

LEVEL: 2ND YEAR BACHELOR'S IN COMPUTER SCIENCE (2025/2026)
MODULE: DATABASES
TD NO 1: INTRODUCTION TO DATABASES

EXERCISE 1: Answer with **True or False** and correct the false propositions:

1. A database is an organized collection of related data.
2. File systems completely eliminate data inconsistency.
3. The hierarchical model organizes data in the form of tables.
4. SQL is only used to retrieve data from a database.
5. Primary keys uniquely identify each record in a table.
6. NoSQL databases are mainly designed for structured data only.
7. One advantage of databases is improved data security.
8. Transaction management helps maintain data consistency even after system failures.
9. In the relational model, data is stored in graphs.
10. Scalability refers to the ability of a system to handle growing amounts of data efficiently.
11. A DBMS is mandatory for data management in a database.
12. Database normalization is a process aimed at increasing data redundancy.
13. Foreign keys establish links between different tables in a database.
14. A relational database can be graphically represented as an entity-relationship diagram.
15. Distributed databases are designed to be stored on a single server.
16. The DBMS must be installed on the same server as the database.
17. In a company using a database, each employee will access the same data as their teammates.
18. The Excel spreadsheet is the easiest DBMS to use.

Exercise 2 : Answers to the questions

1. What is data integrity?
2. What are the purposes of DML, DDL, and DCL?
3. What are the three levels of data description defined by the ANSI/SPARC standard?
4. Provide examples of DBMS.