- Describe the characteristics and common uses of structured data. Provide examples as necessary.

  Structured data is used all over the place. Many standard database systems for web applications are relational structured databases. Relational databases traditionally are tabular databases with rows, columns, and attributes. When I started working with databases, it was easiest for me to think of them as a collection of excel spreadsheets. An example of a structured database system that I'm working on right now is a claims system. A claimant table might have columns for "first_name", "last_name", "social_security_number", and a "claimant_id". Other tables that *relate* to the claimant table (like a claim table), might have a *foreign key* to the claimant table to show that the claim record is tied to a particular claimant.

- Describe the characteristics of unstructured data (e.g., big data) and where these data elements may be found. Provide examples as necessary.

  AWS says that unstructured data is typically more difficult to analyze. Unstructured data falls into formats that aren't as standardized. Some examples would be text files, emails, images, audio files, video files, etc. A lot of times, pointers to unstructured data can be stored within a structured database. Using the same example from the structured data section, a claimant might have a "photo_url" column within a structured database. This is a pointer to an unstructured data format that can be accessed within an application.

- Discuss the common business analysis role and the types of data that may be used. Provide examples as necessary.

  Business analysis is looking at functions and processes used in a company and creating technological solutions to optimize these functions and processes. A lot of times this requires some level of business analytics, which is analysis of data and reporting within a business. For a business that is not technologically integrated yet, much of the data used would be unstructured data, or physical documents. For a business that is already somewhat modernized with technological solutions, it could be a combination of structured, unstructured, and physical data. It depends on the business and the domain within the business that the analyst is researching.

- Discuss the use of analytics and the types of data that may be used. Provide examples as necessary.

  The data types used in analytics range from structured, to semi-structured (json, xml), to unstructured. For example, the output of a lot of reporting services is excel spreadsheets or PDFs. These are examples of unstructured data that may be analyzed for optimization of business processes. However, these unstructured data types typically have a structured data source used to generate these documents, so analytics

may be conducted on the source rather than the output. It depends on the business analyst's approach in this scenario.

References

AWS. (n.d.). What is Structured Data? - Structured Data Explained - AWS. Amazon Web Services, Inc. https://aws.amazon.com/what-is/structured-data/

AltexSoft Inc. (2023, November 1). Unstructured Data: Examples, Tools, Techniques, and Best Practices. Medium. https://altexsoft.medium.com/unstructured-data-examples-tools-techniques-and-best-practices-c0fefa57f741#:~:text=Unstructured%20data%20storage%201%20Scalability.%20Unstructured%20data%20has

Terra, J. (2020, May 5). What is a Business Analysis and What does Business Analyst Do. Simplilearn.com. https://www.simplilearn.com/what-is-a-business-analyst-article