**Assignment No:-2 B**

**( Map Reduce Function )**

**Subject**: LP – I( ADBMS)

**Student Name:- Sangram Phalake Roll No : 3006 Batch : T2**

**Problem Statement :**

In this example we shall take school db in which students is a collection

and the collection has documents where each document has name of the

student, marks he/she scored in a particular subject.

We shall apply mapReduce function

customer> use school

switched to db school

school> db.students.find()

[

{

\_id: ObjectId("653259c6e4a87690ad0a8c03"),

name: 'Midhu',

subject: 'science',

marks: 68

},

{

\_id: ObjectId("653259d0e4a87690ad0a8c04"),

name: 'Midhu',

subject: 'maths',

marks: 98

},

{

\_id: ObjectId("653259d8e4a87690ad0a8c05"),

name: 'Midhu',

subject: 'sports',

marks: 77

},

{

\_id: ObjectId("653259e0e4a87690ad0a8c06"),

name: 'Akhil',

subject: 'science',

marks: 67

},

{

\_id: ObjectId("653259e6e4a87690ad0a8c07"),

name: 'Akhil',

subject: 'maths',

marks: 87

},

{

\_id: ObjectId("653259ece4a87690ad0a8c08"),

name: 'Akhil',

subject: 'sports',

marks: 89

},

{

\_id: ObjectId("653259f1e4a87690ad0a8c09"),

name: 'Anish',

subject: 'science',

marks: 67

},

{

\_id: ObjectId("653259f6e4a87690ad0a8c0a"),

name: 'Anish',

subject: 'maths',

marks: 78

},

{

\_id: ObjectId("653259fce4a87690ad0a8c0b"),

name: 'Anish',

subject: 'sports',

marks: 90

}

]

**1] to find Average Marks For Each Student**

school> var reduce1=function(name,marks){return Array.avg(marks)}

school> var map1=function(){emit(this.name, this.marks)}

school> var reduce1=function(name,marks){return Array.avg(marks)}

school> db.students.mapReduce(map1,reduce1,{out:"Average"})

{ result: 'Average', ok: 1 }

school> db.Average.find()

[

{ \_id: 'Anish', value: 78.33333333333333 },

{ \_id: 'Midhu', value: 81 },

{ \_id: 'Akhil', value: 81 }

]

**2] To Find Total Marks For Each Students**

school> var map2=function(){emit(this.name,this.marks)}

school> var reduce2=function(name,marks){return Array.sum(marks)}

school> db.students.mapReduce(map2,reduce2,{out:"TotalMarks"})

{ result: 'TotalMarks', ok: 1 }

school> db.TotalMarks.find()

[

{ \_id: 'Anish', value: 235 },

{ \_id: 'Midhu', value: 243 },

{ \_id: 'Akhil', value: 243 }]