# **README**

# **Employee Assessment Dashboard — Project Overview**

This dashboard is designed to monitor and evaluate employee performance and compliance with company policies and skill assessments. It captures individual scores across multiple evaluations, analyzes overall performance metrics, and highlights employees who require corrective action or termination based on predefined criteria.

***Content***

### **1.Technical Tools & Skills Used**

* **Microsoft Excel**: Core platform for all analysis and visualization
* **Formulas**: IF, OR, AVERAGE, COUNTIF, logical comparisons
* **Percentage Calculations**: Normalizing test scores for standardized evaluation
* **Conditional Formatting**: Highlighting underperformance automatically
* **Pivot Tables**: Aggregated reporting on employee status
* **Data Validation**: For interactive employee selection
* **Dynamic Charts**: Linked to filters and data for real-time updates
* **Filtering Functionality**: Applied across all columns for drill-down analysis

### **2. Gradebook Structure**

The core of the dashboard is a detailed gradebook, where each employee's performance is recorded across multiple tests. Each test includes:

* Raw scores
* Calculated percentages
* Performance classification (e.g., Passed / Failed)

This section forms the foundation for all subsequent analysis and visualizations.

### **3. Summary Statistics**

Using Excel formulas, I calculated:

* Average, Minimum, and Maximum scores for each test
* Percentage scores to ensure standardized comparison

These metrics provide a quick snapshot of individual and collective performance.

### **4. Dynamic Visualizations**

The dashboard includes multiple charts:

* Individual performance charts by test
* A grand summary chart that visualizes employees falling below the 50% threshold — automatically identifying them as "To Be Fired"

All charts are dynamically linked to the gradebook, ensuring real-time updates with any data changes.

### **5. Employee Status Logic**

I used logical functions (e.g., IF, AVERAGE, COUNTIF) to automate status assignment:

* If an employee scores below 50% in total, they are flagged as “Fired”
* This logic enhances decision-making and reduces manual errors

### **6. Pivot Table Reporting**

A pivot table summarizes key workforce insights:

* Total number of employees
* Count of active vs. fired employees
* Performance distribution across assessments

This enables clear high-level reporting for management.

**7. Interactive Filtering** Filters are applied across all data columns, allowing users to quickly isolate specific employees, tests, or results. All charts and statistics respond instantly to these filters, enabling focused performance analysis.

## **Data Structure and Key Metrics**

The dashboard is built upon a structured gradebook that captures detailed performance metrics across multiple evaluation areas. Below are the key data points included:

### **1. Employee Identification**

* First Name
* Last Name

Each row represents a unique employee, with all subsequent columns reflecting their performance across different assessments.

### **2. Assessment Scores**

Each test measures a distinct area of employee performance, with varying maximum scores:

* Safety Test (out of 10)
* Company Philosophy Test(out of 20)
* Financial Skill Test (out of 100)
* Drug Test (Boolean: 1 = Passed, 0 = Failed)
* Technical Knowledge (out of 50)
* Time Management (out of 30)
* Communication Skills (out of 40)
* Problem Solving (out of 60)
* Leadership Assessment (out of 25)
* Fire Employee (TRUE, FALSE)

**Total Score** is calculated out of **336**, the sum of all applicable assessments.

### **3. Percentage Calculations**

Each test score is normalized to a percentage, enabling consistent evaluation across different test scales. This includes:

* % Safety
* % Company Philosophy
* % Financial Skills
* % Drug Test
* % Technical Knowledge
* % Time Management
* % Communication Skills
* % Problem Solving
* % Leadership Assessment
* %Total Score

These percentages feed into the final logic for employee retention or termination.

### **4. Firing Decision Logic**

An automated column titled “Fired” evaluates each employee's performance using Boolean logic:

* If any of the individual test percentages is below 50%, the employee is marked as "TRUE" (to be fired)
* If all test percentages are 50% or above, the employee is retained (FALSE)

This logic is driven by an IF and OR formula across percentage columns for transparency and automation.

### **5. Summary Statistics**

At the end of the gradebook, I used Excel formulas to compute:

* Minimum score
* Maximum score
* Average score

These are calculated per column to provide quick performance insights at a glance.

### **6. PivotTable Summary – Employee Retention Overview**

The third sheet of the dashboard contains a PivotTable that summarizes employee status based on the "Fired Employee" column.

This PivotTable provides:

* The total number of employees
* The count of employees flagged as "Fired" (TRUE) based on performance criteria
* The count of employees retained (FALSE)

By summarizing these values, the PivotTable offers a quick overview of workforce performance, helping stakeholders understand the proportion of underperforming employees and overall compliance levels.

This PivotTable is dynamically connected to the gradebook, ensuring real-time updates as employee data or firing logic changes.

