ASSIGNMENT 10

PCCOE> use Assign10
switched to db Assign10
//EMPLOYEES COLLECTION
Assign10>   db.createCollection("employees");
{ ok: 1 }
Assign10> db.employees.insertMany([
...   { "name": "Anica", "department": "IT", "salary": 70000 },
...   { "name": "Bobby", "department": "HR", "salary": 45000 },
...   { "name": "Chitra", "department": "Finance", "salary": 60000 },
...   { "name": "Dev", "department": "IT", "salary": 65000 },
...   { "name": "Eshaani", "department": "HR", "salary": 48000 },
...   { "name": "Freddy", "department": "Finance", "salary": 75000}
...   ]);
{
 acknowledged: true,
 insertedIds: {
  '0': ObjectId('67f2ba12ec73fe1354b71240'),
  '1': ObjectId('67f2ba12ec73fe1354b71241'),
  '2': ObjectId('67f2ba12ec73fe1354b71242'),
  '3': ObjectId('67f2ba12ec73fe1354b71243'),
  '4': ObjectId('67f2ba12ec73fe1354b71244'),
  '5': ObjectId('67f2ba12ec73fe1354b71245')
 }
}
//ORDERS COLLECTION
Assign10> db.createCollection("orders");
{ ok: 1 }
Assign10> db.orders.insertMany([
...   { _id: ObjectId("50a8240b927d5d8b5891743c"), cust_id: "abc123", status: "A", price: 25
},
...   { _id: ObjectId("50a8240b927d5d8b5891743d"), cust_id: "abc123", status: "A", price: 40
},

```
...    { _id: ObjectId("50a8240b927d5d8b5891743e"), cust_id: "xyz456", status: "B", price: 15
},
...    { _id: ObjectId("50a8240b927d5d8b5891743f"), cust_id: "xyz456", status: "A", price: 60
},
...    { _id: ObjectId("50a8240b927d5d8b5891743a"), cust_id: "pqr789", status: "A", price: 35
}
... ]);
...
{
  acknowledged: true,
  insertedIds: {
    '0': ObjectId('50a8240b927d5d8b5891743c'),
    '1': ObjectId('50a8240b927d5d8b5891743d'),
    '2': ObjectId('50a8240b927d5d8b5891743e'),
    '3': ObjectId('50a8240b927d5d8b5891743f'),
    '4': ObjectId('50a8240b927d5d8b5891743a')
  }
}
//ZIPCODE COLLECTION
Assign10>  db.zipcode.insertMany([
...        { _id: "10001", city: "NEW YORK", state: "NY", pop: 20000 },
...        { _id: "10002", city: "CHICAGO", state: "NY", pop: 15000 },
...        { _id: "10003", city: "ROCHESTER", state: "NY", pop: 12000 },
...        { _id: "10004", city: "ALBANY", state: "NY", pop: 8000 },
...        { _id: "10005", city: "LOS ANGELES", state: "CA", pop: 30000 }
...      ]);
{
  acknowledged: true,
  insertedIds: {
    '0': '10001',
    '1': '10002',
    '2': '10003',
    '3': '10004',
    '4': '10005'
  }
}
```

Assign10>Display the salary of employees department wise

```
Assign10> var mapFunction1 = function() {
...    emit(this.department, this.salary);
... };
...


Assign10> var reduceFunction1 = function(key, values) {
...    return Array.sum(values);
... };
...
```

```
Assign10> db.employees.mapReduce(
...   mapFunction1,
...   reduceFunction1,
...   { out: "department_salary_totals" }
... )
...
DeprecationWarning: Collection.mapReduce() is deprecated. Use an aggregation instead.
See https://docs.mongodb.com/manual/core/map-reduce for details.
{ result: 'department_salary_totals', ok: 1 }
Assign10> db.department_salary_totals.find().pretty()
[
  { _id: 'Finance', value: 135000 },
  { _id: 'IT', value: 135000 },
  { _id: 'HR', value: 93000 }
]
Assign10> //Display the count of employees department-wise
Assign10> var mapFunction2 = function() {
...   emit(this.department, 1);
... };
...

Assign10> var reduceFunction2 = function(key, values) {
...   return Array.sum(values);
... };
...

Assign10> db.employees.mapReduce(
...   mapFunction2,
...   reduceFunction2,
...   { out: "department_employee_counts" }
... )
...
{ result: 'department_employee_counts', ok: 1 }
Assign10> db.department_employee_counts.find().pretty()
[
  { _id: 'HR', value: 2 },
  { _id: 'Finance', value: 2 },
  { _id: 'IT', value: 2 }
]
Assign10> db.employees.insertMany([
...   { "name": "Shreyas", "department": "Computer", "salary": 70000 },
...   { "name": "Francis", "department": "Finance", "salary": 75000}
...   ]);
{
  acknowledged: true,
```

```
  insertedIds: {
   '0': ObjectId('67f2bf21ec73fe1354b71246'),
   '1': ObjectId('67f2bf21ec73fe1354b71247')
  }
}
```

Assign10> //Display the total salary of employees working in Computer department

```
Assign10> var mapFunction4 = function() {
...   if (this.department === "Computer") {
...     emit(this.department, this.salary);
...   }
... };
...

Assign10> var reduceFunction4 = function(key, values) {
...   return Array.sum(values);
... };
...

Assign10> db.employees.mapReduce(
...   mapFunction4,
...   reduceFunction4,
...   { out: "computer_dept_total_salary" }
... )
...
{ result: 'computer_dept_total_salary', ok: 1 }
Assign10> db.computer_dept_total_salary.find().pretty()
[ { _id: 'Computer', value: 70000 } ]
```

Assign10> //ORDERS COLLECTION
Assign10> //Return the Total Price Per Customer

```
Assign10> var mapFunction3 = function() {
...   emit(this.cust_id, this.price);
... };
...

Assign10> var reduceFunction3 = function(key, values) {
...   return Array.sum(values);
... };
...

Assign10> db.orders.mapReduce(
...   mapFunction3,
...   reduceFunction3,
...   { out: "total_price_per_customer" }
... )
...
```

```
{ result: 'total_price_per_customer', ok: 1 }
Assign10> db.total_price_per_custoner.find().pretty()

Assign10> db.total_price_per_customer.find().pretty()
[
  { _id: 'abc123', value: 65 },
  { _id: 'pqr789', value: 35 },
  { _id: 'xyz456', value: 75 }
]
Assign10> //ZIPCODE COLLECTION
Assign10> //Return the city-wise population of cities in the NY state

Assign10> var mapFunction5 = function() {
...   if (this.state === "NY") {
...     emit(this.city, this.pop);
...   }
... };
...

Assign10> var reduceFunction5 = function(key, values) {
...   return Array.sum(values);
... };
...

Assign10> db.zipcode.mapReduce(
...   mapFunction5,
...   reduceFunction5,
...   { out: "ny_city_population" }
... )
...
{ result: 'ny_city_population', ok: 1 }
Assign10> db.ny_city.find().pretty()

Assign10> db.ny_city_population.find().pretty()
[
  { _id: 'ALBANY', value: 8000 },
  { _id: 'NEW YORK', value: 20000 },
  { _id: 'CHICAGO', value: 15000 },
  { _id: 'ROCHESTER', value: 12000 }
]
Assign10>
```