Tutorial 02
ADBMS - TICT3123 (T)

1. Define data mining and explain how it differs from traditional data analysis.
2. List and briefly describe at least four real-world applications of data mining.
3. Distinguish between descriptive and predictive data mining tasks.
4. Compare DBMS and Data Mining in terms of purpose and data handling.
5. Mention three domains where advanced data mining applications are widely used.
6. Why is handling diverse data types a challenge in data mining?
7. Why is data preprocessing essential before mining?
8. What are the limitations of a centralized database that are addressed by distributed databases?
9. Differentiate between homogeneous and heterogeneous distributed databases.
10. Compare replication and fragmentation as methods of distributed data storage.
11. Explain the concepts of:
    a. Horizontal fragmentation
    b. Vertical fragmentation
12. Why does improper data distribution increase response time?
13. What is a database buffer and what role does it play in minimizing disk I/O in DBMS?
14. Why is it not practical to keep all disk blocks in main memory?
15. Explain how the buffer helps in speeding up user data requests.
16. Differentiate between the following buffer management policies:
    a. Force vs. No-Force
    b. Steal vs. No-Steal
17. Explain how the buffer manager handles a situation when the requested block is not available in the buffer.
18. What is a buffer replacement strategy and why is it necessary?