**ST1501 CA2 Indiviudal Task**

**Class: DAAA/FT/2A/04**

**Group No: 1**

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**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 CAST((SELECT  p.product\_id,  p.product\_name,  b.brand\_name,  c.category\_name,  p.model\_year,  p.list\_price  FROM  Production.Products P  JOIN  Production.Brands B ON P.brand\_id = B.brand\_id  JOIN  Production.Categories C ON C.category\_id = P.category\_id  WHERE p.product\_id IN  (SELECT  product\_id  FROM  (SELECT  S.product\_id,  string\_agg(S.order\_status, ',') 'order\_status'  FROM  (  SELECT DISTINCT  oi.product\_id,  o.order\_status  FROM  Sales.Order\_Items oi  JOIN  Sales.Orders O ON o.order\_id = oi.order\_id  ) as S  GROUP BY  S.product\_id) as S2  WHERE  order\_status ='3')  OR  p.product\_id NOT IN (SELECT DISTINCT product\_id FROM Sales.Order\_Items)  FOR JSON PATH) AS VARCHAR(MAX)) |
| ZeroStock – create a collection to store products which have zero stock | SELECT CAST((SELECT  p.product\_id,  p.product\_name,  b.brand\_name,  c.category\_name,  p.model\_year,  p.list\_price  FROM  Production.Products P  JOIN  Production.Brands B ON P.brand\_id = B.brand\_id  JOIN  Production.Categories C ON C.category\_id = P.category\_id  WHERE  p.product\_id NOT IN (  SELECT DISTINCT product\_id FROM Production.Stocks  )  OR  p.product\_id IN (  SELECT  p.product\_id  FROM  Production.Products P  JOIN  Production.Stocks S ON p.product\_id = s.product\_id  GROUP BY  p.product\_id  HAVING  SUM(s.quantity) = 0  )  FOR JSON PATH) AS VARCHAR(MAX)) |
| Stock – create a collection to store products which have stock | SELECT CAST((SELECT s.product\_id,s.store\_id,s.quantity,p.product\_name,b.brand\_name,c.category\_name,p.list\_price,p.model\_year  FROM  Production.stocks S  JOIN  Production.products P ON p.product\_id = S.product\_id  JOIN  Production.brands B ON b.brand\_id = P.brand\_id  JOIN  Production.categories C ON C.category\_id = P.category\_id  WHERE  s.quantity > 0  FOR JSON PATH) AS VARCHAR(MAX)) |

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| Item | MongoDB command | Results |
| Count of Unsold Collection | db.Unsold.countDocuments() | 16 |
| Count of ZeroStock Collection | db.ZeroStock.countDocuments() | 8 |
| Count of Stock Collection | db.Stock.countDocuments() | 914 |
| Query 1 | db.ZeroStock.find(  {list\_price: {$lt:2000}, category\_name: "Road Bikes"},  {product\_name:1, category\_name: 2, brand\_name: 3, model\_year:4 ,list\_price:5,'\_id': false}  ).sort({list\_price:-1}) | { "product\_name" : "Trek Checkpoint ALR 5 - 2019", "brand\_name" : "Trek", "category\_name" : "Road Bikes", "model\_year" : 2019, "list\_price" : 1999.99 }  { "product\_name" : "Trek Checkpoint ALR 5 Women's - 2019", "brand\_name" : "Trek", "category\_name" : "Road Bikes", "model\_year" : 2019, "list\_price" : 1999.99 }  { "product\_name" : "Trek Checkpoint ALR 4 Women's - 2019", "brand\_name" : "Trek", "category\_name" : "Road Bikes", "model\_year" : 2019, "list\_price" : 1699.99 } |
| Query 2 | **To find Category names:**  db.Unsold.aggregate([  {"$group":{\_id:"$category\_name"  ,count:{"$sum":1}  }}  ])  **To find Brand names:**  db.Unsold.aggregate([  {"$group":{\_id:"$brand\_name",count:{$sum:1}}}  ]) | **-- for Category names**  { "\_id" : "Children Bicycles", "count" : 5 }  { "\_id" : "Mountain Bikes", "count" : 3 }  { "\_id" : "Road Bikes", "count" : 7 }  { "\_id" : "Electric Bikes", "count" : 1 }  **--for Brand names**  { "\_id" : "Surly", "count" : 1 }  { "\_id" : "Electra", "count" : 4 }  { "\_id" : "Trek", "count" : 11 } |
