

LAB 1 - Part 3 : MongoDB  
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**Requirement:** Our data usage pattern is to look up a territory by the territory id and to show all details about a territory, such as its name, salespeople, and sales. Use the embedding design technique and the provided data to design a MongoDB database. Create the database on MongoDB Atlas that includes documents reflecting the data contained in the attached file. (50% of grade)

Then use the MongoDB Compass, JavaScript, and MongoDB Aggregation Pipeline to calculate the total sales of a territory regardless of the salesperson. (50% of grade)

Submit your code, and a screenshot of the created documents and code execution results in the pdf format.

Screenshot of the Document:

```
_id: ObjectId('6335aef6aa643306ee75f5b2')
ID: 1
Name: "Northwest"
SalesPersonInfo: Array
  0: Object
    SalespersonID: 274
    LastName: "Jiang"
    TotalSales: 262466
  1: Object
    SalespersonID: 276
    LastName: "Mitchell"
    TotalSales: 2353659
  2: Object
    SalespersonID: 280
    LastName: "Ansmen-Wolfe"
    TotalSales: 3748246
  3: Object
    SalespersonID: 281
    LastName: "Ito"
    TotalSales: 848175
  4: Object
    SalespersonID: 283
    LastName: "Campbell"
    TotalSales: 4207895
  5: Object
    SalespersonID: 284
    LastName: "Mensa-Annan"
    TotalSales: 2608116
```

```
_id: ObjectId('6335adad29a94f16cb40e29f')
ID: 2
Name: "Northeast"
SalesPersonInfo: Array
  0: Object
    SalespersonID: 274
    LastName: "Jiang"
    TotalSales: 93733
  1: Object
    SalespersonID: 275
    LastName: "Blythe"
    TotalSales: 3301670
  2: Object
    SalespersonID: 277
    LastName: "Carson"
    TotalSales: 4417588
```

```
_id: ObjectId('6335ae2794731f8bf07626e6')
ID: 3
Name: "Central"
SalesPersonInfo: Array
  0: Object
    SalespersonID: 274
    LastName: "Jiang"
    TotalSales: 39933
  1: Object
    SalespersonID: 275
    LastName: "Blythe"
    TotalSales: 2899017
  2: Object
    SalespersonID: 276
    LastName: "Mitchell"
    TotalSales: 2077159
  3: Object
    SalespersonID: 277
    LastName: "Carson"
    TotalSales: 3311502
  4: Object
    SalespersonID: 281
    LastName: "Ito"
    TotalSales: 582372
```

Aggregate Pipeline Code:

```
[{
  $unwind: {
    path: '$SalesPersonInfo'
  }
}, {
  $group: {
    _id: '$Name',
    Sum: {
      $sum: '$SalesPersonInfo.TotalSales'
    }
  }
}]
```

Aggregate Pipeline Result:

<b>_id:</b> "Northeast"
<b>Sum:</b> 7812991
<b>_id:</b> "Central"
<b>Sum:</b> 8909983
<b>_id:</b> "Northwest"
<b>Sum:</b> 14028557