Zeal College of Engineering and Research

Subject: DBMSL

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Div: B   Batch: B1

Roll No: T212009

Group B: Practical No: 11

Program Statement: : MongoDB – Aggregation and Indexing: Design and Develop MongoDB Queries using aggregation and indexing with suitable exampleusing MongoDB.

Code

```
test> use customer
switched to db customer
customer> db.createCollection('Customer');
{ ok: 1 }
customer> db.Customer.insertOne({'CustID':'J478', 'Amount':1500, 'Status':'completed'})
{
  acknowledged: true,
  insertedId: ObjectId('670a113e8b2911ef6e86b01d')
}
customer> db.Customer.insertOne({'CustID':'A124', 'Amount':200, 'Status':'completed'})
{
  acknowledged: true,
  insertedId: ObjectId('670a11618b2911ef6e86b01e')
}
customer> db.Customer.insertOne({'CustID':'A150', 'Amount':250, 'Status':'pending'})
{
  acknowledged: true,
  insertedId: ObjectId('670a11948b2911ef6e86b01f')
}
customer> db.Customer.insertOne({'CustID':'A150', 'Amount':300, 'Status':'pending'})
{
  acknowledged: true,
  insertedId: ObjectId('670a11ac8b2911ef6e86b020')
}
customer> db.Customer.insertOne({'CustID':'A201', 'Amount':750, 'Status':'pending'})
{
  acknowledged: true,
  insertedId: ObjectId('670a11ca8b2911ef6e86b021')
}
```

```
customer> db.Customer.find().pretty()
[
  {
    _id: ObjectId('670a113e8b2911ef6e86b01d'),
    CustID: 'J478',
    Amount: 1500,
    Status: 'completed'
  },
  {
    _id: ObjectId('670a11618b2911ef6e86b01e'),
    CustID: 'A124',
    Amount: 200,
    Status: 'completed'
  },
  {
    _id: ObjectId('670a11948b2911ef6e86b01f'),
    CustID: 'A150',
    Amount: 250,
    Status: 'pending'
  },
  {
    _id: ObjectId('670a11ac8b2911ef6e86b020'),
    CustID: 'A150',
    Amount: 300,
    Status: 'pending'
  },
  {
    _id: ObjectId('670a11ca8b2911ef6e86b021'),
    CustID: 'A201',
    Amount: 750,
    Status: 'pending'
  }
]

customer> db.Customer.aggregate([{$match:{'Status':'completed'}}])
[
  {
    _id: ObjectId('670a113e8b2911ef6e86b01d'),
    CustID: 'J478',
    Amount: 1500,
    Status: 'completed'
  },
  {
    _id: ObjectId('670a11618b2911ef6e86b01e'),
    CustID: 'A124',
    Amount: 200,
```

```
    Status: 'completed'
  }
]

customer> db.Customer.aggregate([{$match:{'Status':'completed','Amount':{$gte:250}}}])
[
  {
    _id: ObjectId('670a113e8b2911ef6e86b01d'),
    CustID: 'J478',
    Amount: 1500,
    Status: 'completed'
  }
]

customer>db.Customer.aggregate([{$match:{'Status':'completed'}},{$match:{'Amount':{$gte:250}}}])
[
  {
    _id: ObjectId('670a113e8b2911ef6e86b01d'),
    CustID: 'J478',
    Amount: 1500,
    Status: 'completed'
  }
]

customer> db.Customer.aggregate([{$match:{'Status':'completed'}},{$group:{_id:'$CustID','totalAmount':{$sum:'$Amount'}}}])
[ { _id: null, totalAmount: 1700 } ]

customer> db.Customer.aggregate([{$match:{'Status':'pending'}},{$group:{_id:'$CustID','minAmount':{$m$max:'$Amount'}}}])
[ { _id: null, minAmount: 750 } ]

customer> db.Customer.aggregate([{$match:{'Status':'pending'}},{$group:{_id:'$CustID','maxAmount':{$m$max:'$Amount'}}}]).pretty()
[ { _id: null, maxAmount: 750 } ]

customer> db.Customer.aggregate([{$match:{'Status':'pending'}},{$group:{_id:'$CustID','avgAmount':{$a$avg:'$Amount'}}}]).pretty()
[ { _id: null, avgAmount: 433.3333333333333 } ]
customer> db.Customer.aggregate([{$sort:{'CustID':1}}]).pretty()
[
  {
    _id: ObjectId('670a11618b2911ef6e86b01e'),
    CustID: 'A124',
    Amount: 200,
    Status: 'completed'
```

```
   },
   {
     _id: ObjectId('670a11948b2911ef6e86b01f'),
     CustID: 'A150',
     Amount: 250,
     Status: 'pending'
   },
   {
     _id: ObjectId('670a11ac8b2911ef6e86b020'),
     CustID: 'A150',
     Amount: 300,
     Status: 'pending'
   },
   {
     _id: ObjectId('670a11ca8b2911ef6e86b021'),
     CustID: 'A201',
     Amount: 750,
     Status: 'pending'
   },
   {
     _id: ObjectId('670a113e8b2911ef6e86b01d'),
     CustID: 'J478',
     Amount: 1500,
     Status: 'completed'
   }
]

customer> db.Customer.aggregate([{$sort:{'CustID':-1}}]).pretty()
[
  {
    _id: ObjectId('670a113e8b2911ef6e86b01d'),
    CustID: 'J478',
    Amount: 1500,
    Status: 'completed'
  },
  {
    _id: ObjectId('670a11ca8b2911ef6e86b021'),
    CustID: 'A201',
    Amount: 750,
    Status: 'pending'
  },
  {
    _id: ObjectId('670a11948b2911ef6e86b01f'),
    CustID: 'A150',
    Amount: 250,
    Status: 'pending'
  },
```

```
  {
    _id: ObjectId('670a11ac8b2911ef6e86b020'),
    CustID: 'A150',
    Amount: 300,
    Status: 'pending'
  },
  {
    _id: ObjectId('670a11618b2911ef6e86b01e'),
    CustID: 'A124',
    Amount: 200,
    Status: 'completed'
  }
]

customer>db.Customer.aggregate([{$skip:1},{$group:{_id:'$CustID','totalAmount':{$sum:'$
Amount'}}}])
[
  { _id: 'A124', totalAmount: 200 },
  { _id: 'A201', totalAmount: 750 },
  { _id: 'A150', totalAmount: 550 }
]

customer>db.Customer.aggregate([{$limit:2},{$group:{_id:'$CustID','totalAmount':{$sum:'$
Amount'}}}])
[
  { _id: 'J478', totalAmount: 1500 },
  { _id: 'A124', totalAmount: 200 }
]

customer>db.Customer.aggregate([{$limit:4},{$group:{_id:'$CustID','totalAmount':{$first:'$
Amount'}}}])
[
  { _id: 'J478', totalAmount: 1500 },
  { _id: 'A150', totalAmount: 250 },
  { _id: 'A124', totalAmount: 200 }
]

customer>
db.Customer.aggregate([{$limit:4},{$group:{_id:'$CustID','totalAmount':{$last:'$Amount'}}}
])

[
  { _id: 'J478', totalAmount: 1500 },
  { _id: 'A124', totalAmount: 200 },
  { _id: 'A150', totalAmount: 300 }
customer>
```