

Assignment

DA 100

Assignment : Basic Excel

Business Requirement

HR Data Analysis Question

Objective:

The management of HacMarine seeks to derive meaningful insights from their employee data to support informed decision-making. They have provided two sets of data: one containing “Staff Information” and the other containing “Staff Salary” records for each employee.

The goal is to analyze the employee dataset to uncover trends and insights related to employee demographics, hiring patterns, and payment status.

Data Profiling and Understanding the Data:

- Explore the provided data to develop a clear understanding of all variables (columns) within the dataset.
- Conduct a data profiling exercise to identify potential issues or inconsistencies in the data.

Data Cleaning and Transformation:

- Prepare and clean the data by transforming it as needed. Derive relevant metrics and dimensions that will assist in answering the specific questions outlined.

Data Reporting:

- Present the findings and insights derived from the analysis in a clear, professional report.

Question 1: Employee Age and Years of Service Analysis

The management is keen to understand the relationship between employee age and years of service in order to make informed decisions regarding downsizing based on tenure.

Tasks:

1. **Calculate the Age of Employees:**
 - Calculate the age of each employee using their date of birth and the current year.
 - Group employees into age ranges (**e.g., 20-30- Young, 30-40- Middle Age, Above 40,- Old Age etc.**).
2. **Calculate Years of Employment:**
 - Calculate the number of years of service for each employee based on their hire date.
3. **Follow-up Analysis:**
 - Identify the age group with the highest number of employees.
 - Based on a tenure of over 15 years, recommend potential layoffs (Hint: Create a new column called “Status Recommendation” and use logical statements to populate it).
 - Derive the full name of each staff member using an appropriate text function.

- Present the insights and recommendations clearly to management.

Question 2: Employee Distribution by Country and Payment Status Analysis

The management seeks insights into the distribution of employees across different countries and their payment status.

(Hint: Transfer staff salaries to the "Staff Info" sheet using the VLOOKUP function)

Tasks:

1. Distribution by Country:

- Group employees by country and count the number of employees in each country (Hint: Use a Pivot table to group employees by country and count them).

2. Payment Status:

- Create a new column titled "Pay Status" based on the existing Payment Status field (0 = To Pay, 1 = Not to Pay). Use a conditional function to achieve this.

3. Tax Calculation:

- Introduce a 20% tax on male employees residing in the USA (Hint: Use the IF(AND) function for this).

4. Staff Payment Status Distribution:

- Display the distribution of employees categorized as "To Pay" and "Not To Pay" using a Pivot table.
- Calculate the number of employees not yet paid by country using a Pivot table.

5. Salary and Payment Analysis:

- Show the total amount to be paid, grouped by age category, using a Pivot table.

6. Follow-up Analysis:

- Based on the distribution of employees by country and payment status, provide recommendations regarding regional staffing needs.
- Identify any countries with significant disparities in staffing compared to others and suggest potential strategies.

Deliverables:

- **Data Cleaning and Transformation Documentation:** A detailed explanation of how the data was cleaned and transformed.
- **Insightful Analysis:** Clear and concise answers to the tasks above, presented with appropriate report/ charts (e.g., bar charts, pie charts, pivot tables).
- **Recommendations:** Professional recommendations based on the analysis, presented to the management for informed decision-making.