

DAT 202 Assignment 3

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Part A: Questions Data Governance

What is the focus of Data Governance?

Data Governance focuses on managing the value, quality, consistency, usability, security, and availability of data across an organization. It aims to ensure that data is treated as a strategic and valuable enterprise asset through a business-driven approach that integrates people, processes, and technology. Key elements include:

- Creating standards for an enterprise business data dictionary
- Establishing ownership and accountability for data
- Implementing data monitoring standards
- Maintaining a framework for training and communication of data governance standards

What is the importance of Data Governance to business and data analytics?

Data Governance is critical to businesses and data analytics because it ensures data quality, consistency, and security, which are foundational for making informed business decisions. Effective data governance leads to:

- Enhanced decision-making capabilities through reliable and high-quality data
- Improved compliance with regulatory demands where the financial penalties can be significant
- Increased efficiency and reduced costs through simplified access and ease of processing large amounts of data
- Clear ownership and avoiding privacy issues (e.g. who owns medical data, who can grant the right to use it?)
- Reduced business risk by maintaining control over data

How will Data Governance enable better decision making?

Data Governance enables better decision-making by ensuring that data is accurate, consistent, and readily available. It supports this by:

- Providing a common business language and single interpretation of data
- Ensuring the integrity and reliability of data sources
- Facilitating faster reporting and insights due to improved data quality

- Reducing risks by maintaining end-to-end control over data processes
- Enabling integration and reconciliation of information from various sources to provide a single version of the truth

Provide a summary of the main business and technical roles required in Data Governance.

Effective Data Governance requires a combination of four key roles, each with specific responsibilities:

Data Owner: Ensure data quality and availability, authorize access, and maintain accountability for data assets within the business.

Data Steward: Define data management policies and standards, plan information requirements, and coordinate data delivery within the business.

Data Custodian: Design and/or manage data capture, storage, retention, disposal, and security within the technology infrastructure.

Data User: Select information sources, interpret data, comply with policies, and create data extracts for specific business needs. Comply with Information Management Policies and data governance standards.

Part B – Questions on the Visualization Lab

Show total Customer by city in Geographic Map

See separate PDF report (filename "DAT202_Assignment3_CB_Report.pdf").

Which country has the customers who have the highest yearly income?

The following countries all have the maximum YearlyIncome of \$170,000: Australia (AU), Canada (CA), Great Britain (GB) and United States (US).

Show a 'Clustered Column chart' by Marital Status Country wise. Which country has minimum 'Single' by Marital Status customers?

Canada has the minimum number of customers with marital status 'Single'.

How many customers have 'English Education' as 'Graduate Degree' by country?

- US: 1895
- CA: 353
- AU: 328
- GB: 281
- DE: 172
- FR: 160

Customer Age by Customer count. What age of customers is the highest? (Use birth date in DimCustomer table)

The most common customer birth year, with a total of 715 customers is 1981. Therefore the most common age of customers is 43.