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| **SQL Portfolio Project | Analyzing International Debt Statistics | World Bank** |

The **World Bank is an organization that compiles yearly financial stock flows and external debt** to indicate global economies. This project's scope is to use the 2021 dataset from the World Bank to analyze the debt statistics of developing countries. The method we will use to analyze the data comes in three steps. First, extract the dataset into Microsoft Excel to conduct a precise format. Second, import the dataset into Microsoft SQL, and third, use SQL to analyze **the following sample questions**:

1. *What is the total number of global debt?*
2. *Which countries accumulated the highest amount of debt?*
3. *Which countries accumulated the lowest amount of debt?*
4. *What is the difference between the highest and lowest country debt?*

**SQL Data Overview**

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| Select \*  From PorfolioProject..InternationalDebt; |

**Examine the total amount of debt of all developing countries in the dataset.**

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| SELECT COUNT(Country\_name) AS total\_countries  FROM PorfolioProject..InternationalDebt; |

The dataset has a total of 403 countries. A caveat to the dataset is World Bank had some unknown countries’ debt number values. The missing values were set to NULL. The results will exclude NULL values.

**Examine debt indicator.**

We want to pull up the debt indicator to know the debt calculation. The debt indicator measures the indebtedness scale relative to the country’s economic activity.

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| SELECT distinct indicator\_code AS debt\_indicator  FROM PorfolioProject..InternationalDebt  WHERE indicator\_code = indicator\_code  ORDER BY debt\_indicator; |

There are two rows of debt indicators.

1. NY.GDP.PCAP.CD
2. NY.GDP.PCAP.PP.CD

**Using Aggregate functions**

Using aggregate functions to analyze the countries’ debt is essential to calculate the dataset.

First, we will seek to calculate the total amount of all nations’ debt. Note that the debt is the sum of the debts owed by countries by the debt indicator.

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| SELECT SUM(Debt\_2021) AS total\_debt  FROM PorfolioProject..InternationalDebt; |

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| total\_debt |
| 8014697.016664409 |

The results return these numbers in trillions. We can state that all countries that are included in the dataset owe 8014697.02 NY.GDP.PCAP.CD, rounding to 2 decimal places.

Next, we will seek to calculate the top five countries with the maximum debt in descending order using the MAX aggregate function.

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| SELECT TOP 5 Country\_name, MAX(Debt\_2021) AS highest\_countries\_debt  FROM PorfolioProject..InternationalDebt  WHERE indicator\_code = indicator\_code  GROUP BY Country\_name  ORDER BY "highest\_countries\_debt" DESC; |

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| Country\_name | highest\_countries\_debt |
| Monaco | 234315.460503547 |
| Luxembourg | 134544.52912089 |
| Singapore | 116486.473211409 |
| Bermuda | 114090.328338579 |
| Ireland | 106351.373546793 |

The table above indicates **the** top five countries with the highest debts. Monaco accumulated the highest debt amount, rounding to 2 decimal places 234315.46, NY.GDP.PCAP.CD. These five countries provide insight in terms of their socio-economic condition. It has been forecasted that high debt levels may lead creditors to question if the borrowing nations will be able to pay the debts, which brings concerns due to high-interest rates.

We also want to investigate the top five countries with minimum debt accumulation. By using MIN aggregate function and ascending order, we can get the answer we are looking for.

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| SELECT TOP 5 Country\_name, MIN(Debt\_2021) AS lowest\_countries\_debt  FROM PorfolioProject..InternationalDebt  WHERE Debt\_2021 IS NOT NULL  GROUP BY Country\_name  ORDER BY "lowest\_countries\_debt" ASC; |

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| Country\_name | lowest\_countries\_debt |
| Burundi | 221.477676223363 |
| Afghanistan | 368.754614175459 |
| Somalia | 446.981559635259 |
| Central African Republic | 461.137490166508 |
| Sierra Leone | 480.039211301066 |

As the table revealed above, we can see that Burundi has the lowest debt rounding it to two decimal places, $221.48 NY.GDP.PCAP.CD, followed by Afghanistan.

Finally, we want to analyze the difference between the highest and lowest national debt to find how much the lowest national debt is compared to the highest national debt. This approach will give us insight into one nation compared to another.

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| SELECT (Max(Debt\_2021)) - (MIN(Debt\_2021)) AS difference\_debt\_amount  FROM PorfolioProject..InternationalDebt; |

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| lowest\_countries\_debt |
| 234093.982827323 |

The difference in debt between Monoca and Burundi is $234093.98 NY.GDP.PCAP.CD