Day 5 - Data Visualization

\*Refer to <https://lucaspingpao.shinyapps.io/graphing/> to see the finalized version of the graphing app you are about to enhance below.

1. Graphing App!
   1. Open “Graphing App.R” in RStudio. Try running the app locally on your computer.
   2. Add an input that allows you to input points onto the plot manually (the user types in x and y values into the input without clicking on the plot itself)
   3. Create a reset button that reinitializes the variables to their original default values.
   4. Add widgets that allow you change the following parameters:
      1. Main title and axes titles
      2. Colors of the elements
      3. Types of elements
      4. Size of the points
      5. Thickness of the lines
      6. Zoom in and out (hint: change axes limits)
   5. Add inputs that allow you to draw arrows and segments at specified locations
   6. Add inputs that allow you to draw straight lines at specified locations
   7. (Bonus): Implement the ability to draw different types of elements on your plot. Use the following instructions below as guidelines for implementing this function.
      1. Create radio buttons that specify which type of element you are about to draw (points, segments, arrows, etc.)
      2. Create conditional statements that draw different types of elements based on which option is selected from the radio buttons.
      3. The plot click function only stores the coordinates for one point at a time, so for elements that require two points (such as arrows), create boolean variables such as “first” and “second” that specify whether you are clicking the first point of the arrow or the second point of the arrow.
2. Statistics App!
   1. Go to your Statistics Calculator app you made on Day 3.
   2. Make a button that allows you to plot a histogram of the data from the input.
   3. Add inputs that allow the user to adjust the parameters on the histogram.
3. Coronavirus Tracker - you now have all the tools you need to analyze and visualize data sets to build your very own coronavirus tracker! Find related data sets here: <https://data.europa.eu/euodp/en/data/dataset/covid-19-coronavirus-data>