PRACTICAL NO : 11

Problem Statement : Implementation of mapReduce operation with suitable example using mongodb

test> show dbs

admin 40.00 KiB

config 72.00 KiB

local 72.00 KiB

mydb 240.00 KiB

test> use mydb

switched to db mydb

mydb> show collections

employees

Employees

PDEA

student

Students

tushar

mydb> db.student.find()

[

{ \_id: ObjectId("65277b64bd64de380e10da4e"), Name: 'Bhagyashri' },

{ \_id: ObjectId("65277b64bd64de380e10da4f"), Name: 'Vaishali' }

]

mydb> db.createCollection("stud")

{ ok: 1 }

mydb> db.stud.insertMany([{id:101,name:"vaishali",marks:88,age:20},{id:102,name:"bhagyashri",marks:89,age:20},{id:103,name:"purva",marks:78,age:19},{id:104,name:"virat",marks:68,age:30},{id:105,name:"rohit",marks:91,age:30},{id:106,name:"rahul",marks:76,age:28}])

{

acknowledged: true,

insertedIds: {

'0': ObjectId("6530ad4bfb41071db021be36"),

'1': ObjectId("6530ad4bfb41071db021be37"),

'2': ObjectId("6530ad4bfb41071db021be38"),

'3': ObjectId("6530ad4bfb41071db021be39"),

'4': ObjectId("6530ad4bfb41071db021be3a"),

'5': ObjectId("6530ad4bfb41071db021be3b")

}

}

mydb> db.stud.find()

[

{

\_id: ObjectId("6530ad4bfb41071db021be36"),

id: 101,

name: 'vaishali',

marks: 88,

age: 20

},

{

\_id: ObjectId("6530ad4bfb41071db021be37"),

id: 102,

name: 'bhagyashri',

marks: 89,

age: 20

},

{

\_id: ObjectId("6530ad4bfb41071db021be38"),

id: 103,

name: 'purva',

marks: 78,

age: 19

},

{

\_id: ObjectId("6530ad4bfb41071db021be39"),

id: 104,

name: 'virat',

marks: 68,

age: 30

},

{

\_id: ObjectId("6530ad4bfb41071db021be3a"),

id: 105,

name: 'rohit',

marks: 91,

age: 30

},

{

\_id: ObjectId("6530ad4bfb41071db021be3b"),

id: 106,

name: 'rahul',

marks: 76,

age: 28

}

]

mydb> var mapfunction=function(){emit(this.age,this.marks)}

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

mydb> db.stud.mapReduce(mapfunction,reducefunction,{'out':'Result1\_mapReduce'})

DeprecationWarning: Collection.mapReduce() is deprecated. Use an aggregation instead.

See https://docs.mongodb.com/manual/core/map-reduce for details.

{ result: 'Result1\_mapReduce', ok: 1 }

mydb> db.Result1\_mapReduce.find()

[

{ \_id: 20, value: 177 },

{ \_id: 30, value: 159 },

{ \_id: 19, value: 78 },

{ \_id: 28, value: 76 }

]

mydb> db.stud.mapReduce(function () {emit(this.age, this.marks);}, function (key, values) { return Array.avg(values);}, { query: { age: { $gt: 20 } }, out: 'Result2\_mapReduce' })

{ result: 'Result2\_mapReduce', ok: 1 }

mydb> db.Result2\_mapReduce.find()

[ { \_id: 30, value: 79.5 }, { \_id: 28, value: 76 } ]

mydb>