HR Analytics Dashboard – Project Plan & Requirements

1. Project Objective

To design and build a comprehensive HR Analytics Dashboard using Power BI, which helps HR managers and executives monitor employee performance, retention trends, department-level KPIs, and engagement levels using interactive visuals, DAX measures, Power Query transformation, and publishing to the Power BI Online Service.

2. Dataset Details

Table Name: Employee_Performance

Columns:

- Employment_id
- Department
- Age
- Job Title
- Hire_Date
- Years_at_company
- Education_level
- Performance_Score
- Monthly_Salary
- Work_Hours_per_Week
- Project_Handled
- Overtime_Hours
- Sick_Days
- Remote_Work_Frequency
- Team_Size
- Training_Hours
- Promotions
- Employee_Satisfaction_Score
- Resigned (Yes/No)

3. Power Query Editor – Data Preparation Steps

1. Rename Columns to follow proper casing (e.g., Employment ID, Work Hours per Week).
2. Change Data Types:
   - Dates: Hire_Date
   - Numeric: Monthly_Salary, Age, Years_at_company, etc.
   - Text: Job Title, Department, etc.
3. Remove Duplicates on Employment_id.
4. Create Calculated Columns:
   - Tenure Category: Based on Years_at_company (e.g., 0-2 = New, 3-5 = Mid, 6+ = Veteran)
   - Overtime Category: IF Overtime_Hours > 10 THEN "High", ELSE "Low"
5. Clean Null Values: Replace or remove rows depending on importance.
6. Create Date Table: Mark as Date table, join with Hire_Date.

4. Data Model – Relationships

- Connect Date Table to Hire_Date (One-to-Many)
- Create simple star schema, ensure no circular dependencies
- Optionally: Create Lookup Tables for Department, Education_level, etc.

5. DAX Measures (Key KPIs)

1. Employee Count
2. Resignation Rate
3. Avg. Performance Score
4. Avg. Monthly Salary
5. Avg. Training Hours
6. Avg. Employee Satisfaction
7. Overtime Utilization
8. Sick Days per Employee
9. Remote Work Adoption Rate
10. Promotion Rate
11. Avg. Tenure (Years at Company)

6. Report Pages and Visuals

Page 1: Executive Summary
- Card: Total Employees
- Card: Resignation Rate
- Card: Avg. Performance Score
- Card: Avg. Monthly Salary
- Line Chart: Resignation Rate over Time
- Clustered Column Chart: Department-wise Satisfaction

Page 2: Department Insights
- Bar Chart: Employees per Department
- Heatmap: Avg. Salary vs Performance per Department
- Pie Chart: Education Level Distribution
- KPI: Avg. Tenure by Department

Page 3: Employee Engagement
- Gauge: Employee Satisfaction
- Donut Chart: Remote Work Frequency
- Clustered Column Chart: Avg. Overtime by Job Title
- Scatter Plot: Training Hours vs Performance Score

Page 4: Retention & Promotions
- Matrix: Promotions by Department & Education Level
- Bar Chart: Sick Days vs Resigned Employees
- Line Chart: Training Trend over Years
- Card: Promotion Rate

Page 5: Filters and Slicers
- Slicers: Department, Job Title, Education Level, Remote Work Frequency, Tenure Category, Resigned (Yes/No)

7. Power BI Features to Apply

Power BI Desktop:
- DAX for KPIs
- Custom tooltips
- Drillthrough pages
- Bookmarks for navigation
- Conditional formatting
- Sync slicers

Power Query Editor:
- Data cleaning, calculated columns
- Merging lookup tables (if applicable)
- Categorizing and grouping

Design:
- Use consistent color themes
- Add icons for Job Titles, Department
- Use grid layout
- Add company logo, titles

8. Publish and Share (Power BI Online Service)
1. Create Workspace: HR Analytics Workspace
2. Publish the report from Power BI Desktop
3. Set up Scheduled Refresh
4. Create App and publish for stakeholders
5. Assign Roles & Permissions
   - HR Team: View access
   - Managers: Access to department-specific view (RLS if needed)
6. Mobile View Optimization

9. Optional Advanced Features
- Row-Level Security (RLS) for department managers
- Paginated Report: Print-ready HR summary
- Power Automate: Send alert if resignation rate exceeds threshold
- Q&A visual: Enable natural language questions

10. Versioning and Maintenance
- Document every update in Power BI Online Service
- Keep a backup of PBIX file
- Log last refresh date and publish history
- Monthly check for data quality issues