

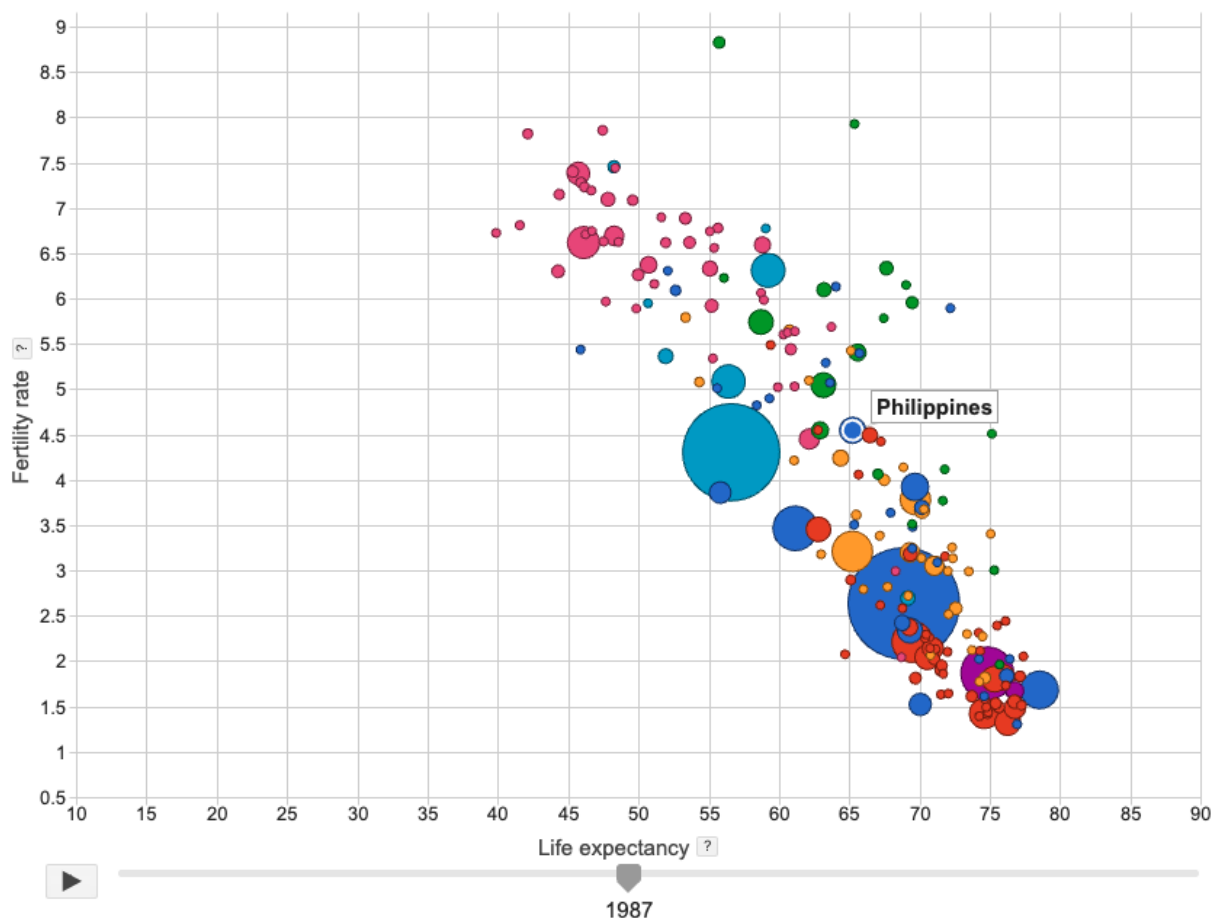
# PROGRAMMING EXERCISE 4

Due Date: 06/11/2023

In this exercise, you are given three different datasets including the information about World's population, fertility rate, and life expectancy. Make a bubble chart where the x-axis indicates life expectancy, the y-axis refers to the fertility rate, and the size of the bubble is the population. Each bubble presents a country. The X-axis and y-axis range from the minimum to the maximum of the corresponding data over the years, meaning that axes do not change. There is no restriction on color choice. With this instruction for drawing the chart, your task is to add the interactions. Please follow the guideline below to get the full credits.

- (2 points) Show a tooltip for the mouseover event on a bubble
  - Include the country name, fertility rate, and life expectancy
- (2 points) Display the slider where you can control the year presented on the chart

Here is an example of your result. You can check out this [link](#) to explore the application.



Drawing a bubble chart without any interaction values 1 point. If you succeed in adding interactions explained in the guideline, you can earn 5 points total including the completion of drawing

a chart. You can ask a question on the blackboard discussion only if it is not described in the guideline. You can use any web framework, but please attach an explanation to run your code (for any installation, create requirement.txt). The file title should be *studentID\_firstname.zip*. Any submission past the deadline will result in 0 points.