**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

**Data Definition:** The term ‘Data’ is often used as a singular noun even though it's technically plural. Data can be a variety of things such as numbers, words, or images representing qualitative or quantitative attributes. However, on its own, data lacks meaning—it's just a collection of information without context or relation to other facts.

**History of Databases:** It explores the historical progression of databases from pre-computer era record-keeping to the emergence of computerized systems, such as CODASYL, IMS, relational models, and object-oriented databases.

**Evolution through Decades:** The article discusses the development and advancements of databases in the 1960s, 1970s, 1980s, and 1990s, including the commercialization of relational systems, the rise of object-oriented databases, internet usability, and the emergence of XML and ORDBMS.

**Early 21st Century Developments:** It touches on the advancements in databases post-2000, such as more sophisticated programming logic, the handling of huge terabyte systems, data mining, warehousing, and the rise of NoSQL databases to cater to specific needs of internet companies.

**Future Trends:** Anticipations for the future of databases include more complex logic, distributed/federated databases, handling spatial and complex medical data, and adaptation to emerging technologies like cloud computing and mobile applications.

The key takeaway is the continuous evolution of databases from manual record-keeping to highly sophisticated systems, adapting to technological advancements and diverse data needs.

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