## Lab1: Part 2: Mongo DB

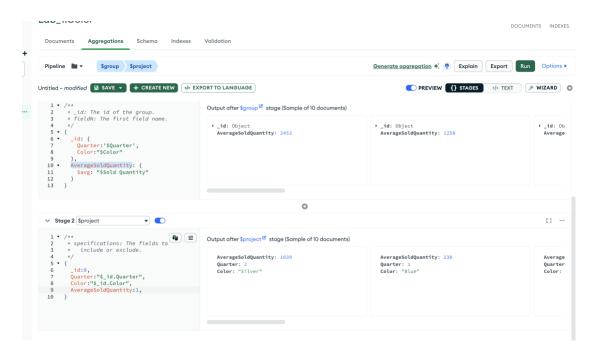
Document: Below document contains all the 12 rows from the csv file

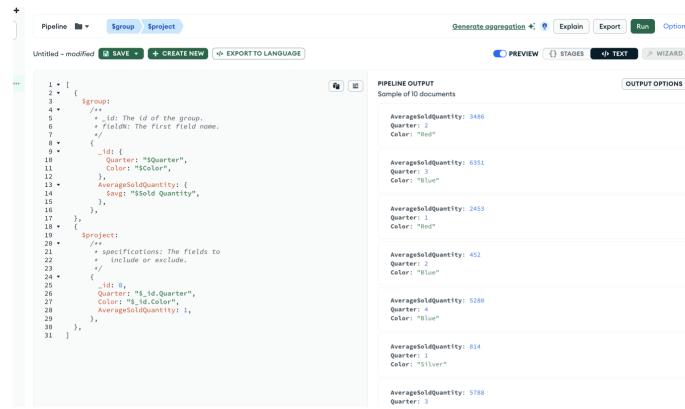
```
◆ ADD DATA ▼
                                                                                                                                         1-12 of 12 € < > ■ {} ⊞
         _id: ObjectId('65b6fdaaefb51420f85dblea')
         Color: "Blue"
Quarter: 1
         Sold Quantity: 230
         _id: ObjectId('65b6fdaaefb51420f85dbleb')
         Color: "Blue"
         Sold Quantity: 452
         _id: ObjectId('65b6fdaaefb51420f85dblec')
Color: "Blue"
         Quarter: 3
Sold Quantity: 6351
         _id: ObjectId('65b6fdaaefb51420f85dbled')
         Ouarter: 4
                                                                                                                                                          _id: ObjectId('65b6fdaaefb51420f85db1ee')
         Color: "Red"
         Sold Quantity: 2453
         _id: ObjectId('65b6fdaaefb51420f85dblef')
Color: "Red"
         Quarter: 2
         Sold Quantity: 3486
        _id: ObjectId('65b6fdaaefb51420f85db1f0')
Color: "Red"
         Quarter: 3
         Sold Quantity: 1535
         _id: ObjectId('65b6fdaaefb51420f85db1f1')
         Color: "Red"
         Quarter: 4
         Sold Quantity: 1250
         _id: ObjectId('65b6fdaaefb51420f85db1f2')
         Color: "Silver"
         Quarter: 1
         Sold Quantity: 814
         _id: ObjectId('65b6fdaaefb51420f85db1f3')
         Color: "Silver"
         Quarter: 2
         Sold Quantity: 1039
         _id: ObjectId('65b6fdaaefb51420f85db1f4')
         Color: "Silver"
         Quarter: 3
         Sold Quantity: 5788
         _id: ObjectId('65b6fdaaefb51420f85db1f5')
         Color: "Silver"
         Sold Quantity: 4511
```

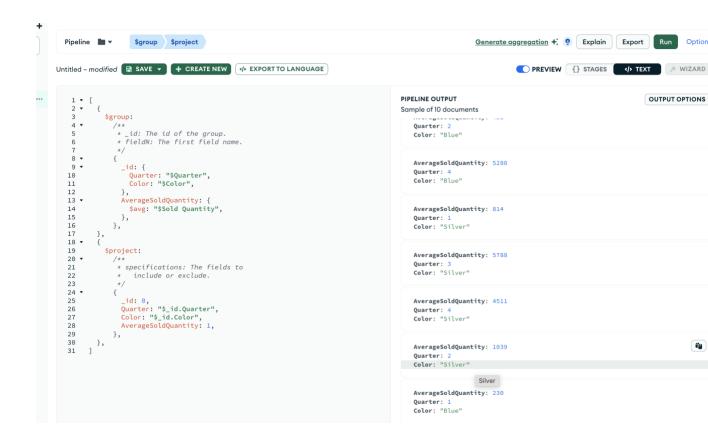
## Part1: Aggregate: Average sold quantity of all colors

```
Formula:
{
  $group:
   /**
   * _id: The id of the group.
   * fieldN: The first field name.
   */
   {
    _id: {
     Quarter: "$Quarter",
     Color: "$Color",
    },
    AverageSoldQuantity: {
     $avg: "$Sold Quantity",
    },
  },
},
  $project:
   /**
   * specifications: The fields to
   * include or exclude.
   */
   {
    _id: 0,
    Quarter: "$_id.Quarter",
    Color: "$_id.Color",
    AverageSoldQuantity: 1,
  },
},
```

]







**Part 2: Aggregation**: to calculate the average quarterly sold quantity of the blue color I followed below steps:

```
    In the first stage I used the '$match' aggregator.
    Formula:

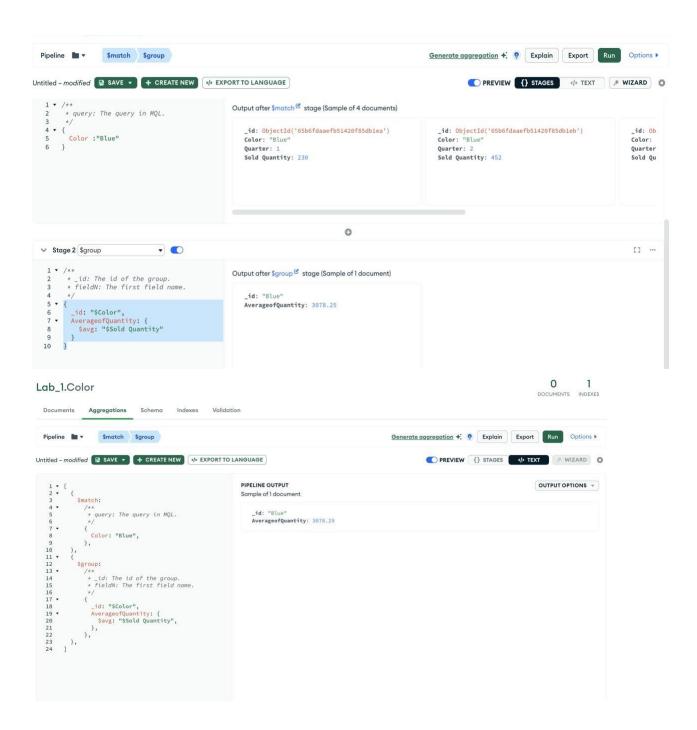
            Color: "Blue"
            In the second stage I used the '$group' aggregator.

    Formula:

            id: "$Color",
            AverageofQuantity: {
            $avg: "$Sold Quantity"
            }
```

Screenshot of Aggregator Pipeline

## Output:



## Output:

Average Sold Quantity for Color Blue: 3078.25