LECTURE 3

REFERENCE AND RESEARCH ARTICLE

Lecture 3: Database System Architecture

* **Standard Textbook References**

1. Elmasri, R. & Navathe, S. B. (2017). Fundamentals of Database Systems (7th Edition). Pearson Education.
2. Covers DBMS architecture, three-schema model, data independence, and modern architectures.
3. Korth, H. F., Silberschatz, A., & Sudarshan, S. (2019). Database System Concepts (7th Edition). McGraw Hill.
4. Classical and client-server architectures, schema levels, and concurrency aspects.
5. Ramakrishnan, R., & Gehrke, J. (2014). Database Management Systems (3rd Edition). McGraw Hill.
6. Explains DBMS structure, storage managers, query processors, and distributed DBMS.

* **Research Articles (Recent – 2020 Onwards)**

1. Sharma, N., & Singh, P. (2021). An overview of modern database system architectures: From centralized to cloud-native DBMS. Journal of Database Management, 32(2), 45–62.
2. Reviews DBMS evolution: centralized → client-server → distributed → cloud-native.
3. Abadi, D. J. (2020). The Design and Architecture of Modern Analytical Database Systems. Foundations and Trends in Databases, 13(4).
4. Explains architectural changes in analytical DBMS and cloud-based designs.
5. Stonebraker, M., & Çetintemel, U. (2022). Database Architecture in the Age of Big Data and Cloud. Communications of the ACM, 65(7), 72–81.
6. Highlights how DBMS architectures adapt to scalability, distributed processing, and data-intensive applications.
7. Gupta, R., & Bhatia, A. (2023). A survey on cloud database architectures and performance optimization techniques. IEEE Access, 11, 10789–10812.
8. Provides insights into cloud DBMS, elasticity, and performance trade-offs.

* Online Authoritative Sources

1. ACM Digital Library – https://dl.acm.org
2. IEEE Xplore – https://ieeexplore.ieee.org
3. DBLP Computer Science Bibliography – https://dblp.uni-trier.de