**Assignment No:-2 A**

**( Aggregation & Indexes )**

**Subject**: LP – I( ADBMS)

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**Problem Statement**

Implement aggregation with customer collection using MongoDB. Customer collection consist of

following data

**> db.customer.find();**

{ "\_id" : ObjectId("54265694517b30434f6a2bdc"), "custID" : "A123", "Amount" : 500, "status" :

"A" }

{ "\_id" : ObjectId("542656eb517b30434f6a2bdd"), "custID" : "A123", "Amount" : 250, "status" :

"A" }

{ "\_id" : ObjectId("54265726517b30434f6a2bde"), "custID" : "B212", "Amount" : 200, "status" :

"A" }

{ "\_id" : ObjectId("54265757517b30434f6a2bdf"), "custID" : "A123", "Amount" : 300, "status" :

"D" }

**Execute following queries on employee collection.**

**PART-A**

**a) Find the total amount of each customer.**

customer> db.customer.aggregate([{$group:{\_id:"$custID" , TotalAmount:{$sum:"$Amount"}}}])

[

{ \_id: 'A123', TotalAmount: 1050 },

{ \_id: 'B212', TotalAmount: 200 }

]

**b) Find the total amount of each customer whose status is A.**

customer>db.customer.aggregate({$match:{status:"A"}},{$group:{\_id:"null",TotalAmountOfCustomerWhoseStatusIs\_A:{$sum:"$Amount"}}})

[ { \_id: 'null', TotalAmountOfCustomerWhoseStatusIs\_A: 950 } ]

**c) Find the minimum total amount of each customer whose Status is A.**

customer>db.customer.aggregate({$match:{status:"A"}},{$group:{\_id:"null",MinimumTotalAmountOfEachCustomerWithStatus\_A:{$min:"$Amount"}}})

[ { \_id: 'null', MinimumTotalAmountOfEachCustomerWithStatus\_A: 200 } ]

**d) Find the maximum total amount of each customer whose Status is A.**

customer>db.customer.aggregate({$match:{status:"A"}},{$group:{\_id:"Null",MaximumTotalAmountOfEachCustomerWithStatus\_A:{$max:"$Amount"}}})

[ { \_id: 'Null', MaximumTotalAmountOfEachCustomerWithStatus\_A: 500 } ]

**e) Find the average total amount of each customer whose Status is A.**

customer>db.customer.aggregate({$match:{status:"A"}},{$group:{\_id:"null",AverageTotalAmountOfEachCustomerWithStatus\_A:{$avg:"$Amount"}}})

[

{

\_id: 'null',

AverageTotalAmountOfEachCustomerWithStatus\_A: 316.6666666666667

}

]

**PART-B**

**f) Create index on custID.**

customer> db.customer.createIndex({custID:1})

custID\_1

**g) Execute getIndexes.**

customer> db.customer.getIndexes({})

[

{ v: 2, key: { \_id: 1 }, name: '\_id\_' },

{ v: 2, key: { custID: 1 }, name: 'custID\_1' }

]

**h) Drop the index created.**

customer> db.customer.dropIndex({custID:1})

{ nIndexesWas: 2, ok: 1 }