DSC 650

Week 3 Assignment

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Screenshot 1: SELECT \* FROM grades;

A screenshot of a computer

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Run 3 different SQL commands on the grades data

**Query 1:**

**Screenshot 2: Students with highest Final exam score**

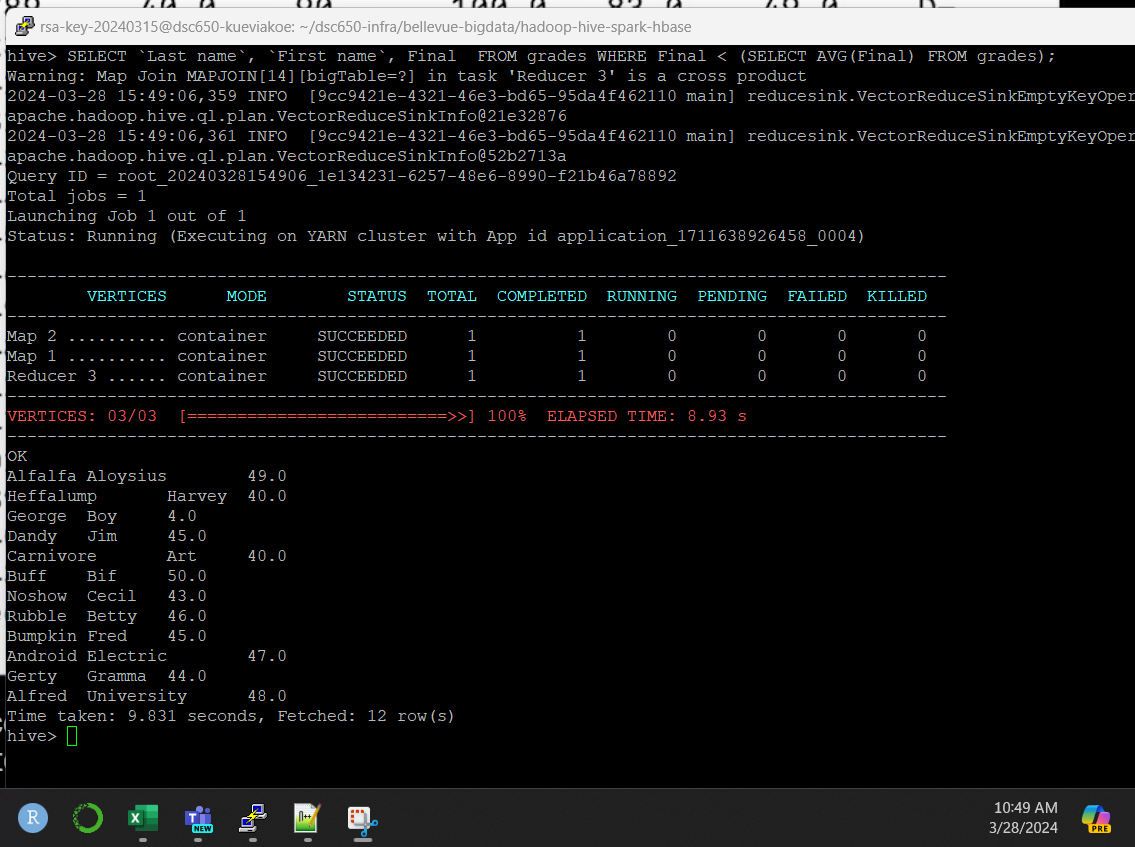
SELECT `Last name`, `First name`, MAX(Final) AS Highest\_Final FROM grades GROUP BY `Last name`, `First name` ORDER BY Highest\_Final DESC;