| Query 3 | db.Stock.aggregate([  {  $unionWith: {  coll: 'ZeroStock',  pipeline: []  }  },  {  "$group":{\_id:["$category\_name","$brand\_name"]}  }  ]) | { "\_id" : [ "Comfort Bicycles", "Electra" ] }  { "\_id" : [ "Children Bicycles", "Trek" ] }  { "\_id" : [ "Cruisers Bicycles", "Pure Cycles" ] }  { "\_id" : [ "Mountain Bikes", "Sun Bicycles" ] }  { "\_id" : [ "Children Bicycles", "Electra" ] }  { "\_id" : [ "Cruisers Bicycles", "Sun Bicycles" ] }  { "\_id" : [ "Road Bikes", "Trek" ] }  { "\_id" : [ "Road Bikes", "Surly" ] }  { "\_id" : [ "Electric Bikes", "Electra" ] }  { "\_id" : [ "Comfort Bicycles", "Sun Bicycles" ] }  { "\_id" : [ "Electric Bikes", "Trek" ] }  { "\_id" : [ "Children Bicycles", "Sun Bicycles" ] }  { "\_id" : [ "Mountain Bikes", "Surly" ] }  { "\_id" : [ "Cruisers Bicycles", "Electra" ] }  { "\_id" : [ "Electric Bikes", "Sun Bicycles" ] }  { "\_id" : [ "Children Bicycles", "Strider" ] }  { "\_id" : [ "Mountain Bikes", "Heller" ] }  { "\_id" : [ "Cyclocross Bicycles", "Trek" ] }  { "\_id" : [ "Children Bicycles", "Haro" ] }  { "\_id" : [ "Mountain Bikes", "Ritchey" ] }  { "\_id" : [ "Cyclocross Bicycles", "Surly" ] }  { "\_id" : [ "Mountain Bikes", "Trek" ] }  { "\_id" : [ "Mountain Bikes", "Haro" ] } |
| Query 4 | db.Unsold.aggregate([  {  $lookup:{  from: "Stock",  localField:"product\_id",  foreignField:"product\_id",  as:"Stores"  }  },  {  $match:{  "Stores":{$not:{$eq:[]}}  }  },  {  $project:{"\_id":0,"product\_id":1,"product\_name":1,"brand\_name":1,"category\_name":1,"model\_year":1,"list\_price":1,"Stores.store\_id":1,"Stores.quantity":1}  }  ]) | { "product\_id" : "MOB125", "product\_name" : "Trek Kids' Dual Sport - 2018", "brand\_name" : "Trek", "category\_name" : "Mountain Bikes", "model\_year" : 2018, "list\_price" : 469.99, "Stores" : [ { "store\_id" : "ST3", "quantity" : 2 }, { "store\_id" : "ST2", "quantity" : 10 }, { "store\_id" : "ST1", "quantity" : 22 } ] }  { "product\_id" : "CHB289", "product\_name" : "Electra Superbolt 1 20\" - 2018", "brand\_name" : "Electra", "category\_name" : "Children Bicycles", "model\_year" : 2018, "list\_price" : 319.99, "Stores" : [ { "store\_id" : "ST1", "quantity" : 2 }, { "store\_id" : "ST2", "quantity" : 5 }, { "store\_id" : "ST3", "quantity" : 2 } ] }  { "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, "Stores" : [ { "store\_id" : "ST1", "quantity" : 27 }, { "store\_id" : "ST2", "quantity" : 21 }, { "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, "Stores" : [ { "store\_id" : "ST3", "quantity" : 26 }, { "store\_id" : "ST1", "quantity" : 27 }, { "store\_id" : "ST2", "quantity" : 6 } ] }  { "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, "Stores" : [ { "store\_id" : "ST1", "quantity" : 13 }, { "store\_id" : "ST2", "quantity" : 9 }, { "store\_id" : "ST3", "quantity" : 22 } ] }  { "product\_id" : "MOB1", "product\_name" : "Trek 820 - 2016", "brand\_name" : "Trek", "category\_name" : "Mountain Bikes", "model\_year" : 2016, "list\_price" : 379.99, "Stores" : [ { "store\_id" : "ST3", "quantity" : 14 }, { "store\_id" : "ST2", "quantity" : 14 }, { "store\_id" : "ST1", "quantity" : 27 } ] }  { "product\_id" : "MOB121", "product\_name" : "Surly Krampus Frameset - 2018", "brand\_name" : "Surly", "category\_name" : "Mountain Bikes", "model\_year" : 2018, "list\_price" : 2499.99, "Stores" : [ { "store\_id" : "ST2", "quantity" : 3 }, { "store\_id" : "ST1", "quantity" : 19 }, { "store\_id" : "ST3", "quantity" : 4 } ] }  { "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, "Stores" : [ { "store\_id" : "ST3", "quantity" : 10 }, { "store\_id" : "ST1", "quantity" : 