**Readings’ Review – Format**

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COMP 4522 – Advanced Databases

1. Summary of the assigned article (a well-thought paragraph will do)

The focus of the article revolves around the history and evolution of databases, tracing the origins from the pre-computer times when humans began to count, write, and store information. It emphasizes the transitional period from manual methods of record-keeping to the emergence of the digital databases as we know them today. Additionally, the article concisely details a variety of changes to how databases interact with data, stemming from the need for better, faster, and more efficient systems as data became more and more ingrained in our everyday lives. Finally, the article poses the idea that as more powerful database systems emerge, and incorporation of databases grows stronger within our society, there may even be a time where the worlds of science-fiction and reality may become less blurred.

1. Short description of key points

**Definition of Data and Metadata:** The article defines data as qualitative or quantitative attributes. But clarifies that, on its own, data lacks meaning—it's just a collection of information without context. This is where metadata, the data on the data, comes into play. Metadata gives meaning to the qualitive and quantitative attribute data.

**History of Databases:** The article discusses the historical progression of databases from the pre-computer era of manual record-keeping to the emergence of computerized systems, and data storage methods such as relational models, and object-oriented databases.

**Evolution through Decades:** The article briefly explains the development and advancements of databases throughout the decades, from the 1960’s to the 1990’s, up to our modern present-day systems. It also briefly poses thoughts on the future of databases.

**Other Database Methods (NoSQL):** **NoSQL Emergence and Purpose:** NoSQL databases were created as a response to the limitations of traditional relational databases. The aim of NoSQL was to offer scalability, flexibility, and performance advantages for specific data models, optimized for retrieval and append operations.

1. What conclusions have you drawn after reading the assigned material?