# **Data Visualizations — Performance Insights at a Glance**

To support data-driven decision-making and highlight individual and overall employee performance, I created multiple dynamic charts and added filter to each column using percentage-based metrics from each test. These visualizations offer instant insights into who is meeting performance expectations and who is falling below the retention threshold.

### **1.Individual Test Performance Charts**

For each assessment, I created a dedicated chart that visually tracks employee performance:

* X-Axis: Employee Names
* Y-Axis: Percentage Score
* Threshold Line: 50% (visual cutoff for retention vs. firing)

#### **Charts include:**

* Safety Test Chart
* Company Philosophy Test Chart
* Financial Knowledge Test Chart
* Drug Test Chart *(Boolean – Passed/Failed)*
* Technical Knowledge Test Chart
* Time Management Chart
* Communication Skills Chart
* Problem Solving Chart
* Leadership Assessment Chart

Each chart clearly highlights which employees fall below the 50% threshold, flagging them for potential termination. The visuals are color-coded for clarity, helping identify patterns in underperformance.

These charts make performance trends immediately visible, enabling targeted interventions or retraining efforts.

### **2.Grand Performance Chart (Comprehensive Overview)**

I also designed a **Grand Chart** that compiles all test performance data for every employee:

* X-Axis: Employee Names
* Y-Axis: Percentage Scores
* Multiple Colored Lines: One for each test, allowing visual comparison across assessments

This chart offers a consolidated view, showing:

* Employees consistently above or below the 50% threshold
* Specific tests where performance dips are common
* Overall performance distribution across the team

This comprehensive chart supports high-level decision-making by identifying both individual weaknesses and systemic training gaps.

**3.Retention VS Termination Summary Pie Chart**

To visually summarize employment status, I added a **Pie Chart** based on the Fire Employee column:

* Red Segment (TRUE): Employees flagged for termination
* Green Segment (FALSE): Employees retained

This chart offers an immediate snapshot of organizational health, based on performance and compliance standards.

It dynamically updates as data changes, ensuring accurate real-time insights.

# **4.Smart Filtering Across All Data Columns and Charts**

The dashboard includes fully integrated column-level filters across all tables, enabling seamless exploration and real-time data interaction.

* Full-Table Filtering: Filters are applied to every column — including employee name, test scores, percentages, and firing status.
* Targeted Insights: You can easily:
  + Select a specific employee to view their entire performance profile.
  + Filter for a specific test to compare scores across employees.
  + Drill down into any individual metric or condition (e.g., who failed the Drug Test, or who scored below 50% in Leadership).
* Chart Interactivity: All charts are dynamically linked to the filtered data. As you apply a filter, every corresponding chart automatically updates — showing only the relevant results, scores, percentages, and trends.

This creates a fully interactive reporting environment, where visualizations and data respond instantly to user selections, supporting detailed and on-the-fly performance analysis.

## **Dashboard Purpose and Application**

This Employee Assessment Dashboard is designed to:

1. Track and evaluate individual employee performance across multiple skill and compliance assessments
2. Identify areas where additional training or support is needed
3. Monitor adherence to company standards and policies
4. Make objective, data-driven decisions regarding employee retention or termination

## **How to Use the Dashboard**

* Update Employee Data: Input new test scores and evaluation results into the gradebook as assessments are completed
* View Performance Trends: Use the summary statistics section to monitor average, minimum, and maximum scores for quick insights
* Interpret Visualizations: Analyze the test-specific and overall performance charts to identify underperforming employees and top achievers
* Review Firing Status: Use the "Fired Employee" column to determine employee status based on automatic logic tied to performance thresholds

## **Project Interpretation**

This project represents a complete, data-driven solution for evaluating employee performance and making objective HR decisions using Microsoft Excel. The dashboard integrates structured data management, performance scoring, statistical analysis, dynamic visualization, data filtering and automated decision logic into a single, user-friendly tool.

By tracking multiple test scores and calculating standardized percentages, the dashboard ensures consistent assessment across diverse evaluation types from safety and communication skills to technical knowledge and compliance. The use of Boolean logic to identify under-performing employees (those scoring below 50% in any area) supports fair and transparent termination decisions.

With comprehensive visualizations including test-specific charts, a grand performance overview, and a pie chart summarizing firing outcomes the tool allows for instant insights into employee strengths, weaknesses, and overall company readiness.

P.S: Building this dashboard has sharpened my ability to translate raw performance data into clear, actionable insights. It reinforces the importance of automation, interactivity, and visual clarity in workforce analytics — skills essential for any data-driven decision-making role. This project not only strengthened my Excel capabilities but also deepened my understanding of practical HR analytics.

***By maintaining and regularly updating this workbook, you can ensure that employee performance is consistently monitored and managed, promoting a productive and compliant workforce.***