**Assignment No. 5**

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**Std:** TE-A

**Roll No.:** 3164018

> db.createCollection("product")

{ "ok" : 1 }

> db.product.insertMany([

... {id:1,item:"Soap",price:10,quantity:2},

... {id:2,item:"Shoes",price:1000,quantity:1},

... {id:3,item:"Tie",price:150,quantity:3},

... {id:4,item:"Shampoo",price:70,quantity:2}

... ])

{

"acknowledged" : true,

"insertedIds" : [

ObjectId("5b95f342d82986998acd76d8"),

ObjectId("5b95f342d82986998acd76d9"),

ObjectId("5b95f342d82986998acd76da"),

ObjectId("5b95f342d82986998acd76db")

]

}

> db.product.aggregate([{$group:

... {

... \_id:"$item",

... totalAmount:{$sum:{$multiply:

... ["$price","$quantity"]

... }

... }

... }

... }])

{ "\_id" : "Tie", "totalAmount" : 450 }

{ "\_id" : "Shampoo", "totalAmount" : 140 }

{ "\_id" : "Shoes", "totalAmount" : 1000 }

{ "\_id" : "Soap", "totalAmount" : 20 }

> db.product.insertMany([

... {id:5,item:"Soap",price:50,quantity:1},

... {id:6,item:"Shoes",price:5000,quantity:3},

... {id:7,item:"Tie",price:400,quantity:2}

... ])

{

"acknowledged" : true,

"insertedIds" : [

ObjectId("5b95f75fd82986998acd76dc"),

ObjectId("5b95f75fd82986998acd76dd"),

ObjectId("5b95f75fd82986998acd76de")

]

}

> db.product.aggregate([{$group: { \_id:"$item", totalAmount:{$avg:{$multiply: ["

$price","$quantity"] } } } }])

{ "\_id" : "Tie", "totalAmount" : 625 }

{ "\_id" : "Shampoo", "totalAmount" : 140 }

{ "\_id" : "Shoes", "totalAmount" : 8000 }

{ "\_id" : "Soap", "totalAmount" : 35 }

> db.product.aggregate([{$group: { \_id:"$item", totalAmount:{$max:{$multiply: ["

$price","$quantity"] } } } }])

{ "\_id" : "Tie", "totalAmount" : 800 }

{ "\_id" : "Shampoo", "totalAmount" : 140 }

{ "\_id" : "Shoes", "totalAmount" : 15000 }

{ "\_id" : "Soap", "totalAmount" : 50 }

> db.product.aggregate([{$group: { \_id:"$item", totalAmount:{$min:{$multiply: ["

$price","$quantity"] } } } }])

{ "\_id" : "Tie", "totalAmount" : 450 }

{ "\_id" : "Shampoo", "totalAmount" : 140 }

{ "\_id" : "Shoes", "totalAmount" : 1000 }

{ "\_id" : "Soap", "totalAmount" : 20 }

> db.product.find({id:5})

{ "\_id" : ObjectId("5b95f75fd82986998acd76dc"), "id" : 5, "item" : "Soap", "pric

e" : 50, "quantity" : 1 }

> db.product.find({id:5}).explain("executionStats")

{

"queryPlanner" : {

"plannerVersion" : 1,

"namespace" : "kedar.product",

"indexFilterSet" : false,

"parsedQuery" : {

"id" : {

"$eq" : 5

}

},

"winningPlan" : {

"stage" : "COLLSCAN",

"filter" : {

"id" : {

"$eq" : 5

}

},

"direction" : "forward"

},

"rejectedPlans" : [ ]

