**DBMS Lab**

**Assignment No. 12 (Map-Reduce on Bank Collection)**

**Aim:** To study and implement MapReduce operation in MongoDB

**Title:** Write and execute simple queries to demonstrate MapReduce operation.

**Theory:**

1. **Create collection bank**

2. **Insert following documents into it.**

>db.bank.insert ({'custid':'c001','custname':'amit','bank':'SBI','blance':3000,'loction':'Pune'})

> db.bank.insert ({'custid':'c002','custname':'amol','bank':'AXIS','blance':4000,'loction':'Pune'})

> db.bank.insert ({'custid':'c002','custname':'amit','bank':'AXIS','blance':5000,'loction':'Mumbai'})

> db.bank.insert ({'custid':'c003','custname':'amit','bank':'AXIS','blance':5000,'loction':'Nagpur'})

> db.bank.insert ({'custid':'c004','custname':'amay','bank':'AXIS','blance':6000,'loction':'Nashik'})

> db.bank.insert ({'custid':'c005','custname':'amar','bank':'HDFC','blance':7000,'loction':'pune'})

> db.bank.insert ({'custid':'c006','custname':'vijay','bank':'HDFC','blance':8000,'loction':’Mumbai'})

3**. Perform aggregation using Map-Reduce to display bank wise balance**

> var Mapfunction=function(){emit(this.bank,this.blance)}

> var reducefunction=function(key,values){return **Array.sum**(values)}

> db.bank.mapReduce(Mapfunction, reducefunction,{'out':'bankMR'})

{ "result" : "bankMR",

"timeMillis" : 4,

"counts" : {

"input" : 7,

"emit" : 7,

"reduce" : 2,

"output" : 3

},

"ok" : 1, }

4. **Display the result of new collection bankMR**

> db.bankMR.find()

{“\_id”: "AXIS", "value”: 20000}

{“\_id”: "HDFC", "value”: 15000}

{“\_id”: "SBI", "value”: 3000}

5. **Display the balance of HDFC bank only from bankMR collection**

> db.bankMR.find ({'\_id':'HDFC'})

{“\_id”: "HDFC", "value”: 15000}

6. **Display the balance of SBI bank only from bankMR collection**

> db.bankMR.find ({'\_id':'SBI'})

{“\_id”: "SBI", "value”: 3000}

7. **Display the balance of AXIS bank only from bankMR collection**

> db.bankMR.find ({'\_id':'AXIS'})

{“\_id”: "AXIS", "value”: 20000}