Lab 1 Task 2 Report

Monthly Review:

In the infographic, the average Outdoor temperature, average Indoor temperature, average Humidity, Rainfall and Barometric Pressure have been considered as quantitative variables and use Mackinlay’s length, size and text labels proportional to their numeric values. The months have been considered as an ordinal variable because of the natural ordering of months in a year and use Mackinlay’s position/placement from left to right and text labels to represent them chronologically.

Bar graph for the outdoor temperature values encodes the average temperature values of each month directly proportional to the height of the bar for each month i.e the highest bar being the highest temperature and lowest bar being the least temperature. Facts about warmest and coldest months are categorical and have been depicted in orange and blue text blocks respectively.

Line graph for the Indoor temperature values encodes the temperature value for each month directly proportional to the size of the circular marker i.e largest circle being the highest temperature and the smallest circle being the lowest temperature. Facts about warmest and coldest months are categorical and have been depicted in orange and blue text blocks respectively.

Bar graph for the rainfall encodes the amount of average rainfall for each month directly proportional to the height of the bar for each month.

Line graphs for humidity and Barometric pressure encodes marker size directly proportional to the value of the variable i.e largest circles depicting the highest average humidity and highest average pressure and vice versa.

To visually separate the variables, the temperature variables are represented using yellow or orange to be associated with heat. Humidity, rainfall and pressure are depicted with blue to depict association with water.

Seasonal Review:

In the seasonal infographic, the seasons are considered as categorical variables and use Mackinlay’s colour to distinguish autumn with dark red, winter with blue, summer with orange and spring with green. Quantitative variables such as outdoor temperature, indoor temperature, humidity, rainfall and pressure use Mackinlay’s position/placement, size and length directly proportional to their numeric value.

The average outdoor temperature and average rainfall bar graphs depict the temperature and rainfall values proportional to the height of the bar. Each bar is colour coded seasonally. Each bar has months positioned as text labels from top for being greater than the seasonal mean, to bottom for being less than the seasonal mean. These text labels enable comparison with the monthly averages of the respective variable.

The line graphs for average indoor temperature, average humidity and average pressure depict the seasons with the respective marker colours. The numerical values from highest to lowest are directly proportional to the size of the marker in the line graph.

The type of graphs used for seasonal and monthly infographic of are identical for simpler comparison of monthly and seasonal values.