

# CSE 1300

## ASSIGNMENT 2

### Data Import, Organization, and Visualization in Microsoft Excel

The purpose of this assignment is to import a CSV file into Microsoft Excel, clean and organize the data, and generate visualizations to enhance data analysis. You will modify column names, adjust data formatting, and create charts, then submit the final .xlsx file along with screenshots of your visualizations in a PDF document.

#### Instructions:

Follow the steps below carefully to complete the assignment.

#### Part 1: Import the CSV File into Microsoft Excel

1. Download the provided CSV file (census2000\_.csv).
2. Open Microsoft Excel and navigate to the Data tab.
3. Click "Get Data" → "From Text/CSV" and browse to locate the census2000\_.csv file.
4. Click "Import" and review the data preview.
5. Ensure the "Comma" delimiter is selected to properly separate columns.
6. Click "Load" to insert the data into an Excel worksheet.

#### Part 2: Data Organization & Cleaning

After importing the data, make the following modifications:

1. **Remove Decimals in the "Age" Column**
  - Select the entire Age column.
  - Navigate to the Number Format options on the Home tab.
  - Select "Number" and set decimal places to 0.
2. **Rename the "People" Column to "Population"**
  - Click on the column header "People".
  - Type "Population" and press Enter.
3. **Adjust Column Widths and Formatting**
  - Ensure all columns are properly visible by adjusting their widths.
  - Apply bold formatting to the headers to improve readability.

## Part 3: Data Visualization

You will create three types of charts to visualize the data:

### 1. Bar Chart (Comparing Population Across Years)

- Select the "Year" and "Population" columns.
- Go to the Insert tab → Click "Bar Chart" → Select Clustered Bar Chart.
- Customize:
  - Add a title (e.g., "Population Distribution Over Years").
  - Label the X-axis (Years) and Y-axis (Population).
  - Change colors or apply formatting to enhance readability.

### 2. Line Graph (Age-wise Population Trends)

- Select "Age" and "Population" columns.
- Go to the Insert tab → Click "Line Graph".
- Customize:
  - Add a title (e.g., "Population Trends by Age").
  - Format the X-axis (Age) and Y-axis (Population) for better readability.
  - Change line style and color.

### 3. Pie Chart (Population Distribution for a Specific Year)

- Filter the dataset for a single year (e.g., 2000).
- Select "Age" and "Population" for that year.
- Click Insert → Select "Pie Chart".
- Customize:
  - Add a title (e.g., "Age-wise Population Distribution (Year 2000)").
  - Show data labels to display population percentages.
  - Adjust colors to improve visualization.

## Part 4: Enhancing Charts

- Apply consistent colors to improve readability.
- Add axis titles, data labels, and legends.
- Adjust chart layouts to make them visually appealing.

## Submission Guidelines

1. Save the updated Excel file with all changes as census2000\_updated.xlsx.
2. Take screenshots of the three charts (Bar Chart, Line Graph, and Pie Chart).
3. Insert the screenshots into a Word document and save it as a PDF.
4. Submit the following files:
  - census2000\_updated.xlsx
  - A PDF file containing screenshots of the charts

## Grading Criteria (100 Points)

Task	Points
Successfully imported CSV file	10
Removed decimal from "Age" column	10
Renamed "People" column to "Population"	10
Created and customized Bar Chart	20
Created and customized Line Graph	20
Created and customized Pie Chart	20
Submitted correct files (.xlsx and PDF)	10

## Deadline & Submission

- Submit your .xlsx file and PDF document on the learning platform by the due date.
- Late submissions will not be accepted.

## Additional Notes

- If you encounter any issues, reach out to your instructor.
- Make sure data formatting and charts are clear and readable.