19)Implement Map reduces operation with suitable example using MongoDB

yashu@Yashu-Laptop:~$ mongo

MongoDB shell version v5.0.22

connecting to: mongodb://127.0.0.1:27017/?compressors=disabled&gssapiServiceName=mongodb

Implicit session: session { "id" : UUID("fc8c87f0-f721-4f87-8524-9de90af12370") }

MongoDB server version: 5.0.22

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Warning: the "mongo" shell has been superseded by "mongosh",

which delivers improved usability and compatibility.The "mongo" shell has been deprecated and will be removed in

an upcoming release.

For installation instructions, see

https://docs.mongodb.com/mongodb-shell/install/

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The server generated these startup warnings when booting:

2023-11-05T14:01:23.566+05:30: Using the XFS filesystem is strongly recommended with the WiredTiger storage engine. See http://dochub.mongodb.org/core/prodnotes-filesystem

2023-11-05T14:01:24.080+05:30: Access control is not enabled for the database. Read and write access to data and configuration is unrestricted

2023-11-05T14:01:24.080+05:30: /sys/kernel/mm/transparent\_hugepage/enabled is 'always'. We suggest setting it to 'never'

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> use assg11;

switched to db assg11

> db.stud.insert({'name':'amit',marks:80});

WriteResult({ "nInserted" : 1 })

> db.stud.insert({'name':'amit',marks:90});

WriteResult({ "nInserted" : 1 })

> db.stud.insert({'name':'diya',marks:85});

WriteResult({ "nInserted" : 1 })

> db.stud.insert({'name':'neha',marks:75});

WriteResult({ "nInserted" : 1 })

> db.stud.insert({'name':'neha',marks:35});

WriteResult({ "nInserted" : 1 })

>

> db.stud.find();

{ "\_id" : ObjectId("65476584539051d28b923b55"), "name" : "amit", "marks" : 80 }

{ "\_id" : ObjectId("65476596539051d28b923b56"), "name" : "amit", "marks" : 90 }

{ "\_id" : ObjectId("654765af539051d28b923b57"), "name" : "diya", "marks" : 85 }

{ "\_id" : ObjectId("654765be539051d28b923b58"), "name" : "neha", "marks" : 75 }

{ "\_id" : ObjectId("654765c5539051d28b923b59"), "name" : "neha", "marks" : 35 }

> var map = function(){emit(this.name,this.marks);};

> var reduce = function(name,marks){return Array.sum(marks);};

> db.stud.mapReduce( map, reduce, {out:"result"} );

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

> db.result.find();

{ "\_id" : "amit", "value" : 170 }

{ "\_id" : "diya", "value" : 85 }

{ "\_id" : "neha", "value" : 110 }

> db.stud.find().pretty();

{

"\_id" : ObjectId("65476584539051d28b923b55"),

"name" : "amit",

"marks" : 80

}

{

"\_id" : ObjectId("65476596539051d28b923b56"),

"name" : "amit",

"marks" : 90

}

{

"\_id" : ObjectId("654765af539051d28b923b57"),

"name" : "diya",

"marks" : 85

}

{

"\_id" : ObjectId("654765be539051d28b923b58"),

"name" : "neha",

"marks" : 75

}

{

"\_id" : ObjectId("654765c5539051d28b923b59"),

"name" : "neha",

"marks" : 35

}

> db.result.find().pretty();

{ "\_id" : "amit", "value" : 170 }

{ "\_id" : "diya", "value" : 85 }

{ "\_id" : "neha", "value" : 110 }

>

>