Excel Complete Project Outline

Section 1: Insurance Dataset Analysis

[DATASET]

1.1 Initial Analysis

- **Task:** Calculate the average premium for the customers.
- **Steps:**
    1. Open the "Insurance.xlsx" file.
    2. Calculate the average of the `Premium` column.
    3. Highlight customers who are paying more than the average premium using conditional formatting.

1.2 Additional Analysis & Automation

- **Task:** Record a macro to perform the following:
    - Create a new column `Total Insured`, which contains the total number of people covered under each policy.
    - Calculate the premium paid per head by dividing the `Expense` column by the `Total Insured` column.

1.3 Data Validation

- **Task:** Implement data validation on the following columns:
    - Ensure that the `Age` column contains values between 18 and 80.
    - Ensure that the `Gender` column contains only "Male," "Female," or "Other."
    - Ensure that the `BMI` and `Expenses` columns contain positive values.
    - Ensure that the `Smoker` column contains either "Yes" or "No."

1.4 Dashboard Creation

- **Task:** Create a dashboard containing the following visualizations:
    1. **Line Chart:** Depicting the relationship between the average premium per head and age.
    2. **Bar Chart:** Showing the fraction of male and female customers who smoke.
    3. **Pie Chart:** Depicting the count of people who smoke in each region.

Section 2: Work Orders Dataset Analysis

https://docs.google.com/spreadsheets/d/1N4zHsmIQ3BGR4SZgnZIH2DLbPKvt1_0RaXG6po41Slk/edit#gid=0

2.1 Initial Analysis

- **Task:** Analyze the "Work_Orders.xlsx" file.
    1. Insert a column to calculate the hourly cost for the number of technicians used.
    2. Calculate the total cost of service by adding the labor cost (calculated based on hourly cost and hours worked) and the `PartsCost`.

2.2 Technician Data Analysis

- **Task:** Create a table showing the valid number of technicians allowed for each service type.
    - Use the "AdminData" sheet for additional relevant data.

2.3 Named Ranges Creation

- **Task:** Create named ranges for each service type based on the table created in the previous step. Ensure each range contains the respective technician counts.

2.4 Data Validation

- **Task:** Implement data validation on the "Techs" column:
    - Ensure that the value in each row matches the valid number of technicians allowed, as defined in the previous table.

2.5 Pivot Table & Revenue Analysis

- **Task:** Create a pivot table that summarizes:
    - Total revenue across all service categories.
    - The count of services performed, categorized by technician counts.

Final Section: Project Compilation

- **Task:** Compile all the above tasks into one cohesive Excel workbook.
    - Create separate worksheets for each analysis section (e.g., Insurance Analysis, Work Orders Analysis).
    - Integrate all dashboards and pivot tables into a summary sheet that provides a high-level overview of both datasets.
    - Ensure that all macros and data validations are functioning correctly.