ASSIGNMENT NO 11
31330

PROBLEM STATEMENT:

MongoDB Map-reduces operations: Implement Map reduces operation with suitable example using MongoDB.
Implement Map reduces operation with suitable example using MongoDB

IMPLEMENTATION

```
31330> var mapFunction = function () {
...     emit(this.category, this.price); // {category: price}
... };
31330> var reduceFunction = function (key, values) { // key: category, values: price
...     var sum = 0;
...     for (var i = 0; i < values.length; i++) {
...         sum += values[i];
...     }
...     return sum / values.length;
... };
31330>
31330> db.Products.mapReduce(mapFunction, reduceFunction, {
...     out: "average_prices",
...     query: { category: "Electronics" },
... });
DeprecationWarning: Collection.mapReduce() is deprecated. Use an aggregation instead.
See https://docs.mongodb.com/manual/core/map-reduce for details.
{ result: 'average_prices', ok: 1 }
31330>
```

/*Generalized to get sum of all the products*/

```
31330> var mapFunction = function () {
...     emit("total", this.price);
... };
31330>
31330> var reduceFunction = function (key, values)  {
...     return Array.sum(values);
... };
31330> db.Products.mapReduce(mapFunction, reduceFunction, { out: "sum_prices" });
{ result: 'sum_prices', ok: 1 }
31330>
31330>
```

EXAMPLE 2

```
db.blog_posts.insertMany([
  {
    _id: 1,
    author: "Alice",
    comments: [
      {
        status: "approved",
        text: "Great post!",
```

```
        },
        {
          status: "pending",
          text: "I have a question.",
        },
      ],
    },
    {
      _id: 2,
      author: "Bob",
      comments: [
        {
          status: "approved",
          text: "Nice work!",
        },
        {
          status: "approved",
          text: "I agree with your points.",
        },
      ],
    },
{
      _id: 3,
      author: "Alice",
      comments: [
        {
          status: "rejected",
          text: "This is not correct.",
        },
        {
          status: "approved",
          text: "Thanks for sharing.",
        },
      ],
    },
    {
      _id: 4,
      author: "Alice",
      comments: [
        {
          status: "approved",
          text: "Please write more.",
        },
        {
          status: "pending",
          text: "Can I get a copy of this?",
        },
      ],
    },
]);
```

{ acknowledged: true, insertedIds: { '0': 1, '1': 2, '2': 3, '3': 4 } }

```
31330> var mapFunction = function () {
...     this.comments.forEach(function (comment) {
...       emit(
...         {
...            author: this.author,
...            status: comment.status,
...         },
```

```
...             1
...         );
...     });
... };
31330> var reduceFunction = function (key, values) {
...     return Array.sum(values);
... };
31330>
31330> db.blog_posts.mapReduce(mapFunction, reduceFunction, {
...     out: "comments_by_author_status", // Store the results in a new collection called
"comments_by_author_status"
... });
{ result: 'comments_by_author_status', ok: 1 }
31330>
31330>
```