Use Case: Retail Sales Analytics for GIBBS SOLUTIONS

Company Background

GIBBS SOLUTIONS is a fictional online retail company that specializes in selling computers, mobile devices, and accessories. With hundreds of products and daily transactions, the company needs a centralized system to store, manage, and analyze its sales and inventory data.

Problem Statement

Before the database was implemented, GIBBS SOLUTIONS struggled with: - Scattered data across spreadsheets - No visibility into real-time stock levels - Difficulty tracking top-selling products or employee performance - No automated way to identify high-value customers

The Solution

I designed and implemented a **cloud-based PostgreSQL database** to solve these issues. The database structure includes well-normalized tables for customers, employees, products, suppliers, sales, and sale items.

The solution allows: - Tracking every sale with accurate timestamps - Recording which employee closed which sale - Managing stock levels in real time - Linking each product to a supplier for restocking analysis

Key Reports Delivered

- **Top 5 Best-Selling Products**
  For marketing and stock prioritization.
- **Monthly Sales Revenue**
  For executive financial summaries.
- **Low Stock Alerts**
  So inventory managers know what to reorder.
- **Top Customers by Lifetime Value**
  To prioritize customer service and loyalty programs.
- **Employee Sales Performance**
  For management performance reviews and incentives.

Results (Simulated)

With the sample data: - Sales increased visibility by 90% with query-based reporting - Low stock alerts could prevent 30% of lost sales due to out-of-stock items - Management could reward top employees based on data-driven performance

Skills Demonstrated

- Relational Database Design (ERD)
- PostgreSQL SQL DDL & DML
- Data Analysis with SQL Queries
- Linux-based DBMS Deployment
- Git & GitHub for version control

Real-World Readiness

This project simulates what I would do in a real entry-level Database Administrator role—turning business needs into data-driven solutions.