Title: MongoDB Map-reduce operations

Problem Statement:

Implement map-reduce operations with suitable example using MongoDB

Objectives:

→ To understand the concept of map-reduce as data processing paradigm for condensing large volumes of data into useful aggregation results.

S/W & H/W requirements:

Windows 10, 64 bit, 8GB RAM, 512 GB SSD, MongoDB 5.0

Theory:-

MapReduce is a data processing paradigm for condensing large volumes of data into useful aggregated results.

following is the syntax of the basic mapReduce command.

```
db.collection_name.mapReduce(
   function() {
     emit(key,value); },
   function(key,value){
     return reducefunction },
   { query : document,
     out : document
   })
```

In the above Syntax, map is a Javascript function that maps a value with a key and emits a key-value pair

Reduce is a javascript function that reduces or groups all the documents having the same key.

Out specifies the location of the map-reduce query result.

Query specifies the optional selection criteria for selecting documents

Conclusion:

Successfully implemented mapReduce operation in MongoDB.