

GroupB:LabAssignmentno.11

Title:Implement aggregation and indexing with suitable example using MongoDB

dipti@dipti-VPCEG28FN:~$mongo MongoDB shell version v3.6.3

connectingto:mongodb://127.0.0.1:27017 MongoDB server version: 3.6.3

Serverhasstartupwarnings:

2020-10-15T14:26:28.786+0530ISTORAGE[initandlisten]

2020-10-15T14:26:28.786+0530ISTORAGE[initandlisten]\*\*WARNING:

UsingtheXFSfilesystemisstronglyrecommendedwiththeWiredTigerstorage engine

2020-10-15T14:26:28.786+0530 I STORAGE[initandlisten] \*\* See <http://dochub.mongodb.org/core/prodnotes-filesystem>

2020-10-15T14:26:36.417+0530ICONTROL[initandlisten]

2020-10-15T14:26:36.417+0530ICONTROL[initandlisten]\*\*WARNING:

Accesscontrolisnotenabledforthedatabase.

2020-10-15T14:26:36.417+0530 I CONTROL[initandlisten] \*\* Readand write access to data and configuration is unrestricted.

2020-10-15T14:26:36.417+0530ICONTROL[initandlisten]

**>**

//USEDATABASE

* **use comp; switchedtodbcomp**

//CREATE COLLECTION WEBSITE

* **db.createCollection('website');**

{"ok":1 }

//INSERT VALUES IN WEBSITE

db.website.insert({'roll':'1','name':'harsh','amount':1000,'ur l':'www.yahoo.com'});

WriteResult({"nInserted":1})

>db.website.insert({'roll':'2','name':'jitesh','amount':2000,'url':'[www.yahoo.com](http://www.yahoo.com/)'});

WriteResult({"nInserted":1})

>db.website.insert({'roll':'3','name':'rina','amount':3000,'url':'www.google.com'

**});**

WriteResult({"nInserted":1})

>db.website.insert({'roll':'4','name':'ash','amount':4000,'url':'www.gmail.com'})

**;**

WriteResult({"nInserted":1})

>db.website.insert({'roll':'5','name':'ash','amount':1000,'url':'[www.pvg.com](http://www.pvg.com/)'}); WriteResult({ "nInserted" : 1 })

//SUMAGGREGATE

* **db.website.aggregate({$group:{\_id:"$name","total":{$sum:"$amount"}}});**

{"\_id":"ash","total":5000}

{"\_id":"rina","total":3000}

{"\_id":"jitesh","total":2000}

{"\_id":"harsh","total":2000}

//AVG AGGREGATE

* **db.website.aggregate({$group:{\_id:"$name","total":**

{$avg:"$amount"}}});

{"\_id":"ash","total":2500}

{"\_id":"rina","total":3000}

{"\_id":"jitesh","total":2000}

{"\_id":"harsh","total":1000}

//MINAGGREGATION

* **db.website.aggregate({$group:{\_id:"$name","total":{$min:"$amount"}}});**

{"\_id":"ash","total":1000}

{"\_id":"rina","total":3000}

{"\_id":"jitesh","total":2000}

{"\_id":"harsh","total":1000}

//MAXAGGREGATION

* **db.website.aggregate({$group:{\_id:"$name","total":{$max:"$amount"}}});**

{"\_id":"ash","total":4000}

{"\_id":"rina","total":3000}

{"\_id":"jitesh","total":2000}

{"\_id":"harsh","total":1000}

//FIRSTAGGREGATION

* **db.website.aggregate({$group:{\_id:"$name","total":{$first:"$amount"}}});**

{"\_id":"ash","total":4000}

{"\_id":"rina","total":3000}

{"\_id":"jitesh","total":2000}

{"\_id":"harsh","total":1000}

//LASTAGGREGATION

* **db.website.aggregate({$group:{\_id:"$name","total":{$last:"$amount"}}});**

{"\_id":"ash","total":1000}

{"\_id":"rina","total":3000}

{"\_id":"jitesh","total":2000}

{"\_id":"harsh","total":1000}

//PUSHAGGREGATION

* **db.website.aggregate({$group:{\_id:"$name","total":**

{$push:"$amount"}}});

