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Course code and name:	Data Visualisation and Analytics (F21DV)
Type of assessment:	Individual
Coursework Title:	**L**ab 3: Dataset Visualisation & Analytics
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Report Lab 3: Dataset Visualisation & Analytics

Data Visualisation and Analytics (F21DV)

Name: Mohammad Rahoof
HWID: H00396329
Date Of Demonstration: 25-Feb-2022
Demonstrated to: Benjamin Kenwright

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Introduction

Queries:

1. Narrate the evolution of the COVID-19 pandemic over the continents and specific countries (you can provide the narration for a selection of countries).
2. Is there a relation between the relative ‘wealth’ of a population and the evolution of the pandemic?
3. What is the effect of vaccinations on the spread of cases/deaths and display any effect (if any) that booster jabs have on the cases/deaths.
4. How does the geographical position of a country affect the evolution of COVID-19.

Procedure :

step1:create three svg as canvas for graphs

step2:fetch data from github url using d3.csv

step3:get the continents in the data and set as options in continent select

step4 : on selecting a continent :

- filter data of the selected continent
- select columns for all the graphs and pass to graph function
- get all the countries in the continent and set them as options in the country select

step5: on selecting a country

- filter data of the selected country
- select columns for all the graphs and pass to graph function

step6: in graph function:

- create scales for x and y axis using the given data
- create a colour pallet for the countries
- create a graph using circles for the data and colour them based on their location

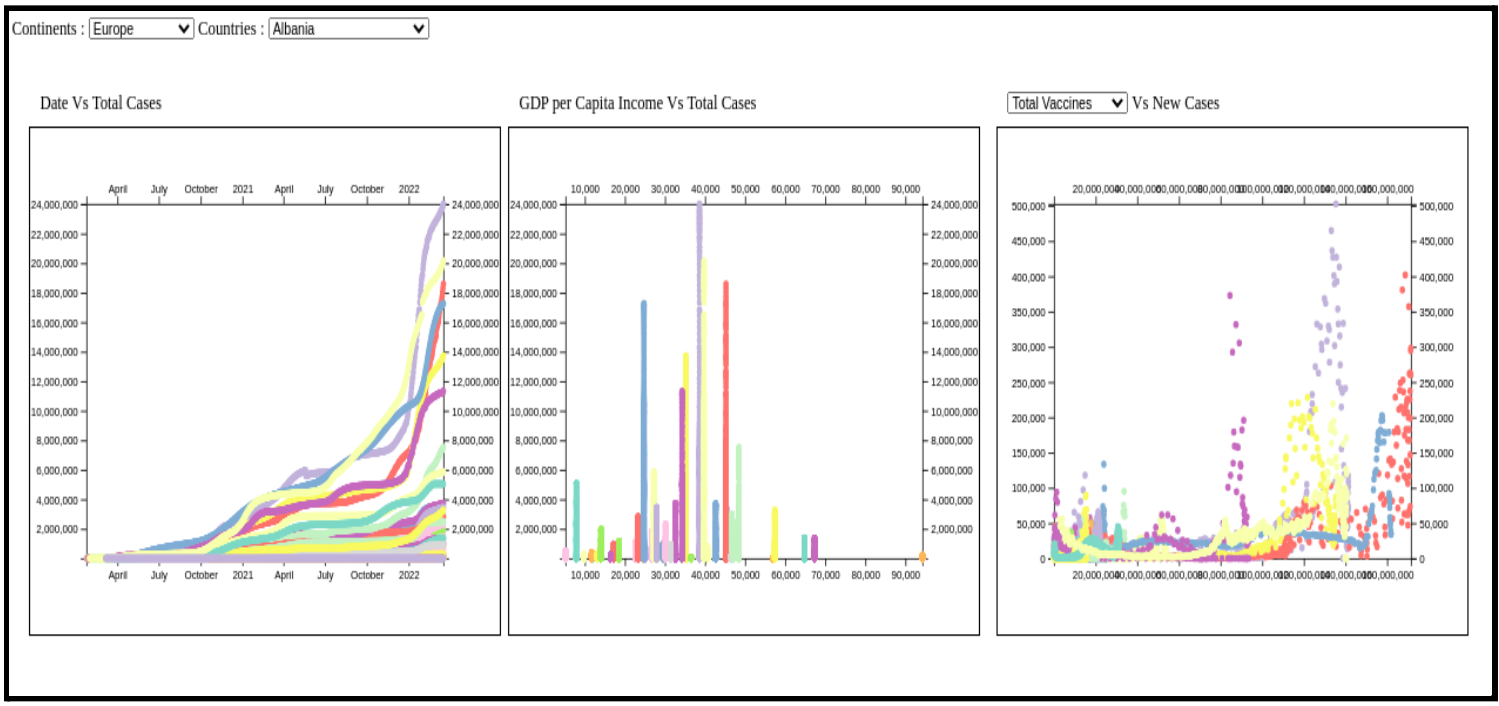
on mouseover:

