Final Task: HR Analytics Dashboard Development

Task Overview:

This project focuses on building an HR analytics dashboard in Power BI, integrating SQL data on employee performance, satisfaction, and demographics. The dashboard will provide HR teams with actionable insights for improving organizational performance and decision-making.

Objective:

Develop an interactive Power BI dashboard using SQL-based HR data to provide insights into employee performance, satisfaction, and demographics, enabling data-driven decision-making for HR teams.

Task Breakdown:

Step 1: Data Preparation

- **Import & Normalize Data**: Import the HR dataset into SQL, normalize it by creating dimension tables (employee, education, satisfaction, rating) and a fact table (performance ratings).
- **Data Transformation**: Clean the data using SQL queries, handling missing values and ensuring consistency across the tables.

Step 2: Power BI Integration

- **Data Import**: Import the cleaned SQL data into Power BI.
- **Relationships**: Build relationships between the dimension tables and the fact table (e.g., employee ID, department, satisfaction).al

Step 3: Dashboard Development

Create a **4-page Power BI Dashboard**:

Power BI Task: HR Analytics Dashboard Development

Objective:

Develop a Power BI dashboard to analyze employee performance, satisfaction, demographics, and attrition trends. This includes interactive visuals and KPIs for actionable insights to support HR decision-making.

Page 1: Overview

Title: Employee Overview
 Subtitle: Summary of Active Employees and Hiring Trends

1. **Visuals:**

   - **Bar Chart:** Active Employees by Education Level and Gender.
   - **Clustered Column Chart:** Employee Hiring Trends over time.
   - **Table:** Active Employees by Department and Job Role.
   - **KPI Cards:**
     - Total Employees.
     - Active Employees.
     - Inactive Employees.
     - Attrition Rate.

2. **Interactive Features:**

   - Add slicers for filtering data by Department, Gender, and Job Role.
   - Add a navigation button to switch between pages.

Page 2: Performance

Title: Employee Performance Metrics
 Subtitle: Review Job Satisfaction and Work-Life Balance Trends

1. **Visuals:**

   - **KPI Cards:**
     - Hire Date.
     - Last Review Date.
     - Next Review Date (calculated field).
   - **Gauge Chart:** Job Satisfaction Score.
   - **Gauge Chart:** Work-Life Balance Score.
   - **Slicer:** Filter by Full Name.
   - **Line Charts:**
     - Job Satisfaction by Year.
     - Relationship Satisfaction by Year.
     - Work-Life Balance by Year.
     - Self-Rating by Year.
     - Environment Satisfaction by Year.
     - Manager Rating by Year.

2. **Interactive Features:**

- ○ Add slicers for filtering data by Employee, Department, and Date Range.
- ○ Navigation button for page switching.

Page 3: Demographics

Title: Employee Demographics
Subtitle: Understand Employee Diversity and Performance Trends

1. **Visuals:**

   - ○ **Column-Line Chart:** Total Employees and Average Salary by Ethnicity.
   - ○ **Line Chart:** Employee Performance Trends Over Time.
   - ○ **Bar Chart:** Age Distribution of Employees.
   - ○ **Bar Chart:** Active Employees by Marital Status.
   - ○ **Treemap:** Job Satisfaction by Job Role.
   - ○ **KPI Cards:**
     - ■ Youngest Age.
     - ■ Oldest Age.
     - ■ Average Age.
     - ■ Active Employees.

2. **Interactive Features:**

   - ○ Include slicers for filtering by Gender, Marital Status, and Ethnicity.
   - ○ Add navigation buttons.

Page 4: Insights & Reporting

Title: Attrition Insights
Subtitle: Detailed Reporting on Attrition and Satisfaction Trends

1. **Visuals:**

   - ○ **Line Chart:** Attrition by Hire Date.
   - ○ **Bar Chart:** Attrition Employees by Education Level and Gender.
   - ○ **Bar Chart:** Job Satisfaction by Age Group and Gender.
   - ○ **Clustered Bar Chart:** Attrition Employees by Department and Gender.
   - ○ **KPI Cards:**
     - ■ Total Attrition.
     - ■ Highest Attrition Department.
     - ■ Lowest Satisfaction Department.

2. **Interactive Features:**

- Slicers for filtering by Department, Education Level, and Gender.
- Add navigation buttons for smooth page transitions.

Additional Features:

1. **Navigation Buttons:**

   - Place interactive buttons on each page for seamless navigation between pages.
2. **Dynamic Titles and Filters:**

   - Set dynamic visuals that update based on slicer selections.

Step 6: Final Review & Presentation

- **Visual Design**: Ensure clarity and consistency across visuals.
- **Sharing**: Save and share the Power BI report (.pbix) and a detailed summary report.

The End