A screenshot of a computer

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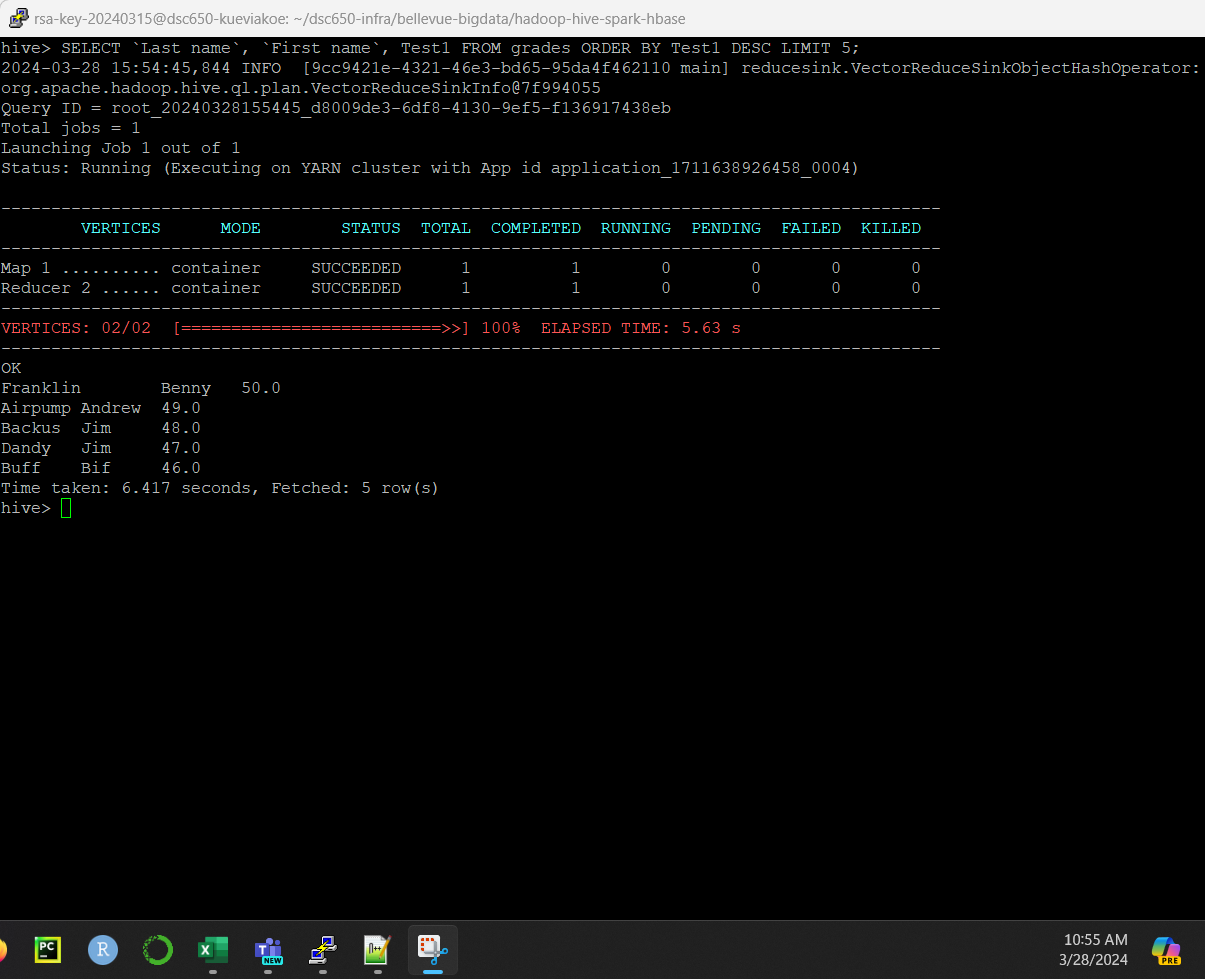
**Query 2:** List of students who scored less than the average final exam score

*SELECT `Last name`, `First name`, Final FROM grades WHERE Final < (SELECT AVG(Final) FROM grades);*

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**Query 3: Top 5 students with the highest scores in Test 1**

SELECT `Last name`, `First name`, Test1 FROM grades ORDER BY Test1 DESC LIMIT 5;



For the assignment, I am choosing the world population data. The data can be found on Kaggle, at <https://www.kaggle.com/datasets/sazidthe1/world-population-data>

I chose the world population dataset because it has information about population dynamics over time, including data from 1970 and 2023, along with details about country’s areas and continents.