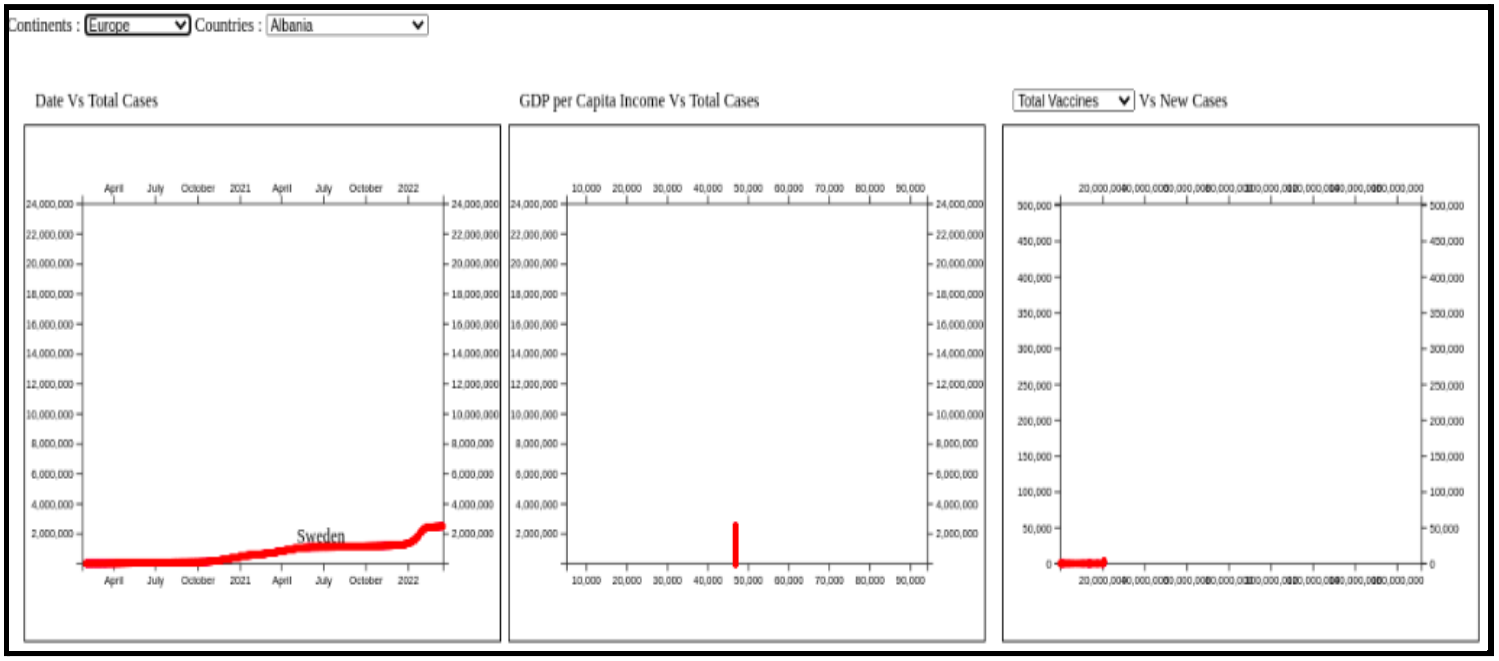
- create a label at the mouse pointer and set the country as the text
- highlight all the points with same country and set the opacity of others to 0

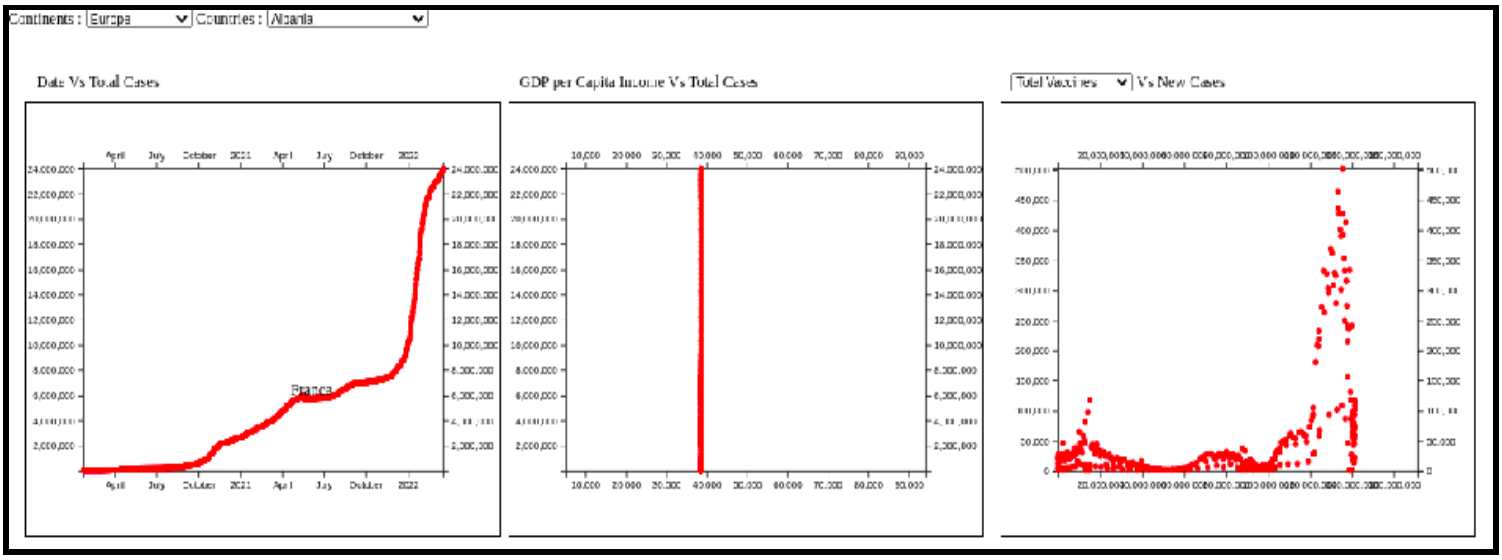
on mouseout:

