DevifyX Assignment

Peer-to-Peer Lending Platform

Assignment Deadline: 7 Days

Objective

Build a robust MySQL-only database solution for a Peer-to-Peer Lending Platform that connects borrowers and investors for loans. **No frontend or backend implementation is required.** Focus solely on database schema design, queries, and procedures.

Core Features

Design and implement the following features using MySQL:

1. **User Management:** Store and manage user profiles, supporting both borrowers and investors.
2. **Loan Listings:** Allow borrowers to create loan requests with details such as amount, interest rate, duration, and purpose.
3. **Investment Offers:** Enable investors to view and invest in active loan listings.
4. **Funding Tracking:** Track partial and full funding of loans by multiple investors.
5. **Repayment Schedules:** Generate and manage repayment schedules for each funded loan.
6. **Transaction Records:** Log all monetary transactions, including investments and repayments.
7. **Loan Status Management:** Update and track loan statuses (e.g., Open, Funded, Active, Completed, Defaulted).
8. **Audit Trail:** Maintain an audit log for key actions (loan creation, investment, repayments, status changes).

Bonus Features

Implementing any of the following will be considered a plus:

- Support for user KYC (Know Your Customer) verification data.
- Automated notifications (via triggers) for important events (e.g., loan fully funded, repayment due).
- Support for secondary market (investors can sell their loan shares).
- Advanced reporting (e.g., total investment per user, default rates).

Technical Requirements

- Use only MySQL (version 5.7+ or 8.0+).
- Deliver all schema definitions (`CREATE TABLE`), indexes, and constraints.
- Write sample data insertion scripts (`INSERT INTO`) for demonstration.
- Provide SQL queries for all core features (e.g., list active loans, show investor portfolio, repayment history).
- Implement stored procedures/functions for key operations (e.g., funding a loan, making a repayment).
- Use triggers where appropriate (e.g., audit logging, status updates).
- Ensure data integrity with proper foreign keys and constraints.
- Document all tables, fields, and procedures with comments.

Deliverables

- A single SQL file containing:
  - Database schema and constraints
  - Sample data
  - Required queries, procedures, and triggers
  - Inline documentation/comments
- A brief `README.md` (max 1 page) explaining your schema design and how to run the SQL file.

Use of AI Tools

> You are **permitted and encouraged** to use AI-based coding tools such as **GitHub Copilot**, **ChatGPT**, or similar platforms to assist with code generation, debugging, and documentation. However, the final submission should reflect your own understanding and structure.

Submission

Submit your assignment using the following form:
`https://forms.gle/HZxnwbzDnmLzMsqTA`

Evaluation Criteria

- **Completeness:** All core features are implemented as described.
- **Database Design:** Normalization, scalability, and clarity of schema.
- **Correctness:** Accurate queries, procedures, and data integrity.
- **Documentation:** Clear comments and explanations.
- **Bonus Features:** Implementation quality of any bonus features.
- **Code Quality:** Readability, structure, and organization of SQL file.

Good luck! We look forward to your submission.
— **DevifyX Team**

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