

SOFE3700U Database Management Systems Project

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Problems to Address:

- Data Privacy: Ensure customer data privacy by hiding IP addresses and personal information.
- Data Accuracy and Quality: Mechanisms to maintain high system data accuracy and integrity
- Duplicate Prevention: Avoid duplicate entries, errors, and miscalculations in data.
- Real-Time Updates: Provide real-time updates for claims status and other critical information.

Goals and Objectives:

Goals:

- Build a database for home, life, and vehicle insurance.
- Register customers and dependents.
- Enable insurance claim submissions with status tracking.
- Verify customer eligibility based on criteria.
- Create user-friendly interfaces for each insurance type.

Motivations:

- Promote inclusivity and fairness in insurance offerings.
- Simplify claim submissions for faster processing.
- Enhance transparency in policy management.
- Provide flexible, customer-focused solutions.
- Build trust by supporting customers in financial hardship.

Related Work and How Our Work will Differ:

- We plan to prioritize simplicity and transparency through tailored user interfaces for different insurance types
- Develop a more inclusive, customer-friendly system that provides fair coverage options for individuals with diverse health conditions. Focus on clear, easy-to-understand policies with detailed explanations of premiums, coverage amounts, and terms.
- Flexible payment options, such as installment plans, delayed payments, or temporary premium reductions for individuals going through financial struggles. This can help retain customers and avoid policy cancellations

References

Dimitrios A. Koutsomitropoulos, & AbstractStandardization efforts have led to the emergence of conceptual models in the insurance industry. Simultaneously. (2017, June 3). *A standards-based ontology and support for Big Data Analytics in the insurance industry*. ICT Express.

https://www.sciencedirect.com/science/article/pii/S2405959517300875

Holycross, M. (2023, September 28). *The top insurance company databases for 2023*. dakota. https://www.dakota.com/resources/blog/the-top-insurance-company-databases-for-2023

Overcoming-insurance-data-challenges-with-a-semantic- ... (2020, February).

https://www.wipro.com/content/dam/nexus/en/service-lines/analytics/latest-thinking/overcoming-insurance-data-c hallenges-with-a-semantic-data-hub.pdf

Sacaric, B. (2022, November 11). *Three reasons how graph databases can enhance the insurance industry*. Memgraph. https://memgraph.com/blog/three-reasons-how-graph-databases-can-enhance-the-insurance-industry

Methodology

- Database Structure:

Key tables include:

- Customers: Stores personal info.
- Policies: Manages insurance policies.
- Life Insurance, Vehicles, and House Insurance: Store specific policy details.
- Payments, Claims Status, Claims History: Handle transactions and claim tracking.

Each insurance type will have a tailored user interface for an improved user experience.

- Plan & Timeline:

- Planning & Requirements: Finalize system features, assign team roles, and define the database structure.
- Database Design: Create the ERD, define keys and relationships, and design the schema.
- Database Setup & Backend Development: Set up the database, implement CRUD operations, and establish relationships between tables.
- Frontend Design & Development: Develop the user interfaces and connect to the backend.
- Presentation & Review: Prepare the final presentation and conduct reviews with the team.