db.Customer.insert([

{"custID" : "A123", "Amount" : 500, "status" :"A"},

{"custID" : "A123", "Amount" : 250, "status" :"A"},

{"custID" : "B212", "Amount" : 200, "status" :"A"},

{"custID" : "A123", "Amount" : 300, "status" :"D"}

])

> db.Customer.distinct("custID")

[ "A123", "B212" ]

> db.Customer.count()

4

-----------------------------------------------------------------------

**# PART - A**

-----------------------------------------------------------------------

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

# for total of amount of each customer

> db.Customer.aggregate({$group:{\_id:"$custID",Total:{$sum:"$Amount"}}})

{ "\_id" : "B212", "Total" : 200 }

{ "\_id" : "A123", "Total" : 1050 }

# for total of amount of all customers, use "custID"

> db.Customer.aggregate({$group:{\_id:"custID",Total:{$sum:"$Amount"}}})

{ "\_id" : "custID", "Total" : 1250 }

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

> db.Customer.aggregate({$match:{status:'A'}},{$group:{\_id:'$custID', TotalAmount:{$sum:'$Amount'}}})

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

{ "\_id" : "A123", "TotalAmount" : 750 }

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

> db.Customer.aggregate({$match:{status:'A'}},{$group:{\_id:'$custID', TotalAmount:{$min:'$Amount'}}})

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

{ "\_id" : "A123", "TotalAmount" : 250 }

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

> db.Customer.aggregate({$match:{status:'A'}},{$group:{\_id:'$custID', TotalAmount:{$max:'$Amount'}}})

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

{ "\_id" : "A123", "TotalAmount" : 500 }

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

> db.Customer.aggregate({$match:{status:'A'}},{$group:{\_id:'$custID', TotalAmount:{$avg:'$Amount'}}})

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

{ "\_id" : "A123", "TotalAmount" : 375 }

-----------------------------------------------------------------------

**# PART - B**

-----------------------------------------------------------------------

**f) Create index on custID.**

> db.Customer.getIndexes()

[

{

"v" : 2,

"key" : {

"\_id" : 1

},

"name" : "\_id\_",

"ns" : "company.Customer"

}

]

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

{

"createdCollectionAutomatically" : false,

"numIndexesBefore" : 1,

"numIndexesAfter" : 2,

"ok" : 1

}

> db.Customer.createIndex({custID:1,Amount:-1})

{

"createdCollectionAutomatically" : false,

"numIndexesBefore" : 1,

"numIndexesAfter" : 2,

"ok" : 1

}

> db.Customer.getIndexes()

[

{

"v" : 2,

"key" : {

"\_id" : 1

},

"name" : "\_id\_",

"ns" : "company.Customer"

},

{

"v" : 2,

"key" : {

"custID" : 1,

"Amount" : -1

},

"name" : "custID\_1\_Amount\_-1",

"ns" : "company.Customer"

}

]

**g) Execute getIndexes.**

> db.Customer.getIndexes()

[

{

"v" : 2,

"key" : {

"\_id" : 1

},

"name" : "\_id\_",

"ns" : "company.Customer"

},

{

"v" : 2,

"key" : {

"custID" : 1

},

"name" : "custID\_1",

"ns" : "company.Customer"

}

]

**h) Drop the index created.**

> db.Customer.dropIndex('custID\_1')

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