**ST1501 CA2 Indiviudal Task**

**Class: DAAA/FT/2A/02**

**Group No: 2**

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| **AdmNo** | **Name** |
| **P2112729** | **Joel Poah Zhi Kang** |

**Individual Task**

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| Item | SQL statement for JSON format |
| UnSold – create a collection to store those products which have never been sold | select distinct p.product\_id,p.product\_name,b.brand\_name,c.category\_name,p.model\_year,p.list\_price  from Production.products as p ,production.brands as b , Production.categories as c  where p.product\_id not in (select s.product\_id from Sales.order\_items as s  inner join sales.orders o on o.order\_id = s.order\_id  where o.order\_status=4) and p.brand\_id = b.brand\_id and p.product\_id not in (select s.product\_id from Sales.order\_items as s)  and p.category\_id = c.category\_id          FOR JSON PATH,          INCLUDE\_NULL\_VALUES |
| ZeroStock – create a collection to store products which have zero stock | Select p.product\_id,p.product\_name,b.brand\_name,c.category\_name,p.model\_year,p.list\_price from production.products as p ,Production.brands as b , Production.categories as c WHERE p.product\_id not in (select product\_id from Production.stocks) and b.brand\_id = p.brand\_id and c.category\_id=p.category\_id and p.product\_id not in (select product\_id from Production.stocks group by product\_id having SUM(Quantity) = 0) FOR JSON PATH, INCLUDE\_NULL\_VALUES |
| Stock – create a collection to store products which have stock | select distinct p.product\_id ,s.store\_id,s.quantity from production.products as p inner join Production.stocks as s on s.product\_id = p.product\_id WHERE p.product\_id in (select product\_id from Production.stocks) and p.product\_id in (select product\_id from Production.stocks group by product\_id having SUM(Quantity) > 0) FOR JSON PATH, INCLUDE\_NULL\_VALUES |

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| Item | MongoDB command | Results |
| Count of Unsold Collection | db.UnSold.count() | 14 |
| Count of ZeroStock Collection | db.ZeroStock.count() | 8 |
| Count of Stock Collection | db.Stock.count() | 939 |
| Query 1 | db.ZeroStock.find( { list\_price: { $lt: 2000 }, category\_name: "Road Bikes"},{\_id:0,product\_name:1,list\_price:1}) | { "product\_name" : "Trek Checkpoint ALR 4 Women's - 2019", "list\_price" : 1699.99 }  { "product\_name" : "Trek Checkpoint ALR 5 - 2019", "list\_price" : 1999.99 }  { "product\_name" : "Trek Checkpoint ALR 5 Women's - 2019", "list\_price" : 1999.99 } |
| Query 2 | db.UnSold.aggregate([          {$group:{                  \_id:"category and brand", "category": {$addToSet :"$category\_name"},                            "brand\_name":{$addToSet :"$brand\_name"}                  }          }          ]).pretty() | {  "\_id" : "category and brand",  "category" : [  "Mountain Bikes",  "Road Bikes",  "Children Bicycles",  "Electric Bikes"  ],  "brand\_name" : [  "Surly",  "Trek",  "Electra"  ]  } |
| Query 3 | db.UnSold.aggregate([{$lookup: {from: "ZeroStock", localField: "category\_name",  foreignField: "category\_name", as: "UnSold"}},  {$group: {\_id: {category\_name: "$category\_name", brand\_name: "$brand\_name"}}}]) | { "\_id" : { "category\_name" : "Electric Bikes", "brand\_name" : "Electra" } }  { "\_id" : { "category\_name" : "Mountain Bikes", "brand\_name" : "Trek" } }  { "\_id" : { "category\_name" : "Mountain Bikes", "brand\_name" : "Surly" } }  { "\_id" : { "category\_name" : "Children Bicycles", "brand\_name" : "Electra" } }  { "\_id" : { "category\_name" : "Road Bikes", "brand\_name" : "Trek" } }  { "\_id" : { "category\_name" : "Children Bicycles", "brand\_name" : "Trek" } } |
