Insurance Management System
Group 38

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Problem Statement

In the insurance industry, managing policy creation, claims processing, customer data, and payment processing across multiple departments and enterprises can be challenging due to the lack of an integrated platform. This results in inefficiencies, delays, and data inconsistency, which negatively impact operational effectiveness and customer satisfaction.

This project aims to address these challenges by developing a **unified Insurance Management System**. The goal is to streamline insurance-related operations, ensure seamless collaboration between departments, and enhance customer service delivery through centralized data management.


Solution

We propose an **Insurance Management Platform** to manage policies, claims, payments, and customer interactions efficiently. The platform will provide role-based access, centralized data storage, and streamlined workflows across departments and enterprises.

Key Features:

- **Role-Based Access**: Secure access to platform resources based on user roles, ensuring data integrity and privacy.
- **Work Request Management**: Efficient handling of policy approvals, claim submissions, and cross-departmental requests.
- **Reporting Module**: Summarized views of system operations, including claims status, policy metrics, and payment trends.
- **Pre-Populated Data**: Integration with the Faker module for generating realistic test data for demonstrations.

- **Scalable Architecture**: Designed to accommodate advanced features like email notifications, document uploads, and APIs for external integrations.

High-Level Component Diagram
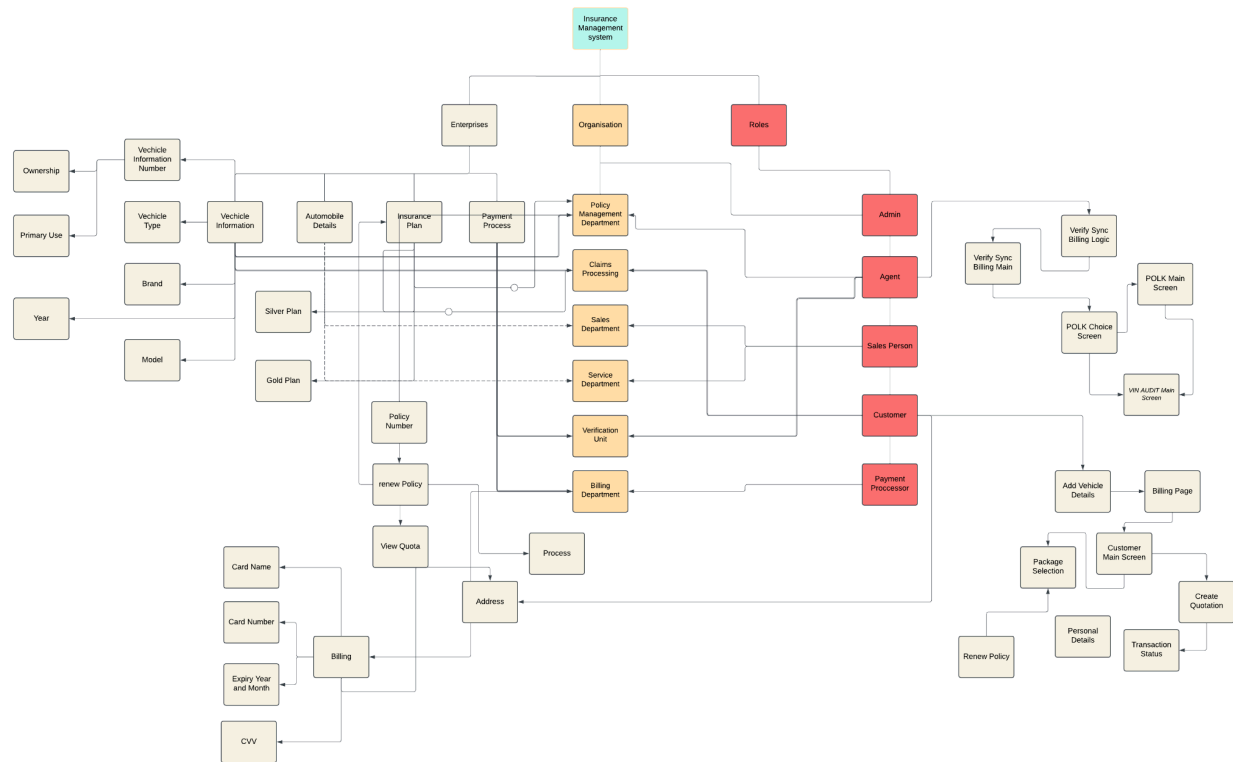
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Ecosystem Hierarchy

1. Network:

- A centralized network connecting multiple enterprises and departments within the insurance domain.

2. Enterprises:

1. **Policy Management Enterprise**:

- ○ **Focus**: Handles policy creation, updates, and renewals.
- ○ **Roles**: Policy Admin, VIN Database Manager.
2. **Claims Processing Enterprise**:
   - ○ **Focus**: Manages claim submissions, verifications, and settlements.
   - ○ **Roles**: Claims Admin.
3. **Customer Support Enterprise**:
   - ○ **Focus**: Manages customer inquiries, account updates, and feedback.
   - ○ **Roles**: Sales Person, Agent,IT Support, Customer.
4. **Payment Processing Enterprise**:
   - ○ **Focus**: Processes premium payments, refunds, and settlements.
   - ○ **Roles**: Payment Processor.

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3. Organizations:

1. **Policy Administration Department**: Oversees all policy-related operations.
2. **Claims Adjustment Unit**: Handles claim verification and status management.
3. **Support Team**: Addresses customer issues and inquiries.
4. **Billing and Payments Department**: Manages premium payments and refunds.
5. **Agent Operations Team**: Supports insurance agents in policy sales and customer onboarding.
6. **Sales and Business Development**: Handles customer acquisition.

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4. Roles:

- ● **Admin**, **Agent**, **Sales Person**, **Customer**, **Claims Processor**, **Policy Admin**, **Payment Processor**, **VIN Database Manager**, **IT Specialist**.

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5. Use Cases:

1. Role Management by Admin

- ● **Actors**: Admin
- ● **Description**:
  - ○ Admin creates roles (Agent, Sales Person, Policy Admin, IT Support, etc.).
  - ○ Admin assigns appropriate permissions to these roles.

2. Customer Account Creation by Agent

- ● **Actors**: Agent, Customer
- ● **Description**:
  - ○ Agent creates an account for the customer and stores the details in the MySQL database.
  - ○ Sends a welcome email to the customer using Oracle Mail with credentials authenticated by the Authenticator JAR file.

3. Viewing All Customers by Agent

- **Actors**: Agent
- **Description**:
    - Agent views the list of all customers in the system.

4. Policy Update by Policy Admin

- **Actors**: Policy Admin
- **Description**:
    - Policy Admin updates or edits insurance packages (e.g., Silver, Gold).

5. Customer Policy Enrollment

- **Actors**: Customer
- **Description**:
    - Customer selects a policy package and enrolls in the system.

6. VIN Verification

- **Actors**: VIN Database Manager
- **Description**:
    - VIN Database Manager verifies the validity of the Vehicle Identification Number (VIN).

7. Payment Validation

- **Actors**: Payment Processor, Customer
- **Description**:
    - Payment Processor validates the payment details and approves or rejects the payment.

8. Sending Policy Updates by Sales Person

- **Actors**: Sales Person, Customer
- **Description**:
    - Sales Person sends emails or calls customers to inform them about policies and updates.

9. Resolving Technical Issues by IT Support

- **Actors**: IT Support
- **Description**:
    - IT Support resolves technical issues faced by other roles (e.g., login issues, system errors).