. Find the Average Marks obtained by each Sec and Arrange in Descending Order

3. Find the count of female student in each Sec and Display 2nd and 3rd Documents only.

4. Create an index on id that identified students uniquely and check their performance using explain() method and also delete this index after use.

5. Take the backup of this Student collection and restore after drooping it.

Instructions:

- Perform all the above activities.

- Student1.json file is attached.

Implementation:

1.

```
> db.assign2.aggregate([{$unwind : "$sports"},{$match : {sports : "cricket"}},{$project : {_id : 0 , name : 1}}])
```

```
{ "name" : "priya" } { "name" : "kamal" } { "name" : "sachin" } { "name" : "manish" }
{ "name" : "sachin" } { "name" : "pankaj" } { "name" : "manish" } { "name" : "sneha" }
{ "name" : "sonali" } { "name" : "varsh" } { "name" : "Tanya" } { "name" : "pankaj" }
```

2.

```
> db.assign2.aggregate([{$group : {_id:"$sec", count : {$avg : "$averageScore"}}},{$sort : {_id : -1}}])
```

```
{ "_id" : "D", "count" : 4.9 } { "_id" : "C", "count" : 5.8 }
{ "_id" : "B", "count" : 4.566666666666666 } { "_id" : "A", "count" : 7 }
```

3.

```
> db.assign2.aggregate([{$match : {gender : "female"}} , {$group : {_id:"$sec", count : {$sum : 1}}} , {$skip : 1} , {$limit : 2}])
```

{ "_id" : "C", "count" : 3 } { "_id" : "A", "count" : 4 }

4.

> db.assign2.createIndex({id : 1} , {unique : true})

{ "createdCollectionAutomatically" : false, "numIndexesBefore" : 1, "numIndexesAfter" : 2, "ok" : 1 }

> db.assign2.explain().find({id : 1})

{ "queryPlanner" : { "plannerVersion" : 1, "namespace" : "DB1.assign2", "indexFilterSet" : false, "parsedQuery" : { "id" : { "$eq" : 1 } }, "queryHash" : "6DAB46EC", "planCacheKey" : "801B9D84", "winningPlan" : { "stage" : "FETCH", "inputStage" : { "stage" : "IXSCAN", "keyPattern" : { "id" : 1 }, "indexName" : "id_1", "isMultiKey" : false, "multiKeyPaths" : { "id" : [ ] }, "isUnique" : true, "isSparse" : false, "isPartial" : false, "indexVersion" : 2, "direction" : "forward", "indexBounds" : { "id" : ["[1.0, 1.0]"] } } }, "rejectedPlans" : [ ] }, "serverInfo" : { "host" : "Jai_Anant_Comp", "port" : 27017, "version" : "4.4.3", "gitVersion" : "913d6b62acfbb344dde1b116f4161360acd8fd13" }, "ok" : 1

> db.assign2.dropIndex("id_1")

{ "nIndexesWas" : 2, "ok" : 1 }

5.

> db.assign2.aggregate({$out : "assign3"}) > db.assign2.drop() true > db.assign3.aggregate({$out : "assign2"})