

Group B

Assignment – 2

Problem Statement : Design and Develop MongoDB Queries using aggregation and indexing with suitable example using MongoDB.

```
Pratik> db.createCollection("customer")
{ ok: 1 }
Pratik>db.customer.insert({Item_id:1,Cust_Name:"Pratik",Product:"Milk",Amount:50});
{
  acknowledged: true,
  insertedIds: { '0': ObjectId('66f25a84d7c8c61a8d964046') }
}
Pratik>db.customer.insert({Item_id:2,Cust_Name:"Onkar",Product:"Biscuits",Amount:40});
{
  acknowledged: true,
  insertedIds: { '0': ObjectId('66f25aa8d7c8c61a8d964047') }
}
Pratik>db.customer.insert({Item_id:3,Cust_Name:"Pratik",Product:"Chips",Amount:40});
{
  acknowledged: true,
  insertedIds: { '0': ObjectId('66f25aead7c8c61a8d964048') }
}
Pratik>db.customer.insert({Item_id:4,Cust_Name:"Onkar",Product:"Chocolate",Amount:60});
{
  acknowledged: true,
  insertedIds: { '0': ObjectId('66f25b0bd7c8c61a8d964049') }
}
Pratik>db.customer.insert({Item_id:5,Cust_Name:"Ashok",Product:"Noodles",Amount:100});
{
  acknowledged: true,
  insertedIds: { '0': ObjectId('66f25b28d7c8c61a8d96404a') }
}
Pratik> db.customer.find()
[
  {
    _id: ObjectId('66f25a84d7c8c61a8d964046'),
    Item_id: 1,
    Cust_Name: 'Pratik',
    Product: 'Milk',
    Amount: 50
  },
  {
    _id: ObjectId('66f25aa8d7c8c61a8d964047'),
    Item_id: 2,
    Cust_Name: 'Onkar',
    Product: 'Biscuits',
    Amount: 40
  },
  {
    _id: ObjectId('66f25aead7c8c61a8d964048'),
    Item_id: 3,
    Cust_Name: 'Pratik',
    Product: 'Chips',
    Amount: 40
  },
  {
```

```

    _id: ObjectId('66f25b0bd7c8c61a8d964049'),
    Item_id: 4,
    Cust_Name: 'Onkar',
    Product: 'Chocolate',
    Amount: 60
  },
  {
    _id: ObjectId('66f25b28d7c8c61a8d96404a'),
    Item_id: 5,
    Cust_Name: 'Ashok',
    Product: 'Noodles',
    Amount: 100
  }
]
//Aggregation
Pratik>
db.customer.aggregate({$group:{_id:"$Cust_Name","total":{$sum:"$Amount"}}
});
[
  { _id: 'Pratik', total: 90 },
  { _id: 'Onkar', total: 100 },
  { _id: 'Ashok', total: 100 }
]
Pratik>
db.customer.aggregate({$group:{_id:"$Cust_Name","total":{$avg:"$Amount"}}
});
[
  { _id: 'Pratik', total: 45 },
  { _id: 'Onkar', total: 50 },
  { _id: 'Ashok', total: 100 }
]
Pratik>
db.customer.aggregate({$group:{_id:"$Cust_Name","total":{$min:"$Amount"}}
});
[
  { _id: 'Ashok', total: 100 },
  { _id: 'Pratik', total: 40 },
  { _id: 'Onkar', total: 40 }
]
Pratik>
db.customer.aggregate({$group:{_id:"$Cust_Name","total":{$max:"$Amount"}}
});
[
  { _id: 'Ashok', total: 100 },
  { _id: 'Pratik', total: 50 },
  { _id: 'Onkar', total: 60 }
]
Pratik>
db.customer.aggregate({$group:{_id:"$Cust_Name","total":{$first:"$Amount"
}}});
[
  { _id: 'Ashok', total: 100 },
  { _id: 'Pratik', total: 50 },
  { _id: 'Onkar', total: 40 }
]
Pratik>
db.customer.aggregate({$group:{_id:"$Cust_Name","total":{$last:"$Amount"
}}});
[
  { _id: 'Ashok', total: 100 },
  { _id: 'Onkar', total: 60 },
  { _id: 'Pratik', total: 40 }
]

```

```

]
Pratik>
db.customer.aggregate({$group:{_id:"$Cust_Name","total":{$push:"$Amount"}
}});
[
  { _id: 'Pratik', total: [ 50, 40 ] },
  { _id: 'Onkar', total: [ 40, 60 ] },
  { _id: 'Ashok', total: [ 100 ] }
]
Pratik>
db.customer.aggregate({$group:{_id:"$Cust_Name","total":{$sum:1}}});
[
  { _id: 'Ashok', total: 1 },
  { _id: 'Pratik', total: 2 },
  { _id: 'Onkar', total: 2 }
]
Pratik>
db.customer.aggregate({$group:{_id:"$Cust_Name","total":{$addToSet:"$Amount"}
}});
[
  { _id: 'Pratik', total: [ 40, 50 ] },
  { _id: 'Onkar', total: [ 60, 40 ] },
  { _id: 'Ashok', total: [ 100 ] }
]
//Indexing
Pratik> db.customer.createIndex({'Item_id':1})
Item_id_1
Pratik> db.customer.createIndex({'Item_id':2})
Item_id_2
Pratik> db.customer.createIndex({'Item_id':4})
Item_id_4
Pratik> db.customer.getIndexes();
[
  { v: 2, key: { _id: 1 }, name: '_id_' },
  { v: 2, key: { Item_id: 1 }, name: 'Item_id_1' },
  { v: 2, key: { Item_id: 2 }, name: 'Item_id_2' },
  { v: 2, key: { Item_id: 4 }, name: 'Item_id_4' }
]
Pratik> db.customer.dropIndex({'Item_id':4})
{ nIndexesWas: 4, ok: 1 }
Pratik> db.customer.dropIndex({'Item_id':1})
{ nIndexesWas: 3, ok: 1 }
Pratik> db.customer.getIndexes();
[
  { v: 2, key: { _id: 1 }, name: '_id_' },
  { v: 2, key: { Item_id: 2 }, name: 'Item_id_2' }
]
Pratik> db.customer.getIndexes();
[
  { v: 2, key: { _id: 1 }, name: '_id_' },
  { v: 2, key: { Item_id: 2 }, name: 'Item_id_2' }
]

```