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Class: INFO 250-001

Assignment 3

	Scatter plot	Bar Chart	Line Chart	Voronoi Tessellation	Pie Chart
System support	- RAW: Scatter plot - Tableau: Simple and matrix scatter plots - ggplot: Simple and grouped scatterplots, scatter plots with ellipses - Google Charts: Basic scatter plots, top-X scatter plots, dual-Y scatter plots, and animated scatter plots	- RAW: Bar chart - Tableau: Horizontal bars, Stacked bars, and Side-by-side bars - ggplot: Labeled bars, grouped bars, and basic bars - Google Charts: coloring bars/columns, stacked bars/columns, labeled bars/columns	- RAW: Not supported - Tableau: lines (continuous), lines (discrete), dual lines - ggplot: Basic line plots, line plots with multiple groups, line plots with numeric x-axis, line graph with error bars, customized line graphs - Google Charts: Basic line charts, dual-Y charts, top-X charts,	- RAW: Voronoi Tessellation - Tableau: Not supported - ggplot (Supported with library ggvoronoi): Voronoi diagrams - Google Charts: Not supported	- RAW: Pie chart - Tableau: pie charts - ggplot: Simple pie charts, customized pie charts - Google Charts: Basic pie chart, 3D pie chart, Donut chart, Rotating a pie chart, Exploding a slice, Removing slices, Slice visibility threshold
Visual patterns	- Size (of data points, i.e. radius) - Color - Shape (of data points, i.e. circle, triangle) - Transparency - X-axis - Y-axis	- Size (of bars) - Color - Labels - X-axis - Y-axis	- Line width - Line type - Color - X-axis - Y-axis	- Color - Size (of the colored areas) - Labels - X-axis - Y-axis	- Size (angle) of the circle - Color - Labels
Data types	- 2-dimensional (numeric x numeric)	- 2-dimensional (numeric x categorical)	- 2-dimensional (datetime/categorical x numeric)	- 2-dimensional (numeric/datetime x numeric/datetime)	- 1-dimensional (numeric)
Questions	1. What is the correlation between two variables	1. How objects are compared in terms of the number?	1. What is the movement of the variable compared to the timeline?	1. Where are the clusters of data points located with respect to x-axis and y-axis?	1. What is the percentage represented by each category?

	described in this graph? 2. Are there any outliers in the sample?	2. How different subcategories within a group are different in the number?	2. (Multiple lines in one graph) Compare the ups and downs of the variables in a specific period of time. Do they share any common movement anywhere during this period?	2. Where are the outliers of the sample?	2. What is the ratio of the size of two categories represented in the graph?