| Query 4 | db.UnSold.aggregate([      { $lookup: { from: "Stock", localField: "product\_id", foreignField: "product\_id", as: "stock" } },      { $match: { "stock.quantity": { $gt: 0 } } },      { $unwind:'$stock'},      { $project: { \_id:0,product\_id: 1, product\_name: 1, brand\_name: 1, category\_name: 1, model\_year: 1, list\_price: 1, "stock.store\_id":1,"stock.quantity": 1} }  ]).pretty() | {  "product\_id" : "CHB267",  "product\_name" : "Trek Precaliber 12 Girl's - 2018",  "brand\_name" : "Trek",  "category\_name" : "Children Bicycles",  "model\_year" : 2018,  "list\_price" : 199.99,  "stock" : {  "store\_id" : "ST1",  "quantity" : 27  }  }  {  "product\_id" : "CHB267",  "product\_name" : "Trek Precaliber 12 Girl's - 2018",  "brand\_name" : "Trek",  "category\_name" : "Children Bicycles",  "model\_year" : 2018,  "list\_price" : 199.99,  "stock" : {  "store\_id" : "ST2",  "quantity" : 21  }  }  {  "product\_id" : "CHB267",  "product\_name" : "Trek Precaliber 12 Girl's - 2018",  "brand\_name" : "Trek",  "category\_name" : "Children Bicycles",  "model\_year" : 2018,  "list\_price" : 199.99,  "stock" : {  "store\_id" : "ST3",  "quantity" : 12  }  }  {  "product\_id" : "CHB284",  "product\_name" : "Electra Savannah 1 (20-inch) - Girl's - 2018",  "brand\_name" : "Electra",  "category\_name" : "Children Bicycles",  "model\_year" : 2018,  "list\_price" : 319.99,  "stock" : {  "store\_id" : "ST1",  "quantity" : 27  }  }  {  "product\_id" : "CHB284",  "product\_name" : "Electra Savannah 1 (20-inch) - Girl's - 2018",  "brand\_name" : "Electra",  "category\_name" : "Children Bicycles",  "model\_year" : 2018,  "list\_price" : 319.99,  "stock" : {  "store\_id" : "ST2",  "quantity" : 6  }  }  {  "product\_id" : "CHB284",  "product\_name" : "Electra Savannah 1 (20-inch) - Girl's - 2018",  "brand\_name" : "Electra",  "category\_name" : "Children Bicycles",  "model\_year" : 2018,  "list\_price" : 319.99,  "stock" : {  "store\_id" : "ST3",  "quantity" : 26  }  }  {  "product\_id" : "CHB291",  "product\_name" : "Electra Sweet Ride 1 (20-inch) - Girl's - 2018",  "brand\_name" : "Electra",  "category\_name" : "Children Bicycles",  "model\_year" : 2018,  "list\_price" : 319.99,  "stock" : {  "store\_id" : "ST1",  "quantity" : 9  }  }  {  "product\_id" : "CHB291",  "product\_name" : "Electra Sweet Ride 1 (20-inch) - Girl's - 2018",  "brand\_name" : "Electra",  "category\_name" : "Children Bicycles",  "model\_year" : 2018,  "list\_price" : 319.99,  "stock" : {  "store\_id" : "ST2",  "quantity" : 22  }  }  {  "product\_id" : "CHB291",  "product\_name" : "Electra Sweet Ride 1 (20-inch) - Girl's - 2018",  "brand\_name" : "Electra",  "category\_name" : "Children Bicycles",  "model\_year" : 2018,  "list\_price" : 319.99,  "stock" : {  "store\_id" : "ST3",  "quantity" : 10  }  }  {  "product\_id" : "ELB195",  "product\_name" : "Electra Townie Go! 8i Ladies' - 2018",  "brand\_name" : "Electra",  "category\_name" : "Electric Bikes",  "model\_year" : 2018,  "list\_price" : 2599.99,  "stock" : {  "store\_id" : "ST1",  "quantity" : 1  }  }  {  "product\_id" : "ELB195",  "product\_name" : "Electra Townie Go! 8i Ladies' - 2018",  "brand\_name" : "Electra",  "category\_name" : "Electric Bikes",  "model\_year" : 2018,  "list\_price" : 2599.99,  "stock" : {  "store\_id" : "ST2",  "quantity" : 19  }  }  {  "product\_id" : "ELB195",  "product\_name" : "Electra Townie Go! 8i Ladies' - 2018",  "brand\_name" : "Electra",  "category\_name" : "Electric Bikes",  "model\_year" : 2018,  "list\_price" : 2599.99,  "stock" : {  "store\_id" : "ST3",  "quantity" : 20  }  }  {  "product\_id" : "MOB1",  "product\_name" : "Trek 820 - 2016",  "brand\_name" : "Trek",  "category\_name" : "Mountain Bikes",  "model\_year" : 2016,  "list\_price" : 379.99,  "stock" : {  "store\_id" : "ST1",  "quantity" : 27  }  }  {  "product\_id" : "MOB1",  "product\_name" : "Trek 820 - 2016",  "brand\_name" : "Trek",  "category\_name" : "Mountain Bikes",  "model\_year" : 2016,  "list\_price" : 379.99,  "stock" : {  "store\_id" : "ST2",  "quantity" : 14  }  }  {  "product\_id" : "MOB1",  "product\_name" : "Trek 820 - 2016",  "brand\_name" : "Trek",  "category\_name" : "Mountain Bikes",  "model\_year" : 2016,  "list\_price" : 379.99,  "stock" : {  "store\_id" : "ST3",  "quantity" : 14  }  }  {  "product\_id" : "MOB121",  "product\_name" : "Surly Krampus Frameset - 2018",  "brand\_name" : "Surly",  "category\_name" : "Mountain Bikes",  "model\_year" : 2018,  "list\_price" : 2499.99,  "stock" : {  "store\_id" : "ST1",  "quantity" : 19  }  }  {  "product\_id" : "MOB121",  "product\_name" : "Surly Krampus Frameset - 2018",  "brand\_name" : "Surly",  "category\_name" : "Mountain Bikes",  "model\_year" : 2018,  "list\_price" : 2499.99,  "stock" : {  "store\_id" : "ST2",  "quantity" : 3  }  }  {  "product\_id" : "MOB121",  "product\_name" : "Surly Krampus Frameset - 2018",  "brand\_name" : "Surly",  "category\_name" : "Mountain Bikes",  "model\_year" : 2018,  "list\_price" : 2499.99,  "stock" : {  "store\_id" : "ST3",  "quantity" : 4  }  }  {  "product\_id" : "MOB125",  "product\_name" : "Trek Kids' Dual Sport - 2018",  "brand\_name" : "Trek",  "category\_name" : "Mountain Bikes",  "model\_year" : 2018,  "list\_price" : 469.99,  "stock" : {  "store\_id" : "ST1",  "quantity" : 22  }  }  {  "product\_id" : "MOB125",  "product\_name" : "Trek Kids' Dual Sport - 2018",  "brand\_name" : "Trek",  "category\_name" : "Mountain Bikes",  "model\_year" : 2018,  "list\_price" : 469.99,  "stock" : {  "store\_id" : "ST2",  "quantity" : 10  }  }  Type "it" for more  > it  {  "product\_id" : "MOB125",  "product\_name" : "Trek Kids' Dual Sport - 2018",  "brand\_name" : "Trek",  "category\_name" : "Mountain Bikes",  "model\_year" : 2018,  "list\_price" : 469.99,  "stock" : {  "store\_id" : "ST3",  "quantity" : 2  }  }  {  "product\_id" : "RDB154",  "product\_name" : "Trek Domane SLR 6 Disc Women's - 2018",  "brand\_name" : "Trek",  "category\_name" : "Road Bikes",  "model\_year" : 2018,  "list\_price" : 5499.99,  "stock" : {  "store\_id" : "ST1",  "quantity" : 13  }  }  {  "product\_id" : "RDB154",  "product\_name" : "Trek Domane SLR 6 Disc Women's - 2018",  "brand\_name" : "Trek",  "category\_name" : "Road Bikes",  "model\_year" : 2018,  "list\_price" : 5499.99,  "stock" : {  "store\_id" : "ST2",  "quantity" : 9  }  }  {  "product\_id" : "RDB154",  "product\_name" : "Trek Domane SLR 6 Disc Women's - 2018",  "brand\_name" : "Trek",  "category\_name" : "Road Bikes",  "model\_year" : 2018,  "list\_price" : 5499.99,  "stock" : {  "store\_id" : "ST3",  "quantity" : 22  }  } |
