CMSC 508 Semester Project Rubric

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Phase 2 **Team #** 12

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Final documentation:

A. Updated problem statement.
B. Updated Entity-Relationship diagram.
C. Updated relational design (including functional dependencies and normalization).
D. Database: SQL scripts for creating the database tables, views, triggers, and procedures.
E. Interface software: source code and documentation of the interface to the database.

Problem Statement

1. Describes the environment and user groups for a specific database
2. Identifies the entities that need to be stored within the database
3. Describes the potential uses for the database

Music Database

Measure	Excellent	Good	Poor	Unsatisfactory
1 10 pts	Clearly describes the environment in which the database will be used. Clearly defines roles of all possible user groups	Briefly describes the environment in which the database will be used. Clearly defines roles of some possible user groups	Briefly describes the environment in which the database will be used. Just lists user groups	Mentions an environment and lists a few types of users
2 10 pts	Lists all entities that would need to be included in database implementation	Lists most entities that would need to be included in database implementation	Lists some entities that would need to be included in database implementation; but omits some obvious ones	Lists just a few possible entities – omitting several obvious ones
3 10 pts	Potential uses listed as queries for each type of user. Queries are reasonably complex and realistic.	Potential uses listed as queries but without regard to type of user. Queries are reasonably complex and realistic.	Potential uses listed as simplistic queries based on single entities.	Potential uses listed as queries that don't relate to entities in database.

changes to ERD

Design

Measure	Excellent	Good	Poor	Unsatisfactory
Create an updated (if necessary) entity-relationship diagram for a database 10 pts	E/R diagram includes all needed entities and relationships. All relationships are of correct functionality. Diagram can be used to show how to answer all queries.	E/R diagram includes most needed entities and relationships. Most relationships have correct functionality. Diagram can be used to show how to answer most queries.	E/R diagram includes some needed entities and relationships. Most relationships have correct functionality. Diagram can be used to show how to answer some queries.	E/R diagram includes a few needed entities and relationships. Some relationships have correct functionality. Diagram cannot be used to show how to answer most queries.

Implementation and Demonstration of a Running Database and Interface.

1. Design and implementation of a database in MySQL in AWS RDS to model a real-world problem.
   a. Create complete database in MySQL on AWS RDS
   b. Primary keys and foreign keys are defined, along with other constraints as appropriate for the problem domain
   c. Implementation SQL queries to retrieve required information from the database
   d. Creating views, triggers, and procedures to facilitate the usage and manipulation of the database
   e. Provide security by creating and securing user accounts and developing appropriate access controls for users

2. Design and implementation of a web interface that interacts with the database to select, insert, update, and delete information to give the end user the ability to access and manipulate the data. Includes, developing and enforcing standards for application programs that access the database; encrypting sensitive data, etc.
3. Documentation in team GitHub repository
4. Presentation of Final Project

	Excellent	**Good**	**Poor**	**Unsatisfactory**
1.a. 25pts	All necessary tables created	Most necessary tables created	A few tables created	No tables created
1.b 10pts	**All** primary and foreign keys correctly defined	All primary and most foreign keys correctly defined	Most primary and foreign keys correctly defined	Just some primary keys defined
1.c 25 pts	All SQL queries working as defined with evidence that they have been thoroughly tested.	Most SQL queries working with some evidence of testing. No tests Shavon	Only wrote some working queries with limited documentation of testing them.	Few queries work with no testing.
1.d 15 pts	Both at least one view, trigger, and stored procedure is correctly implemented.	Two of the three are correctly implemented delimiters not correct in Tigger & Stored Procedure	One of the three are correctly implemented	None are implemented correctly.
1.e 15 pts	Security considered, implemented and documented at both the database level and the application level User authentication with Django not fully implemented	Some security measures are in place at the database or application level with appropriate documentation.	Some security measures are in place at the database or application level WITHOUT appropriate documentation.	No security measures in place in either the database or application.
2. 25 pts.	Web interface implementation is complete and connects successfully to both update and query the database.	Web interface is implemented but with minor connectivity issues. on local host	Connection to the database is limited to a database client, not a separate web application	Database connection is not evident.
3. 20pts.	All documentation including a list of creation, data loading, security, and "20 queries" in SQL is appropriately submitted to the team repository in an organized manner and in the correct file format.	Complete documentation submitted in the wrong file format	Incomplete documentation	Documentation is inadequate.
3. 25 pts.	Volume, pace, and timing of presentation is good. All team members participate. Presentation highlights key aspects of the project, including a demonstration of how the web interface updates and queries the database.	Accomplishes goals from excellent most of the time	Accomplishes some of the goals from excellent some of the time	Rarely accomplishes any of the goals from excellent

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Notes: Django forms; Demo on local host
→ Python familiarity

Advice: - manage your time!
- Communicate regularly with group - Discord