**ST1501 CA2 Individual Task**

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| Class: DAAA/FT/2A/02 | Group No: 2 |

SQL statements for JSON format

| UnSold – create a collection to store those products which have never been sold |
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| *-- UnSold collection query: products which have never been sold (14 rows)* SELECT p.product\_id, p.product\_name, b.brand\_name, c.category\_name, p.model\_year, p.list\_price FROM Production.products p INNER JOIN Production.brands b ON p.brand\_id = b.brand\_id *-- get brand name* INNER JOIN Production.categories c ON p.category\_id = c.category\_id *-- get category name* WHERE p.product\_id NOT IN ( *-- Get product only if it has never been ordered before*  SELECT oi.product\_id FROM Sales.order\_items oi  INNER JOIN sales.orders o ON oi.order\_id = o.order\_id )  FOR JSON PATH,  INCLUDE\_NULL\_VALUES GO |

| ZeroStock – create a collection to store products which have zero stock |
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| *-- ZeroStock collection query: products which have zero stock (8 rows)* SELECT p.product\_id, p.product\_name, b.brand\_name, c.category\_name, p.model\_year, p.list\_price FROM Production.products p INNER JOIN Production.brands b ON p.brand\_id = b.brand\_id *-- get brand name* INNER JOIN Production.categories c ON p.category\_id = c.category\_id *-- get category name* WHERE product\_id NOT IN ( *-- if product ID is not listed at all in stocks table means it has 0 stock*  SELECT product\_id FROM Production.stocks ) OR product\_id IN ( *-- for instances where product is listed in stocks table but all 3 stores run out of stock*  SELECT product\_id FROM production.stocks  GROUP BY product\_id  HAVING SUM(quantity) = 0 )  FOR JSON PATH,  INCLUDE\_NULL\_VALUES GO |

| Stock – create a collection to store products which have stock |
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| *-- Stock collection query: products which have stock (939 rows)* select product\_id, store\_id, quantity from Production.stocks where product\_id in ( *-- get product only if it has a total quantity of greater than 0*  select product\_id from Production.stocks  group by product\_id  having sum(quantity) > 0 )  FOR JSON PATH,  INCLUDE\_NULL\_VALUES GO |

MongoDB Commands and Results

| **Count of Unsold Collection** | | |
| --- | --- | --- |
| MongoDB Command | | Results |
| db.UnSold.count() | |  |

| **Count of ZeroStock Collection** | | |
| --- | --- | --- |
| MongoDB Command | | Results |
| db.ZeroStock.count() | |  |

| **Count of Stock Collection** | | |
| --- | --- | --- |
| MongoDB Command | | Results |
| db.Stock.count() | |  |

| **Query 1** | | |
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| MongoDB Command | | |
| db.ZeroStock.find(  {"category\_name": "Road Bikes", "list\_price": {$lt: 2000}},   {\_id:0} ).sort({"list\_price": -1}).pretty() | | |
| Results | | |
| {  "product\_id" : "RDB317",  "product\_name" : "Trek Checkpoint ALR 5 - 2019",  "brand\_name" : "Trek",  "category\_name" : "Road Bikes",  "model\_year" : 2019,  "list\_price" : 1999.99 } {  "product\_id" : "RDB318",  "product\_name" : "Trek Checkpoint ALR 5 Women's - 2019",  "brand\_name" : "Trek",  "category\_name" : "Road Bikes",  "model\_year" : 2019,  "list\_price" : 1999.99 } {  "product\_id" : "RDB316",  "product\_name" : "Trek Checkpoint ALR 4 Women's - 2019",  "brand\_name" : "Trek",  "category\_name" : "Road Bikes",  "model\_year" : 2019,  "list\_price" : 1699.99 } | | |

| **Query 2** |
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| MongoDB Command |
| db.UnSold.aggregate([  {"$group":   {\_id: null, "category": {"$addToSet":"$category\_name"}, "brand": {"$addToSet":"$brand\_name"}}  } ]).pretty() |
| Results |
| {  "\_id" : null,  "category" : [  "Mountain Bikes",  "Children Bicycles",  "Road Bikes",  "Electric Bikes"  ],  "brand" : [  "Electra",  "Trek",  "Surly"  ] } |

