

## Assignment No. :- 12

**Problem Statement:-** Implement Map reduces operation with a suitable example using MongoDB.

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### Console :-

```
aartikoli@Aartis-Air :~$ mongo
MongoDB shell version v3.6.3
connecting to: mongoddb://127.0.0.1:27017
MongoDB server version: 3.6.3
Server has startup warnings:
2020-10-15T14:26:28.786+0530 I STORAGE [initandlisten] 2020-10-
15T14:26:28.786+0530 I STORAGE [initandlisten] **
WARNING:
Using the XFS filesystem is strongly recommended with the WiredTiger storage
engine
2020-10-15T14:26:28.786+0530 I STORAGE [initandlisten] ** See
http://dochub.mongodb.org/core/prodnotes-filesystem 2020-10-15T14:26:36.417+0530 I
CONTROL [initandlisten] 2020-10-15T14:26:36.417+0530 I CONTROL [initandlisten] **
WARNING: Access control is not enabled for the database. 2020-10-
15T14:26:36.417+0530 I CONTROL [initandlisten] ** Read and write access to data and
configuration is unrestricted. 2020-10-15T14:26:36.417+0530 I CONTROL
[initandlisten]

>
> use Abhi
switched to db Abhi

> db.createCollection('Journal');
{ "ok" : 1 }
> db.Journal.insert({'book_id':1,'book_name':'JavacdOOP
','am t':500,'status':'A vailable'});
WriteResult({ "nInserted" : 1 })
```

```
>db.Journal.insert({'book_id':1,'book_name':'JavaOOP',  
'amt'  
:400,'status':'Not  
Available'}); WriteResult({  
"nInserted" : 1 })
```

```
>db.Journal.insert({'book_id':1,'book_name':'Java','amt':300,'status':'Not Available'});
WriteResult({ "nInserted" : 1 })
```

```
>db.Journal.insert({'book_id':2,'book_name':'Java','amt':300,'status':'Available'});
WriteResult({ "nInserted" : 1 })>
```

```
>db.Journal.insert({'book_id':2,'book_name':'OPP','amt':200,
,'status':'Available'});
```

```
WriteResult({ "nInserted" : 1 })
```

```
>db.Journal.insert({'book_id':2,'book_name':'C+','amt':200, 'status':'Available'});
```

```
WriteResult({ "nInserted" : 1 })
```

```
>db.Journal.insert({'book_id':3,'book_name':'C+','amt':150, 'status':'Available'});
```

```
WriteResult({ "nInserted" : 1 })
```

```
> db.Journal.insert({'book_id':3,'book_name':'C+', 'amt':200,'status':'Not Available'});
```

```
WriteResult({ "nInserted" : 1 })
```

```
> db.Journal.insert({'book_id':4,'book_name':'OPP C+', 'amt':300,'status':'Not Available'});
```

```
WriteResult({ "nInserted" : 1 })
```

```
> db.Journal.insert({'book_id':5,'book_name':'OPP C+
```

```

+', 'amt':400, 'status':'Available'}
);
WriteResult({ "nInserted" : 1 })

> db.Journal.insert({'book_id':5, 'book_name':'C++', 'amt':400, 'status':'Available'}); WriteResult({ "nInserted" : 1 })

> db.Journal.insert({'book_id':5, 'book_name':'C++ Java', 'amt':400, 'status':'Not Available'});
WriteResult({ "nInserted" : 1 })

> var mapfunction=function(){
    emit(this.book_id, this.amt)};
> var
reducefunction=function(key, value){return
Array.sum(value)};

> db.Journal.mapReduce(mapfunction, reducefunction,
    {'out':'new'});
{
  "result" :
  "new",
  "timeMillis" :
  49, "counts" : {
    "input" : 12,
    "emit" : 12,
    "reduce" : 4,
    "output" : 5
  },
  "ok" : 1
}

```

```
> db.Journal.mapReduce(mapfunction,reducefunction,
{'out':'new'}).find().pretty();
{ "_id" : 1, "value" : 1200 }
{ "_id" : 2, "value" : 700 }
```

```
{ "_id" : 3, "value" : 350 }  
{ "_id" : 4, "value" : 300 }  
{ "_id" : 5, "value" : 1200 }
```

>

>

```
> db.new.find().pretty();  
{ "_id" : 1, "value" : 1200 }  
{ "_id" : 2, "value" : 700 }  
{ "_id" : 3, "value" : 350 }  
{ "_id" : 4, "value" : 300 }  
{ "_id" : 5, "value" : 1200 }  
>
```