

ASSIGNMENT NO : 2 (B)

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Roll No : 26

Batch : TE - B2

PROBLEM STATEMENT:

MongoDB – Aggregation and Indexing: Design and Develop MongoDB Queries using aggregation and indexing with suitable example using MongoDB

OUTPUT :

```
gescoe@gescoe-OptiPlex-3010:~$ mongo
MongoDB shell version: 2.6.9
connecting to: test
> use customer
switched to db customer
> db.cust_table.insert({Item_id:1,Cust_Name:"Ronak",Product:"Milk",Amount:40});
WriteResult({ "nInserted" : 1 })
> db.cust_table.insert({Item_id:2,Cust_Name:"Ronak",Product:"Parle_G",Amount:50});
WriteResult({ "nInserted" : 1 })
> db.cust_table.insert({Item_id:3,Cust_Name:"Harsh",Product:"Lays Chips",Amount:40});
WriteResult({ "nInserted" : 1 })
> db.cust_table.insert({Item_id:4,Cust_Name:"Raj",Product:"Mentos",Amount:10});
WriteResult({ "nInserted" : 1 })
> db.cust_table.insert({Item_id:5,Cust_Name:"Harsh",Product:"Maggie",Amount:60});
WriteResult({ "nInserted" : 1 })
> db.cust_table.aggregate({$group:{_id:"$Cust_Name","total":{$sum:"$Amount"}}});
{ "_id" : "Raj", "total" : 10 }
{ "_id" : "Harsh", "total" : 100 }
{ "_id" : "Ronak", "total" : 90 }
> db.cust_table.aggregate({$group:{_id:"$Cust_Name","total":{$avg:"$Amount"}}});
{ "_id" : "Raj", "total" : 10 }
{ "_id" : "Harsh", "total" : 50 }
{ "_id" : "Ronak", "total" : 45 }
> db.cust_table.aggregate({$group:{_id:"$Cust_Name","total":{$min:"$Amount"}}});
{ "_id" : "Raj", "total" : 10 }
{ "_id" : "Harsh", "total" : 40 }
{ "_id" : "Ronak", "total" : 40 }
> db.cust_table.aggregate({$group:{_id:"$Cust_Name","total":{$max:"$Amount"}}});
{ "_id" : "Raj", "total" : 10 }
{ "_id" : "Harsh", "total" : 60 }
{ "_id" : "Ronak", "total" : 50 }
> db.cust_table.aggregate({$group:{_id:"$Cust_Name","total":{$first:"$Amount"}}});
{ "_id" : "Raj", "total" : 10 }
```

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{ "_id" : "Harsh", "total" : 40 }
{ "_id" : "Ronak", "total" : 40 }
> db.cust_table.aggregate({$group:{_id:"$Cust_Name","total":{$last:"$Amount"}}});
{ "_id" : "Raj", "total" : 10 }
{ "_id" : "Harsh", "total" : 60 }
{ "_id" : "Ronak", "total" : 50 }
> db.cust_table.aggregate({$group:{_id:"$Cust_Name","total":{$psuh:"$Amount"}}});
assert: command failed: {
  "errmsg" : "exception: unknown group operator '$psuh'",
  "code" : 15952,
  "ok" : 0
}: aggregate failed
Error: command failed: {
  "errmsg" : "exception: unknown group operator '$psuh'",
  "code" : 15952,
  "ok" : 0
}: aggregate failed
    at Error (<anonymous>)
    at doassert (src/mongo/shell/assert.js:11:14)
    at Function.assert.commandWorked (src/mongo/shell/assert.js:244:5)
    at DBCollection.aggregate (src/mongo/shell/collection.js:1149:12)
    at (shell):1:15
2024-10-03T10:37:57.624+0530 Error: command failed: {
  "errmsg" : "exception: unknown group operator '$psuh'",
  "code" : 15952,
  "ok" : 0
}: aggregate failed at src/mongo/shell/assert.js:13
> db.cust_table.aggregate({$group:{_id:"$Cust_Name","total":{$sum:1}}});
{ "_id" : "Shivam", "total" : 2 }
{ "_id" : "Mohan", "total" : 4 }
{ "_id" : "Ronak", "total" : 4 }
> db.cust_table.aggregate({$group:{_id:"$Cust_Name","total":{$addToSet:"$Amount"}}});
{ "_id" : "Shivam", "total" : [ 10 ] }
{ "_id" : "Mohan", "total" : [ 60, 40 ] }
{ "_id" : "Ronak", "total" : [ 50, 40 ] }
> db.cust_table.createIndex({'Item_id':1})
{
  "createdCollectionAutomatically" : false,
  "numIndexesBefore" : 1,
  "numIndexesAfter" : 2,
  "ok" : 1
}
> db.cust_table.createIndex({'Item_id':2})
{
  "createdCollectionAutomatically" : false,
  "numIndexesBefore" : 2,

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    "numIndexesAfter" : 3,
    "ok" : 1
}
> db.cust_table.createIndex({'Item_id':4})
{
  "createdCollectionAutomatically" : false,
  "numIndexesBefore" : 3,
  "numIndexesAfter" : 4,
  "ok" : 1
}
> db.cust_table.getIndexes()
[
  {
    "v" : 1,
    "key" : {
      "_id" : 1
    },
    "name" : "_id_",
    "ns" : "customer.cust_table"
  },
  {
    "v" : 1,
    "key" : {
      "Item_id" : 1
    },
    "name" : "Item_id_1",
    "ns" : "customer.cust_table"
  },
  {
    "v" : 1,
    "key" : {
      "Item_id" : 2
    },
    "name" : "Item_id_2",
    "ns" : "customer.cust_table"
  },
  {
    "v" : 1,
    "key" : {
      "Item_id" : 4
    },
    "name" : "Item_id_4",
    "ns" : "customer.cust_table"
  }
]
> db.cust_table.dropIndex({'Item_id':4})

```

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{ "nIndexesWas" : 4, "ok" : 1 }
> db.cust_table.dropIndex({"Item_id":1})
{ "nIndexesWas" : 3, "ok" : 1 }
> db.cust_table.getIndexes()
[
  {
    "v" : 1,
    "key" : {
      "_id" : 1
    },
    "name" : "_id_",
    "ns" : "customer.cust_table"
  },
  {
    "v" : 1,
    "key" : {
      "Item_id" : 2
    },
    "name" : "Item_id_2",
    "ns" : "customer.cust_table"
  }
]
> db.cust_table.getIndexes()
[
  {
    "v" : 1,
    "key" : {
      "_id" : 1
    },
    "name" : "_id_",
    "ns" : "customer.cust_table"
  },
  {
    "v" : 1,
    "key" : {
      "Item_id" : 2
    },
    "name" : "Item_id_2",
    "ns" : "customer.cust_table"
  }
]
>

```
