**TASKS**

1. Import all tables into Power BI: `Employee\_list`, `Disability`, `Department`, `Position`, `Contract`, `Contract\_Appendix`, `Order\_List`, `Order\_Name\_List`, `Employee\_Attendance`.

2. Handle missing values and dirty data:

- Use "Replace values" to clean up inconsistent formats

- Replace or remove rows with null or outlier values (e.g., salary outliers in the `Contract\_Appendix` table).

3. Fix data types:

- Detect data types in columns (dates, numbers, etc.)

4. Split and format columns:

- Split the `Employee Name` in `Employee\_list` into "First Name" and "Last Name"

- Format the "Hire Date" and "Termination Date" in `Contract` to ensure a consistent format across all records.

5. Create new columns:

- Custom column: Calculate a “Tenure” column to show the employee’s tenure in years

- Use Conditional columns: Create a column that categorizes employees based on salary (e.g., Low: under $40,000, Medium: $40,000-$80,000, High: $80,000+).

6. Establish relationships between the tables:

- Ensure relationships between `Employee\_list` and `Contract`, `Contract\_Appendix`, `Disability`, and `Employee\_Attendance`.

- Define relationships between `Order\_List`, `Order\_Name\_List`, and `Contract\_Appendix`.

- Use “Manage Relationships” to visually check for any issues.

7. Group by and Summarize:

- In `Employee\_Attendance`, group by Employee ID and calculate total hours worked by each employee

- Remove duplicate rows in tables where necessary (e.g., duplicate contract entries).

8. Append or Merge queries:

- Combine several tables using the Append Queries option. For example, combine all deactivated employees from `Employee\_list` and `Contract` for further analysis.

9. Visualize employee statistics:

- Create bar charts showing the distribution of employees by department and position.

- Visualize employee tenure by department using a column chart.

- Show the salary distribution by department and position.

10. Attendance tracking:

- Create a line chart showing employee attendance over time   
 - Visually show employees who’s late for work and how many minutes they are late

11.Disability and veteran stats:

- Create a stacked bar chart showing the percentage of disabled employees and veterans across different departments.

12. Time Intelligence Visualizations:

- Show a comparison of total salary expenses across Previous Year and SamePeriodLastYear using a line chart.

- Show a Total YTD salary expense using a line chart.

13. Calculated Columns and Measures:

- Create a measure for Total Salary per department and position.

- Use DAX functions like `SUMX` and `CALCULATE` to calculate total vacation days taken by employees, using `Contract\_Appendix` and `Order\_List`.

14. Date-based Measures:

- Create measures for Total Salary MTD, Total Salary YTD, and Total Salary QTD.

- Use the SAMEPERIODLASTYEAR function to compare last year’s data with the current year.

15. Create virtual tables using DAX for filtering:

- Use the FILTER function inside `SUMX` to calculate total salary for employees with more than 5 years of tenure.

16. Dynamic Calculation:

- Create a dynamic measure that calculates the total number of active employees using `Contract` and `Employee\_list` tables

17. Create an HR Performance Dashboard:

- Include a summary page with key KPIs: Total Employees, Active Employees, Total Salary, Salary Distribution, and Total Working Hours.

18. Employee Details Report:

- Create a detailed report page that shows employee profile information (employee name, position, department, tenure, salary) when selecting an employee from a list.

19. Use drill-through filters to allow users to click on a department and see detailed employee information for that department.

20. Implement slicers to filter data by:

- Department

- Position

- Date range

- Veteran status or Disability status