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Group B: Practical: 3

Implement Map reduce operation with suitable example using MongoDB.

Please enter a MongoDB connection string (Default: mongodb://localhost/): db

db

Current Mongosh Log ID: 653d411f18f2246b4da3abe3

Connecting to: mongodb://127.0.0.1:27017/db?directConnection=true&serverSelectionTimeoutMS=2000&appName=mongosh+2.0.1

Using MongoDB: 7.0.2

Using Mongosh: 2.0.1

mongosh 2.0.2 is available for download: https://www.mongodb.com/try/download/shell

For mongosh info see: https://docs.mongodb.com/mongodb-shell/

  The server generated these startup warnings when booting

  2023-10-28T22:17:18.498+05:30: Access control is not enabled for the database. Read and write access to data and configuration is unrestricted

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db> show dbs

Database01   48.00 KiB

Practical10   80.00 KiB

admin   40.00 KiB

config   108.00 KiB

local   88.00 KiB

db> use mapreduce

switched to db mapreduce

```
mapreduce> db.createCollection({college_data})

ReferenceError: college_data is not defined

mapreduce> db.createCollection("college_data")

{ ok: 1 }

mapreduce> db.college_data.insert_one({Class:'TE', div:'A', students: 80, classT: 'xyz sir'})

TypeError: db.college_data.insert_one is not a function

mapreduce> db.college_data.insert({Class:'TE', div:'A', students: 80, classT: 'xyz sir'})

DeprecationWarning: Collection.insert() is deprecated. Use insertOne, insertMany, or bulkWrite.

{
  acknowledged: true,
  insertedIds: { '0': ObjectId("653d437c18f2246b4da3abe4") }
}

mapreduce> db.college_data.insert({Class:'TE', div:'B', students: 94, classT: 'abc mam'})

{
  acknowledged: true,
  insertedIds: { '0': ObjectId("653d43a918f2246b4da3abe5") }
}

mapreduce> db.college_data.insert({Class:'BE', div:'B', students: 84, classT: 'pqr mam'})

{
  acknowledged: true,
  insertedIds: { '0': ObjectId("653d43cf18f2246b4da3abe6") }
}

mapreduce> db.college_data.insert({Class:'TE', div:'C', students: 90, classT: 'name mam'}, {Class:'SE', div:'A', students: 80, classT: 'sdf mam'})

{
  acknowledged: true,
  insertedIds: { '0': ObjectId("653d443018f2246b4da3abe7") }
}

mapreduce> db.college_data.insert({Class:'SE', div:'B', students: 92, classT: 'url sir'})
```

```
{
  acknowledged: true,
  insertedIds: { '0': ObjectId("653d448a18f2246b4da3abe9") }
}
mapreduce> db.college_data.insert({Class:'BE', div:'A', students: 92, classT: 'url sir'}, {Class:'BE',
div:'C',students: 93, classT:'51'})
{
  acknowledged: true,
  insertedIds: { '0': ObjectId("653d44f518f2246b4da3abea") }
}
mapreduce> db.college_data.find()
[
  {
    _id: ObjectId("653d437c18f2246b4da3abe4"),
    Class: 'TE',
    div: 'A',
    students: 80,
    classT: 'xyz sir'
  },
  {
    _id: ObjectId("653d43a918f2246b4da3abe5"),
    Class: 'TE',
    div: 'B',
    students: 94,
    classT: 'abc mam'
  },
  {
    _id: ObjectId("653d43cf18f2246b4da3abe6"),
    Class: 'BE',
```

```
  div: 'B',

  students: 84,

  classT: 'pqr mam'

},

{

  _id: ObjectId("653d443018f2246b4da3abe7"),

  Class: 'TE',

  div: 'C',

  students: 90,

  classT: 'name mam'

},

{

  _id: ObjectId("653d446618f2246b4da3abe8"),

  Class: 'SE',

  div: 'A',

  students: 80,

  classT: 'sdf mam'

},

{

  _id: ObjectId("653d448a18f2246b4da3abe9"),

  Class: 'SE',

  div: 'B',

  students: 92,

  classT: 'url sir'

},

{

  _id: ObjectId("653d44f518f2246b4da3abea"),

  Class: 'BE',

  div: 'A',
```

```
    students: 92,

    classT: 'url sir'

  }

]
mapreduce> var map2 = function(){emit(this.Class, this.students)}


mapreduce> var redu2 = function(Class, students){return Array.sum(students)}


mapreduce> db.college_data.mapReduce(map2, redu2,{out:'out1'});

DeprecationWarning: Collection.mapReduce() is deprecated. Use an aggregation instead.

See https://docs.mongodb.com/manual/core/map-reduce for details.

{ result: 'out1', ok: 1 }

mapreduce> db.out1.find();

[

 { _id: 'BE', value: 176 },

 { _id: 'SE', value: 172 },

 { _id: 'TE', value: 264 }

]
```