| Query 5 | db.UnSold.aggregate([      { $lookup: { from: "Stock", localField: "product\_id", foreignField: "product\_id", as: "stock" } },      { $match: { "stock.quantity": { $gt: 0 } } },      { $unwind:'$stock'},      { $group: { \_id: { product\_id: "$product\_id", product\_name: "$product\_name", brand\_name: "$brand\_name", category\_name: "$category\_name", model\_year: "$model\_year", list\_price: "$list\_price" , TotalQty: { $sum: "$stock.quantity" }} } },      { $sort: { TotalQty: -1 } }  ]).pretty() | {  "\_id" : {  "product\_id" : "CHB284",  "product\_name" : "Electra Savannah 1 (20-inch) - Girl's - 2018",  "brand\_name" : "Electra",  "category\_name" : "Children Bicycles",  "model\_year" : 2018,  "list\_price" : 319.99,  "TotalQty" : 27  }  }  {  "\_id" : {  "product\_id" : "CHB267",  "product\_name" : "Trek Precaliber 12 Girl's - 2018",  "brand\_name" : "Trek",  "category\_name" : "Children Bicycles",  "model\_year" : 2018,  "list\_price" : 199.99,  "TotalQty" : 12  }  }  {  "\_id" : {  "product\_id" : "CHB267",  "product\_name" : "Trek Precaliber 12 Girl's - 2018",  "brand\_name" : "Trek",  "category\_name" : "Children Bicycles",  "model\_year" : 2018,  "list\_price" : 199.99,  "TotalQty" : 27  }  }  {  "\_id" : {  "product\_id" : "MOB121",  "product\_name" : "Surly Krampus Frameset - 2018",  "brand\_name" : "Surly",  "category\_name" : "Mountain Bikes",  "model\_year" : 2018,  "list\_price" : 2499.99,  "TotalQty" : 3  }  }  {  "\_id" : {  "product\_id" : "ELB195",  "product\_name" : "Electra Townie Go! 8i Ladies' - 2018",  "brand\_name" : "Electra",  "category\_name" : "Electric Bikes",  "model\_year" : 2018,  "list\_price" : 2599.99,  "TotalQty" : 19  }  }  {  "\_id" : {  "product\_id" : "CHB284",  "product\_name" : "Electra Savannah 1 (20-inch) - Girl's - 2018",  "brand\_name" : "Electra",  "category\_name" : "Children Bicycles",  "model\_year" : 2018,  "list\_price" : 319.99,  "TotalQty" : 6  }  }  {  "\_id" : {  "product\_id" : "CHB291",  "product\_name" : "Electra Sweet Ride 1 (20-inch) - Girl's - 2018",  "brand\_name" : "Electra",  "category\_name" : "Children Bicycles",  "model\_year" : 2018,  "list\_price" : 319.99,  "TotalQty" : 9  }  }  {  "\_id" : {  "product\_id" : "CHB291",  "product\_name" : "Electra Sweet Ride 1 (20-inch) - Girl's - 2018",  "brand\_name" : "Electra",  "category\_name" : "Children Bicycles",  "model\_year" : 2018,  "list\_price" : 319.99,  "TotalQty" : 10  }  }  {  "\_id" : {  "product\_id" : "CHB284",  "product\_name" : "Electra Savannah 1 (20-inch) - Girl's - 2018",  "brand\_name" : "Electra",  "category\_name" : "Children Bicycles",  "model\_year" : 2018,  "list\_price" : 319.99,  "TotalQty" : 26  }  }  {  "\_id" : {  "product\_id" : "MOB1",  "product\_name" : "Trek 820 - 2016",  "brand\_name" : "Trek",  "category\_name" : "Mountain Bikes",  "model\_year" : 2016,  "list\_price" : 379.99,  "TotalQty" : 14  }  }  {  "\_id" : {  "product\_id" : "MOB125",  "product\_name" : "Trek Kids' Dual Sport - 2018",  "brand\_name" : "Trek",  "category\_name" : "Mountain Bikes",  "model\_year" : 2018,  "list\_price" : 469.99,  "TotalQty" : 10  }  }  {  "\_id" : {  "product\_id" : "MOB125",  "product\_name" : "Trek Kids' Dual Sport - 2018",  "brand\_name" : "Trek",  "category\_name" : "Mountain Bikes",  "model\_year" : 2018,  "list\_price" : 469.99,  "TotalQty" : 2  }  }  {  "\_id" : {  "product\_id" : "RDB154",  "product\_name" : "Trek Domane SLR 6 Disc Women's - 2018",  "brand\_name" : "Trek",  "category\_name" : "Road Bikes",  "model\_year" : 2018,  "list\_price" : 5499.99,  "TotalQty" : 13  }  }  {  "\_id" : {  "product\_id" : "MOB1",  "product\_name" : "Trek 820 - 2016",  "brand\_name" : "Trek",  "category\_name" : "Mountain Bikes",  "model\_year" : 2016,  "list\_price" : 379.99,  "TotalQty" : 27  }  }  {  "\_id" : {  "product\_id" : "RDB154",  "product\_name" : "Trek Domane SLR 6 Disc Women's - 2018",  "brand\_name" : "Trek",  "category\_name" : "Road Bikes",  "model\_year" : 2018,  "list\_price" : 5499.99,  "TotalQty" : 22  }  }  {  "\_id" : {  "product\_id" : "CHB291",  "product\_name" : "Electra Sweet Ride 1 (20-inch) - Girl's - 2018",  "brand\_name" : "Electra",  "category\_name" : "Children Bicycles",  "model\_year" : 2018,  "list\_price" : 319.99,  "TotalQty" : 22  }  }  {  "\_id" : {  "product\_id" : "ELB195",  "product\_name" : "Electra Townie Go! 8i Ladies' - 2018",  "brand\_name" : "Electra",  "category\_name" : "Electric Bikes",  "model\_year" : 2018,  "list\_price" : 2599.99,  "TotalQty" : 20  }  }  {  "\_id" : {  "product\_id" : "MOB121",  "product\_name" : "Surly Krampus Frameset - 2018",  "brand\_name" : "Surly",  "category\_name" : "Mountain Bikes",  "model\_year" : 2018,  "list\_price" : 2499.99,  "TotalQty" : 19  }  }  {  "\_id" : {  "product\_id" : "MOB121",  "product\_name" : "Surly Krampus Frameset - 2018",  "brand\_name" : "Surly",  "category\_name" : "Mountain Bikes",  "model\_year" : 2018,  "list\_price" : 2499.99,  "TotalQty" : 4  }  }  {  "\_id" : {  "product\_id" : "MOB125",  "product\_name" : "Trek Kids' Dual Sport - 2018",  "brand\_name" : "Trek",  "category\_name" : "Mountain Bikes",  "model\_year" : 2018,  "list\_price" : 469.99,  "TotalQty" : 22  }  }  Type "it" for more  > it  {  "\_id" : {  "product\_id" : "RDB154",  "product\_name" : "Trek Domane SLR 6 Disc Women's - 2018",  "brand\_name" : "Trek",  "category\_name" : "Road Bikes",  "model\_year" : 2018,  "list\_price" : 5499.99,  "TotalQty" : 9  }  }  {  "\_id" : {  "product\_id" : "CHB267",  "product\_name" : "Trek Precaliber 12 Girl's - 2018",  "brand\_name" : "Trek",  "category\_name" : "Children Bicycles",  "model\_year" : 2018,  "list\_price" : 199.99,  "TotalQty" : 21  }  }  {  "\_id" : {  "product\_id" : "ELB195",  "product\_name" : "Electra Townie Go! 8i Ladies' - 2018",  "brand\_name" : "Electra",  "category\_name" : "Electric Bikes",  "model\_year" : 2018,  "list\_price" : 2599.99,  "TotalQty" : 1  }  } |
| Query 6 | db.ZeroStock.aggregate([      { $lookup: { from: "UnSold", localField: "product\_id", foreignField: "product\_id", as: "UnSold" } },      { $match: { "UnSold.product\_id": { $exists: false } } },      { $project: { \_id:0,product\_id: 1, product\_name: 1, brand\_name: 1, category\_name: 1, model\_year: 1, list\_price: 1 } }  ]).pretty() | {  "product\_id" : "CMB314",  "product\_name" : "Electra Townie Original 21D EQ Ladies' - 2018",  "brand\_name" : "Electra",  "category\_name" : "Comfort Bicycles",  "model\_year" : 2018,  "list\_price" : 679.99  }  {  "product\_id" : "CMB315",  "product\_name" : "Electra Townie Original 21D Ladies' - 2018",  "brand\_name" : "Electra",  "category\_name" : "Comfort Bicycles",  "model\_year" : 2018,  "list\_price" : 559.99  } |