**Name: Aditya Shankar Khorne TE-C-06**

**Assignment:- 12**

1. **Saving Documents in MongoDB:**

> db.author.save({"book\_title" : "MongoDB Tutorial","author\_name" : db.author.save({"book\_title" : "Software Testing Tutorial","author\_name" : "aparajita","status" : "active","publish\_year": "2015" })\_name" : "aparajita","status" : "active","publish\_year": "2015"

Wrdb.author.save({"book\_title" : "Node.js Tutorial","author\_name" : "Kritika","status" : "active","publish\_year": "2016" })or\_name"

Wrdb.author.save({"book\_title" : "PHP7 Tutorial","author\_name" : "aparajita","status" : "passive","publish\_year": "2016" })name" : "

WriteResult({ "nInserted" : 1 })

1. **Finding all documents:**

> db.author.find()

{ "\_id" : ObjectId("6707bd42a2df0be884326654"), "book\_title" : "MongoDB Tutorial", "author\_name" : "aparajita", "status" : "active", "publish\_year" : "2016" }

{ "\_id" : ObjectId("6707bd42a2df0be884326655"), "book\_title" : "Software Testing Tutorial", "author\_name" : "aparajita", "status" : "active", "publish\_year" : "2015" }

{ "\_id" : ObjectId("6707bd42a2df0be884326656"), "book\_title" : "Node.js Tutorial", "author\_name" : "Kritika", "status" : "active", "publish\_year" : "2016" }

{ "\_id" : ObjectId("6707bd42a2df0be884326657"), "book\_title" : "PHP7 Tutorial", "author\_name" : "aparajita", "status" : "passive", "publish\_year" : "2016" }

1. **MapReduce to select all active books and group by author name:**

> db.author.mapReduce(

... function() { emit(this.author\_name,1); },

... function(key, values) { return Array.sum(values); },

... {

... query: { status: "active" },

... out: "author\_total"

... }

... )

{ "result" : "author\_total", "ok" : 1 }

1. **Viewing results of the MapReduce operation:**

> db.author\_total.find()

{ "\_id" : "aparajita", "value" : 2 }

{ "\_id" : "Kritika", "value" : 1 }

**Commands for Employee Salary Data:**

1. **Finding Employee Salary Data:**

> db.Computer.find().pretty()

{

"\_id" : ObjectId("6707b964a2df0be884326651"),

"Name" : "SDB",

"Designation" : "HOD",

"Age" : 40,

"Salary" : 90000

}

{

"\_id" : ObjectId("6707b964a2df0be884326652"),

"Name" : "SBN",

"Designation" : "Asso Prof",

"Age" : 40,

"Salary" : 85000

}

{

"\_id" : ObjectId("6707b964a2df0be884326653"),

"Name" : "JSC",

"Designation" : "Asst Prof",

"Age" : 30,

"Salary" : 75000

}

1. **Map Function for salary aggregation:**

> var mapFunction = function () {

... emit(this.Designation, this.Salary);

... };

1. **Reduce Function to sum salaries:**

> var reduceFunction = function (key, values) {

... return Array.sum(values);

... };

1. **Performing the MapReduce operation for total salary:**

> db.Computer.mapReduce(

... mapFunction,

... reduceFunction,

... { out: "totalSalaryResult" }

... );

{ "result" : "totalSalaryResult", "ok" : 1 }

1. **Viewing the total salary result:**

> db.totalSalaryResult.find()

{ "\_id" : "HOD", "value" : 90000 }

{ "\_id" : "Asso Prof", "value" : 85000 }

{ "\_id" : "Asst Prof", "value" : 75000 }

1. **Finding designation-wise total salary:**

> var mapFunction = function() {

... emit(this.Designation, this.Salary);

... };

>

> var reduceFunction = function(key, values) {

... return Array.sum(values);

... };

>

> db.Computer.mapReduce(

... mapFunction,

... reduceFunction,

... {

... out: "salary\_totals"

... }

... );

{ "result" : "salary\_totals", "ok" : 1 }