},

"executionStats" : {

"executionSuccess" : true,

"nReturned" : 1,

"executionTimeMillis" : 0,

"totalKeysExamined" : 0,

"totalDocsExamined" : 7,

"executionStages" : {

"stage" : "COLLSCAN",

"filter" : {

"id" : {

"$eq" : 5

}

},

"nReturned" : 1,

"executionTimeMillisEstimate" : 0,

"works" : 9,

"advanced" : 1,

"needTime" : 7,

"needYield" : 0,

"saveState" : 0,

"restoreState" : 0,

"isEOF" : 1,

"invalidates" : 0,

"direction" : "forward",

"docsExamined" : 7

}

},

"serverInfo" : {

"host" : "C05L0819",

"port" : 27017,

"version" : "4.0.1",

"gitVersion" : "54f1582fc6eb01de4d4c42f26fc133e623f065fb"

},

"ok" : 1

}

> db.product.createIndex({id:1})

{

"createdCollectionAutomatically" : false,

"numIndexesBefore" : 1,

"numIndexesAfter" : 2,

"ok" : 1

}

> db.product.getIndexes()

[

{

"v" : 2,

"key" : {

"\_id" : 1

},

"name" : "\_id\_",

"ns" : "kedar.product"

},

{

"v" : 2,

"key" : {

"id" : 1

},

"name" : "id\_1",

"ns" : "kedar.product"

}

]

> db.product.find({id:5}).explain("executionStats")

{

"queryPlanner" : {

"plannerVersion" : 1,

"namespace" : "kedar.product",

"indexFilterSet" : false,

"parsedQuery" : {

"id" : {

"$eq" : 5

}

},

"winningPlan" : {

"stage" : "FETCH",

"inputStage" : {

"stage" : "IXSCAN",

"keyPattern" : {

"id" : 1

},

"indexName" : "id\_1",

"isMultiKey" : false,

"multiKeyPaths" : {

"id" : [ ]

},

"isUnique" : false,

"isSparse" : false,

"isPartial" : false,

"indexVersion" : 2,

"direction" : "forward",

"indexBounds" : {

"id" : [

"[5.0, 5.0]"

]

}

}

},

"rejectedPlans" : [ ]

},

"executionStats" : {

"executionSuccess" : true,

"nReturned" : 1,

"executionTimeMillis" : 40,

"totalKeysExamined" : 1,

"totalDocsExamined" : 1,

"executionStages" : {

"stage" : "FETCH",

"nReturned" : 1,

"executionTimeMillisEstimate" : 0,

"works" : 2,

"advanced" : 1,

"needTime" : 0,

"needYield" : 0,

"saveState" : 0,

"restoreState" : 0,

"isEOF" : 1,

"invalidates" : 0,

"docsExamined" : 1,

"alreadyHasObj" : 0,

"inputStage" : {

"stage" : "IXSCAN",

"nReturned" : 1,

"executionTimeMillisEstimate" : 0,

"works" : 2,

"advanced" : 1,

"needTime" : 0,

"needYield" : 0,

"saveState" : 0,

"restoreState" : 0,

"isEOF" : 1,

"invalidates" : 0,

"keyPattern" : {

"id" : 1

},

"indexName" : "id\_1",

"isMultiKey" : false,

"multiKeyPaths" : {

"id" : [ ]

},

"isUnique" : false,

"isSparse" : false,

"isPartial" : false,

"indexVersion" : 2,

"direction" : "forward",

"indexBounds" : {

"id" : [

"[5.0, 5.0]"

]

},

"keysExamined" : 1,

"seeks" : 1,

"dupsTested" : 0,

"dupsDropped" : 0,

"seenInvalidated" : 0

}

}

},

"serverInfo" : {

"host" : "C05L0819",

"port" : 27017,

"version" : "4.0.1",

"gitVersion" : "54f1582fc6eb01de4d4c42f26fc133e623f065fb"

},

"ok" : 1

}

> db.product.find({id:6,price:5000})

{ "\_id" : ObjectId("5b95f75fd82986998acd76dd"), "id" : 6, "item" : "Shoes", "pri

ce" : 5000, "quantity" : 3 }

> db.product.dropIndexes()

{

"nIndexesWas" : 2,

"msg" : "non-\_id indexes dropped for collection",

"ok" : 1

}