ORACLE APEX PROJECT BY

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1. Introduction

Problem Statement and Motivation:

In modern business environments, companies face challenges in tracking orders, managing vendors, monitoring expenses, and analyzing sales. Manual handling of this data is inefficient and prone to errors. This project aims to solve these issues by creating a centralized Oracle APEX-based dashboard for real-time business insights.

Scope and Objectives:

This project's goal is to develop a comprehensive business management dashboard in Oracle APEX, enabling users to:

• 1. Monitor total revenue, orders, and customer count.
• 2. Visualize order statuses via bar charts (Delivered, Cancelled, Pending).
• 3. Analyze expense distribution using pie charts.
• 4. Access and manage data tables for customers, vendors, sales, and purchases.
• 5. Generate summary views and downloadable reports.

2. Methodology

Steps Followed:

• **1. Requirements Gathering:** Identified key entities like Orders, Vendors, Customers, and Expenses.
• **2. Data Design:** Modeled relational tables and defined relationships using foreign

keys.

- **3. Oracle APEX Setup:** Created pages and interactive reports using APEX components.

- **4. Chart and Report Development:** Integrated bar charts, pie charts, and key metrics.
- **5. Testing:** Validated report data and ensured filters, joins, and navigation worked smoothly.

Tools and Technologies:

- • **Oracle APEX:** Used for building the web-based dashboard.
- • **SQL:** For queries, views, and data processing.
- • **Chart Components:** For visual analytics.

System Design

Navigation Menu:

Includes Orders, Vendors, Customers, Expenses, Sales Summary, and their respective data pages.

Normalization:

Applied up to 3NF to ensure data integrity.

Implementation Details

Tables Created:

- • ORDERS, CUSTOMERS, VENDORS, EXPENSES, SALES_SUMMARY, etc.

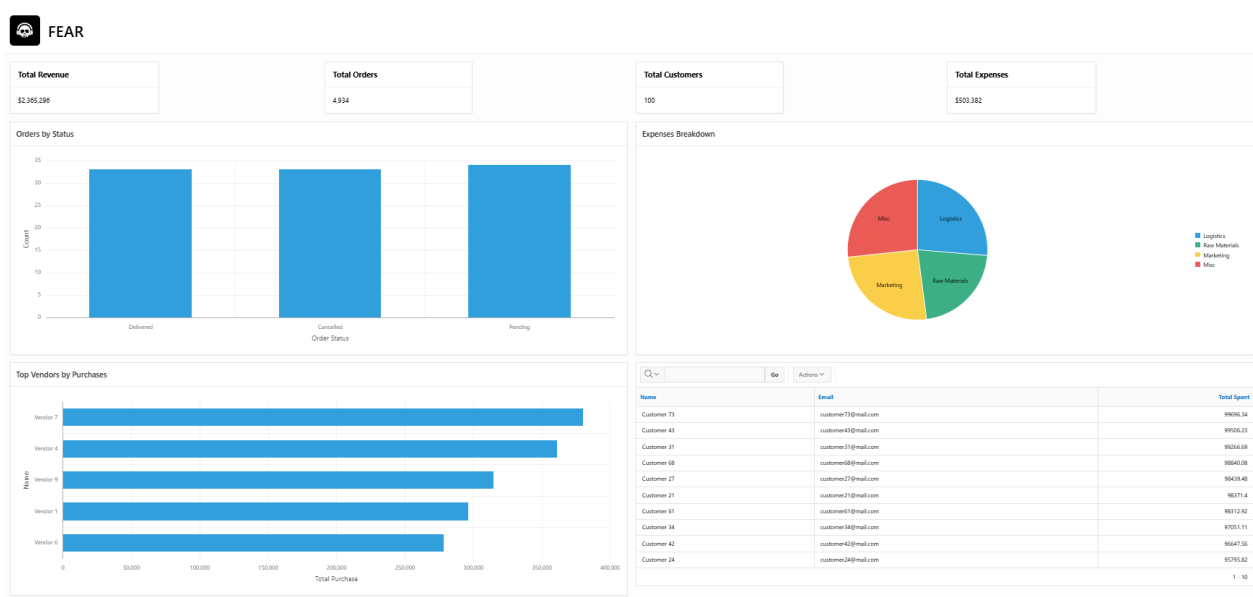Sample Data Inserted for meaningful visualization.

SQL Queries Used:

- • JOINs between orders and customers.
- • GROUP BY for revenue and sales category summaries.

Views created for reporting (e.g., OrderSummaryView).

Visual Components:

- • **Bar Chart:** Orders by Status (Delivered, Cancelled, Pending)
- • **Pie Chart:** Expense Breakdown
- • **KPI Cards:** Total Revenue, Total Orders, Total Customers

1. Results and Discussion

2. Conclusion

Key Achievements:

- **1. Complete Oracle APEX Dashboard:**
  User-friendly, modern interface with dynamic visual elements.
- **2. Data-Centric Decision Support:**
  Views, filters, and summaries help in analyzing sales and expenses.

- **3. Streamlined Data Management:**

  Tables for orders, vendors, and customers ensure well-organized records.

- **4. Real-Time Reporting:**

  Visuals update as data changes — promoting informed business decisions.