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-- Date: 09-04-2022

-- Purpose: Lab 9 DBS311

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**-- Question 1 –** Write an aggregate statement to sort the documents in the grades collection based on student ID and class ID. Display only the student ID and the class ID for each document. Sort the result from high to low values for student ID and from low to high for class ID.

**-- Q1 SOLUTION –**

**db.grades.find({},{\_id : 0,student\_id : 1,class\_id : 1}).sort({student\_id:-1,class\_id: 1})**

A computer screen capture

Description automatically generated with medium confidence

**-- Question 2 –** Revise the previous query to show the result for students with IDs between 10 and 12.

**-- Q2 SOLUTION –**

A picture containing graphical user interface

Description automatically generated**db.grades.find({"$and": [{"student\_id": {"$lte":12}},{"student\_id": {"$gte": 10}}]},{"student\_id": 1,"class\_id": 1}).sort({student\_id: -1,})**

**-- Question 3 –** Show only existing class IDs in the grades collection. (Do not show duplicates.)

**-- Q3 SOLUTION –**

**db.grades.distinct("class\_id")**

A picture containing shape

Description automatically generated

**-- Question 4 –** Write a query to group the type of scores and display the total types in each student document

**-- Q4 SOLUTION –**

**db.grades.aggregate({ "$group": "\_id":"$scores.type","TotalTypes":{"$sum":"$scores.type"}} })**

Text

Description automatically generated

**-- Question 5 –** Write a query to show the maximum and the minimum class ID for each grade student. Sort the result based on student ID from low to high. Show only the first 10 grades student.

**-- Q5 SOLUTION –**

**db.grades.aggregate({ "$group": {"\_id": "$scores","max\_class\_id": {"$max" : "$scores"}}})**

A screen shot of a computer

Description automatically generated with low confidence

**-- Question 6 –** Write a query to find the number of failed exams for student with ID 48.

**-- Q6 SOLUTION –**

**db.grades.find({},{scores:{$elemMatch:{score:{$lte:50}}},"student\_id":48}).pretty()**

Text

Description automatically generated