**::: AGGREGATE :::**

Bank> use Bnk;

switched to db Bnk

Bnk> db.createCollection('Customer');

{ ok: 1 }

Bnk> db.Customer.insertOne({\_id:1101,C\_name:'Emma',Bank\_name:'JPB',Branch:'Chicago',Balance:800000});

{ acknowledged: true, insertedId: 1101 }

Bnk> db.Collection.insertOne({\_id:1102,C\_name:'John',Bank\_name:'IPPB',Branch:'Panama',Balance:90000});

{ acknowledged: true, insertedId: 1102 }

Bnk> db.Collection.insertOne({\_id:1103,C\_name:'Reacher',Bank\_name:'APB',Branch:'Canada',Balance:2000});

{ acknowledged: true, insertedId: 1103 }

Bnk> db.Customer.count();

1

Bnk> db.Collection.count();

2

Bnk> db.Customer.insertOne({\_id:1103,C\_name:'Reacher',Bank\_name:'APB',Branch:'Canada',Balance:2000});

{ acknowledged: true, insertedId: 1103 }

Bnk> db.Customer.insertOne({\_id:1102,C\_name:'John',Bank\_name:'IPPB',Branch:'Panama',Balance:90000});

{ acknowledged: true, insertedId: 1102 }

Bnk> db.Customer.count();

3

Bnk> db.Customer.aggregate([{$group:{C\_id:null,T\_balance:{$sum:'Balance'}}}]);

MongoServerError[Location40234]: The field 'C\_id' must be an accumulator object

Bnk> db.Customer.aggregate([{$group:{\_id:null,T\_balance:{$sum:'Balance'}}}]);

[ { \_id: null, T\_balance: 0 } ]

Bnk> db.Customer.aggregate([{$group:{\_id:"\_id",T\_balance:{$sum:'Balance'}}}]);

[ { \_id: '\_id', T\_balance: 0 } ]

Bnk> db.Customer.aggregate([{$group:{\_id:null,total\_bal:{$sum:'$Balance'}}}]);

[ { \_id: null, total\_bal: 892000 } ]

Bnk> db.Customer.aggregate([{$group:{\_id:null,total\_bal:{$min:'$Balance'}}}]);

[ { \_id: null, total\_bal: 2000 } ]

Bnk> db.Customer.aggregate([{$group:{\_id:null,total\_bal:{$max:'$Balance'}}}]);

[ { \_id: null, total\_bal: 800000 } ]

Bnk> db.Customer.aggregate([{$group:{\_id:null,total\_bal:{$avg:'$Balance'}}}]);

[ { \_id: null, total\_bal: 297333.3333333333 } ]

Bnk> db.Customer.aggregate([{$group:{\_id:null,total\_bal:{$push:'$Balance'}}}]);

[ { \_id: null, total\_bal: [ 800000, 2000, 90000 ] } ]

Bnk> db.Customer.insertOne({\_id:1104,C\_name:'Chris',Bank\_name:'IOB',Branch:'France',Balance:90000});

{ acknowledged: true, insertedId: 1104 }

Bnk> db.Customer.aggregate([{$group:{\_id:null,total\_bal:{$push:'$Balance'}}}]);

[ { \_id: null, total\_bal: [ 800000, 2000, 90000, 90000 ] } ]

Bnk> db.Customer.aggregate([{$group:{\_id:null,total\_bal:{$addToSet:'$Balance'}}}]);

[ { \_id: null, total\_bal: [ 90000, 800000, 2000 ] } ]

Bnk> db.Customer.aggregate([{$group:{\_id:'$Bank\_name',total\_bal:{$sum:'$Balance'}}}]);

[

{ \_id: 'APB', total\_bal: 2000 },

{ \_id: 'JPB', total\_bal: 800000 },

{ \_id: 'IPPB', total\_bal: 90000 },

{ \_id: 'IOB', total\_bal: 90000 }

]

Bnk> db.Customer.find().sort({'C\_name':1});

[

{

\_id: 1104,

C\_name: 'Chris',

Bank\_name: 'IOB',

Branch: 'France',

Balance: 90000

},

{

\_id: 1101,

C\_name: 'Emma',

Bank\_name: 'JPB',

Branch: 'Chicago',

Balance: 800000

},

{

\_id: 1102,

C\_name: 'John',

Bank\_name: 'IPPB',

Branch: 'Panama',

Balance: 90000

},

{

\_id: 1103,

C\_name: 'Reacher',

Bank\_name: 'APB',

Branch: 'Canada',

Balance: 2000

}

]

**:::INDEXING:::**

Bank> db.Customer.createIndex({CustomerId:1});

CustomerId\_1

Bank> db.Customer.getIndexes();

[

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

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

]

Bank> db.Customer.createIndex({CustomerId:1},{Sparse:true});

CustomerId\_1

Bank> db.Customer.getIndexes();

[

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

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

]

Bank> db.Customer.createIndex({CustomerId:2},{Sparse:true});

CustomerId\_2

Bank> db.Customer.getIndexes();

[

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

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

{ v: 2, key: { CustomerId: 2 }, name: 'CustomerId\_2' }

]

Bank> db.Customer.createIndex({CustomerId:3},{Sparse:true});

CustomerId\_3

Bank> db.Customer.getIndexes();

[

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

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

{ v: 2, key: { CustomerId: 2 }, name: 'CustomerId\_2' },

{ v: 2, key: { CustomerId: 3 }, name: 'CustomerId\_3' }

]