| **Query 3** |
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| MongoDB Command |
| db.UnSold.aggregate([  {$group:   {\_id: {"brand":"$brand\_name", "category":"$category\_name"}}  },  {$sort: {\_id: 1}} ]) |
| Results |
| { "\_id" : { "brand" : "Electra", "category" : "Children Bicycles" } } { "\_id" : { "brand" : "Electra", "category" : "Electric Bikes" } } { "\_id" : { "brand" : "Surly", "category" : "Mountain Bikes" } } { "\_id" : { "brand" : "Trek", "category" : "Children Bicycles" } } { "\_id" : { "brand" : "Trek", "category" : "Mountain Bikes" } } { "\_id" : { "brand" : "Trek", "category" : "Road Bikes" } } |

| **Query 4** |
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| MongoDB Command |
| db.UnSold.aggregate([  {$lookup: {from:"Stock", localField:"product\_id", foreignField:"product\_id", as:"product"} },  {$match: {"product":{$ne:[]}} },  {$project: {\_id:0, "product": 0}} ]).pretty() |
| Results |
| | {  "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 } {  "product\_id" : "MOB1",  "product\_name" : "Trek 820 - 2016",  "brand\_name" : "Trek",  "category\_name" : "Mountain Bikes",  "model\_year" : 2016,  "list\_price" : 379.99 } {  "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 } {  "product\_id" : "MOB125",  "product\_name" : "Trek Kids' Dual Sport - 2018",  "brand\_name" : "Trek",  "category\_name" : "Mountain Bikes",  "model\_year" : 2018,  "list\_price" : 469.99 } {  "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 } {  "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 } {  "product\_id" : "MOB121",  "product\_name" : "Surly Krampus Frameset - 2018",  "brand\_name" : "Surly",  "category\_name" : "Mountain Bikes",  "model\_year" : 2018,  "list\_price" : 2499.99 } {  "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 } | | --- | |

| **Query 5** |
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| MongoDB Command |
| db.UnSold.aggregate([  {$lookup: {from:"Stock", localField:"product\_id", foreignField:"product\_id", as:"product"} },  {$match: {"product":{$ne:[]}} },  {$unwind:"$product"},  {$group:  {\_id:"$product\_id", stock:{$sum:"$product.quantity"}, product\_name:{$first:"$product\_name"}}  },  {$sort: {stock:-1}} ]).pretty() |
| Results |
| | {  "\_id" : "CHB267",  "stock" : 60,  "product\_name" : "Trek Precaliber 12 Girl's - 2018" } {  "\_id" : "CHB284",  "stock" : 59,  "product\_name" : "Electra Savannah 1 (20-inch) - Girl's - 2018" } { "\_id" : "MOB1", "stock" : 55, "product\_name" : "Trek 820 - 2016" } {  "\_id" : "RDB154",  "stock" : 44,  "product\_name" : "Trek Domane SLR 6 Disc Women's - 2018" } {  "\_id" : "CHB291",  "stock" : 41,  "product\_name" : "Electra Sweet Ride 1 (20-inch) - Girl's - 2018" } {  "\_id" : "ELB195",  "stock" : 40,  "product\_name" : "Electra Townie Go! 8i Ladies' - 2018" } {  "\_id" : "MOB125",  "stock" : 34,  "product\_name" : "Trek Kids' Dual Sport - 2018" } {  "\_id" : "MOB121",  "stock" : 26,  "product\_name" : "Surly Krampus Frameset - 2018" } | | --- | |

| **Query 6** |
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| MongoDB Command |
| db.ZeroStock.aggregate([  {$lookup: {from:"UnSold", localField:"product\_id", foreignField:"product\_id", as:"unsold\_product"} },  {$match: {"unsold\_product": {$eq:[]} }},  {$project: {\_id:0, "unsold\_product": 0}} ]).pretty() |
| Results |
| | {  "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 } | | --- | |