This dataset will allow us to compare demographics, analyze population density, and track the evolution of populations across different continents.

**Query 1: 10 most populated countries in 2023**

*SELECT Country, Continent, Population\_2023 FROM world\_pop\_data ORDER BY Population\_2023 DESC LIMIT 10;*

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**Query 2: Percentage of population growth between 1970 and 2023**

*SELECT Continent, SUM(Population\_1970) AS Total\_Pop\_1970, SUM(Population\_2023) AS Total\_Pop\_2023,*

*(SUM(Population\_2023) - SUM(Population\_1970)) / SUM(Population\_1970) \* 100 AS Percentage\_growth*

*FROM world\_pop\_data*

*GROUP BY Continent*

*ORDER BY Percentage\_growth ASC;*

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**Query 3: Size of each continent**

*SELECT Continent, SUM(Area\_km2) as Total\_Area\_Km2 FROM World\_pop\_data GROUP BY Continent;*

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Query 4: What are the top 5 countries with highest density in 2023

SELECT Country, Continent, Population\_2023/Area\_km2 as Density FROM World\_pop\_data ORDER BY Density DESC LIMIT 5;

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**Query 5: Continents’ density in 1970 and 2023**

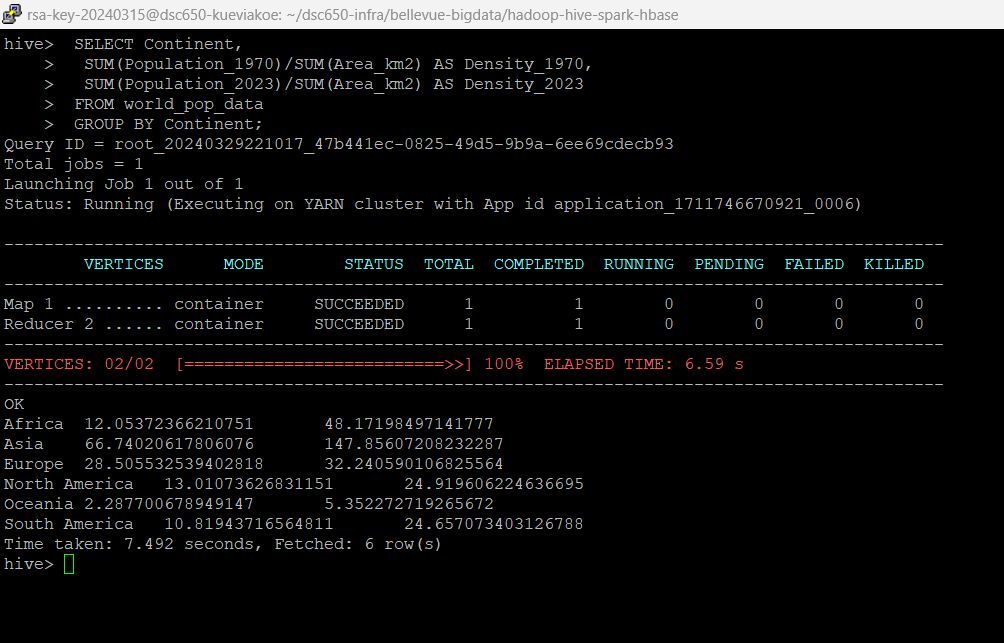
*SELECT Continent,*

*SUM(Population\_1970)/SUM(Area\_km2) AS Density\_1970,*

*SUM(Population\_2023)/SUM(Area\_km2) AS Density\_2023*

*FROM world\_pop\_data*

*GROUP BY Continent;*

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