CSE 1300 – ASSIGNMENT 2

Fall 2025

Data Import, Organization, and Visualization in Microsoft Excel

Overview

In this assignment, you will practice importing a CSV file into Microsoft Excel, cleaning and organizing the data, and creating visualizations for better analysis. You will also apply basic formulas and sorting techniques to analyze hospital trends. Submit the final .xls**x** file along with screenshots of your visualizations in a PDF or Word document.

Instructions

Part 1: Import the CSV File into Microsoft Excel

1. Download the provided CSV file: hospital_data.csv
2. Open Microsoft Excel and navigate to the Data tab.
3. Click "Get Data" → "From Text/CSV" and locate the `hospital_data.csv` file.
4. Ensure the delimiter is set correctly to Comma (,).
5. Click Load to import the data.

Part 2: Data Cleaning & Organization

1. Format the "Treatment Cost" Column:
   - Select the column.
   - Change the format to Currency with two decimal places.
2. Add a New Column "Net Payment":
   - Formula: `Net Payment = Treatment Cost – Insurance Covered.`
   - Apply this formula to all rows.

3. Apply Sorting:

    o Sort the data by Department in A–Z order.
    o Then sort by Treatment Cost in Descending order.
  4. Apply Formatting:
    o Bold the header row.
    o Adjust column widths for readability.
    o Apply cell borders to the table for neatness.

Part 3: Data Visualization

You will create the following three charts:

  1. Bar Chart (Total Costs by Department):
    o Select "Department" and "Treatment Cost" columns.
    o Insert a Bar Chart.
    o Add a title: *"Total Costs by Department"*.
    o Label axes and apply color formatting for clarity.
  2. Line Graph (Monthly Visits Trend):
    o Select "Visit Date" and "Patient ID" columns.
    o Group the data by Month (use PivotTable or manual grouping).
    o Insert a Line Graph showing the number of visits per month.
    o Add a title: *"Monthly Visits Trend"*.
    o Format the X-axis (Months) and Y-axis (Number of Visits).
  3. Doughnut Chart (Payment Status Distribution):
    o Filter data by the "Payment Status" column (e.g., Paid, Pending, Overdue).
    o Insert a Doughnut Chart.
    o Add a title: *"Payment Status Distribution"*.
    o Show data labels and adjust colors for readability.

Part 4: Enhancing Visualizations

- Use consistent colors across all charts.
- Add axis titles, data labels, and legends.
- Adjust layouts to make the charts visually appealing.

Submission Guidelines

1. Save the updated Excel file as hospital_data_updated.xlsx.
2. Take screenshots of your three charts and insert them into a Word document. Save the document as Assignment2_Charts.pdf.
3. Submit both files:
   - `hospital_data_updated.xlsx`
   - `Assignment2_Charts.pdf`
4. Submit your files on the learning platform by the due date.
5. Late submissions will not be accepted.