{"\_id":"ash","total":[4000,1000]}

{"\_id":"rina","total":[3000]}

{"\_id":"jitesh","total":[2000]}

{"\_id":"harsh","total":[1000,1000]}

//COUNTAGGREGATION

* **db.website.aggregate({$group:{\_id:"$name","total":{$sum:1}}});**

{"\_id":"ash","total":2}

{"\_id":"rina","total":1}

{"\_id":"jitesh","total":1}

{"\_id":"harsh","total":2}

//ADDTOSETAGGREGATE

* **db.website.aggregate({$group:**

{\_id:"$name","total"{$addToSet:"$amount"}}});

{"\_id":"ash","total":[1000,4000]}

{"\_id":"rina","total":[3000]}

{"\_id":"jitesh","total":[2000]}

{"\_id":"harsh","total":[1000]}

//INDEXING

* **db.createCollection('website1');**

{"ok":1 }

* **db.website1.insert({'r':1,'name':'harsh'}); WriteResult({ "nInserted" : 1 })**
* **db.website1.find().pretty()**

{"\_id":ObjectId("5ba3509a444926329738012d"),"roll":1, "name" : "harsh" }

{"\_id":ObjectId("5ba35293444926329738012e"),"roll":1, "name" : "harsh" }

* **db.website1.createIndex({'name':1})**

{"numIndexesBefore":2,"note":"allindexesalready exist", "ok" : 1 }//CREATE INDEXING

* **db.website1.createIndex({'name':-1})**

**{**

"createdCollectionAutomatically":false, "numIndexesBefore" : 2,

"numIndexesAfter":3,

"ok":1

**}**

* **db.website1.getIndexses()**

2018-09-20T13:28:09.628+0530TypeError:Property'getIndexses' of object om.website is not a

function

* **db.website1.getIndexes() [**

{"v":1,

**},**

**{**

"v":1,

"key":{

"name":1

**},**

"name" : "name\_1", "ns":"harsh.website1"

**},**

**{**

"v":1,

"key":{

"name":-1

**},**

"name" : "name\_-1", "ns":"harsh.website1"

**}**

**]**

* **db.website1.createIndex({'name':-1})**

{"numIndexesBefore":3,"note":"allindexesalready exist", "ok" : 1 }

//DROPINDEX

* **db.website.dropIndex({'name':-1})**

{ "nIndexesWas" : 3, "ok" : 1 }>db.website1.dropIndex({'name':1})

{"nIndexesWas":2,"ok":1}>db.website1.dropIndex({'name':1})

**{**

"nIndexesWas":1,

"ok":0,

"errmsg":"can'tfindindexwithkey:{name:1.0}"

**}**

//GETINDEXING

* **db.website1.getIndexes() [**

**{**

"v":1,

**}**

**]**

* **db.website1.find().pretty()**

{"\_id":ObjectId("5ba3509a444926329738012d"),"roll":1, "name" : "harsh" }

{"\_id":ObjectId("5ba35293444926329738012e"),"roll":1, "name" : "harsh" }

* **db.website1.createIndex({'name':1})**

**{**

"createdCollectionAutomatically":false, "numIndexesBefore" : 1,

"numIndexesAfter":2,

"ok":1

**}**

* **db.website1.getIndexes()[**

**{**

"v":1,

"key":{

"\_id":1

**},**

"name":"\_id\_",

"ns":"harsh.website1"

**},**

**{**

"v":1,

"key":{"name":1

**},**

"name" : "name\_1", "ns":"harsh.website1"

**}**

**]**

* **db.website1.dropIndex({'name':1})**

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

* **db.website1.getIndexes() [**

**{**

"v":1,

"key":{

"\_id":1

**},**

"name":"\_id\_",

"ns":"harsh.website1"

**}**

**]**

* **db.website1.createIndex({'name':1,'r':-1})**

{"createdCollectionAutomatically":false, "numIndexesBefore" : 1,

"numIndexesAfter":2,

"ok":1

**}**

* **db.website1.getIndexes() [**

**{**

"v":1,

"key":{

"\_id":1

**},**

"name":"\_id\_",

"ns":"harsh.website1"

**},**

**{**

"v":1,

"key":{

"name":1,

"r":-1

**},**

"name":"name\_1\_r\_-1", "ns" : "harsh.website1"

**}**

](i-search)`db.website1.insert({'roll':1,'name':'harsh'});':