Project Insurance Management System

Overview

The **Insurance Management System** is a comprehensive database solution for managing customer, policy, vehicle, agent, claim, and sales data for an insurance company. This project implements a relational database schema and a series of SQL queries for handling customer demographics, policy management, vehicle data, agent information, claims, and insurance policy sales.

The system is designed to track:

- Customer details and demographics (age, gender, etc.).
- Various insurance policies (car, bike, truck) with details such as premiums, policy numbers, and duration.
- Vehicles associated with each policy (type, make, model, etc.).
- Claims associated with the policies, including their status and claim amounts.
- Insurance agents responsible for policy sales, with details about their performance.
- Sales data, including the amount of insurance policies sold and commission details.

This project also includes various scenarios for analysing customer demographics, top-selling policies, claim amounts, vehicle sales, and agent performance.

Tables Created

The following key tables are created in the database:

1. **Project_Insurance_Customer** – Stores customer information such as names, email, age, and gender.
2. **Project_Insurance_Policy** – Contains insurance policy details such as policy type, premium amounts, start and end dates, and customer references.
3. **Project_Insurance_Vehicle** – Stores vehicle details related to policies, including the type of vehicle (car, bike, truck).
4. **Project_Insurance_Claim** – Tracks insurance claims, including claim amount, type, status, and the date of the claim.
5. **Project_Insurance_Agent** – Stores details of insurance agents, including their commission rates and contact information.
6. **Project_Insurance_Policy_Sales** – Keeps track of the insurance policies sold by each agent, along with the sales amount.

Key Features

- **Data Integrity & Constraints:**
    - Constraints for ensuring data validity (e.g., gender check, email uniqueness, policy type check).
    - Foreign key relationships linking customers, policies, vehicles, agents, and claims.
- **Customer Segmentation:** Customers are segmented by demographics (age groups and gender) for targeted marketing.
- **Top Selling Insurance Products:** Queries for identifying the most popular insurance policy types, agents, and sales volume.
- **Claim Analysis:** Analysis of claims, including claim amounts, status, and types (e.g., accident, theft, natural disaster).
- **Policy Expiration Analysis:** Identifying policies nearing expiration to enhance customer retention efforts.
- **Sales Performance Tracking:** Analyses insurance agent performance based on policies sold and total sales amounts.

Technologies Used

- **SQL**: Structured Query Language (SQL) for creating tables, inserting data, and performing queries on the relational database.
- **Oracle Database**: The project uses Oracle SQL syntax and functionality.

Setup Instructions

To use this project:

1. **Clone the Repository**:

   git clone https://github.com/your-username/insurance-management-system.git

2. **Run the SQL Scripts**: Execute the SQL scripts in an Oracle database environment to set up the tables and insert data.
3. **Perform Queries**: You can run the example queries provided in the script to analyse data related to policies, customers, agents, and claims.