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Database Design and Implementation

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Assignment 2

1. What is SQL?

   a. Language used for querying and manipulating data / databases

2. What are the components of a database?

   a. Data Manipulation Language (DML)

   b. Data Definition Language (DDL)

   c. Data Control Language (DCL)

3. What are the components of a table?

   a. Null Value

   b. Fields

   c. Records / Rows

   d. Columns

4. What are the elements of an SQL statement?

   a. Queries retrieve data based on criteria

   b. Clauses = component of statement or queries

   c. Predicates = logical conditions that evaluate true / false statements

   d. Expressions produce scalar values / tables (part of predicates)

e. Statements = queries run against a database (comprised of clauses, expressions, predicates)

f. White space (formatting)

5. What are the reasons to normalize a database?

   a. Avoid redundant data

   b. Optimize performance

   c. Ensure data integrity

6. What is data integrity?

   a. Consistency / accuracy of data and table relationships

7. What types of RDMS exist?

   a. Oracle

   b. MySQL

   c. SQL Server

   d. PostgreSQL

8. What are the advantages of MySQL over other implementations of SQL?

   a. Available for free

   b. Functionality for system and database admins

   c. Easy to use and implement

   d. Fast and stable