DATABASEMENT MANAGEMENT SYSTEM

Subject: DBMS

Due Date: 2025-11-13

Teacher: SNMB

Points: 100

Questions

1. What is the difference between a Database (DB) and a Database Management System (DBMS)?
2. Explain the three levels of data abstraction (physical, logical, and view levels) in a DBMS architecture.
3. Differentiate between a schema and a database instance.
4. Define a super key, a candidate key, and a primary key. How do they relate to each other?
5. What is a foreign key, and what role does it play in maintaining referential integrity?
6. Explain the concept of data redundancy and why it is a concern in database design.
7. Normalization
8. What is database normalization, and what is its primary purpose?
9. Explain the First Normal Form (1NF), Second Normal Form (2NF), and Third Normal Form (3NF).
10. What is a functional dependency, and how does it relate to normalization?
11. Explain the difference between 3NF and Boyce-Codd Normal Form (BCNF).
12. When might you consider denormalization, and what are the potential trade-offs?