9 }, { "store\_id" : "ST2", "quantity" : 22 } ] }  { "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, "Stores" : [ { "store\_id" : "ST3", "quantity" : 20 }, { "store\_id" : "ST1", "quantity" : 1 }, { "store\_id" : "ST2", "quantity" : 19 } ] }  { "product\_id" : "CHB266", "product\_name" : "Trek Superfly 20 - 2018", "brand\_name" : "Trek", "category\_name" : "Children Bicycles", "model\_year" : 2018, "list\_price" : 399.99, "Stores" : [ { "store\_id" : "ST3", "quantity" : 18 }, { "store\_id" : "ST1", "quantity" : 1 }, { "store\_id" : "ST2", "quantity" : 18 } ] } |
| Query 5 | db.Unsold.aggregate([  {  $lookup:{  from: "Stock",  localField:"product\_id",  foreignField:"product\_id",  as:"matchedProduct"  }  },  {  $match:{  "matchedProduct":{$not:{$eq:[]}}  }  },  {  $project:{  "\_id":0,  "product\_id":1,  "product\_name":1,  "brand\_name":1,  "category\_name":1,  "model\_year":1,  "list\_price":1,  "totalStock":{$sum:"$matchedProduct.quantity"}  }  },  {  $sort:{"totalStock":-1}  }  ]) | { "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, "totalStock" : 60 }  { "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, "totalStock" : 59 }  { "product\_id" : "MOB1", "product\_name" : "Trek 820 - 2016", "brand\_name" : "Trek", "category\_name" : "Mountain Bikes", "model\_year" : 2016, "list\_price" : 379.99, "totalStock" : 55 }  { "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, "totalStock" : 44 }  { "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, "totalStock" : 41 }  { "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, "totalStock" : 40 }  { "product\_id" : "CHB266", "product\_name" : "Trek Superfly 20 - 2018", "brand\_name" : "Trek", "category\_name" : "Children Bicycles", "model\_year" : 2018, "list\_price" : 399.99, "totalStock" : 37 }  { "product\_id" : "MOB125", "product\_name" : "Trek Kids' Dual Sport - 2018", "brand\_name" : "Trek", "category\_name" : "Mountain Bikes", "model\_year" : 2018, "list\_price" : 469.99, "totalStock" : 34 }  { "product\_id" : "MOB121", "product\_name" : "Surly Krampus Frameset - 2018", "brand\_name" : "Surly", "category\_name" : "Mountain Bikes", "model\_year" : 2018, "list\_price" : 2499.99, "totalStock" : 26 }  { "product\_id" : "CHB289", "product\_name" : "Electra Superbolt 1 20\" - 2018", "brand\_name" : "Electra", "category\_name" : "Children Bicycles", "model\_year" : 2018, "list\_price" : 319.99, "totalStock" : 9 } |
| Query 6 | db.ZeroStock.aggregate([  {  $lookup:{  from: "UnSold",  localField:"product\_id",  foreignField:"product\_id",  as:"matchedProduct"  }  },  {  $match:{  "matchedProduct":{$eq:[]}  }  },  {  $project:{"\_id":0,"product\_id":1,"product\_name":1,"brand\_name":1,"category\_name":1,"model\_year":1,"list\_price":1}  }  ]) | { "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" : "RDB319", "product\_name" : "Trek Checkpoint SL 5 Women's - 2019", "brand\_name" : "Trek", "category\_name" : "Road Bikes", "model\_year" : 2019, "list\_price" : 2799.99 }  { "product\_id" : "RDB320", "product\_name" : "Trek Checkpoint SL 6 - 2019", "brand\_name" : "Trek", "category\_name" : "Road Bikes", "model\_year" : 2019, "list\_price" : 3799.99 }  { "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 }  { "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" : "RDB321", "product\_name" : "Trek Checkpoint ALR Frameset - 2019", "brand\_name" : "Trek", "category\_name" : "Road Bikes", "model\_year" : 2019, "list\_price" : 3199.99 }  { "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 }  { "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 } |