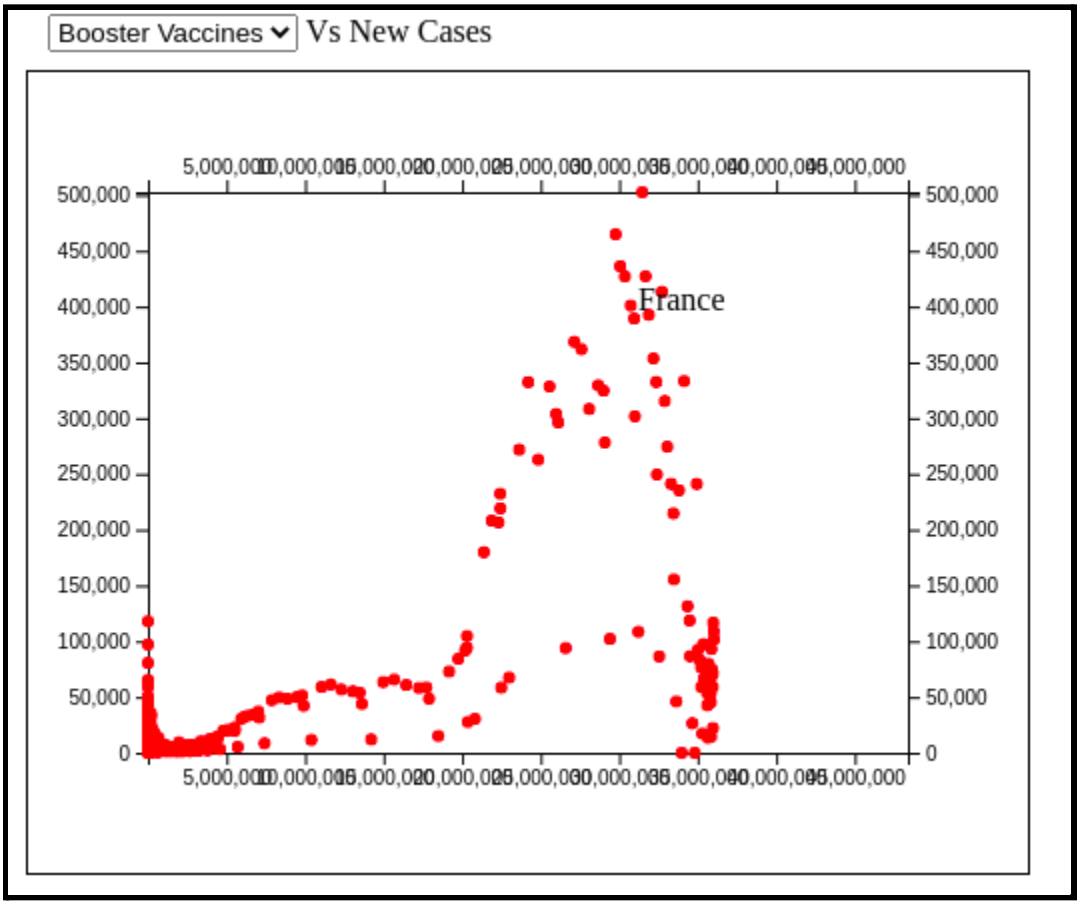
- remove label
- set the colour of the point to its original colour

OnSelecting a continent::






Continents : Europe
Countries : Albania
Date Vs Total Cases
GDP per Capita Income Vs Total Cases
Total Vaccines
Vs New Cases
France


Booster Vaccines
Vs New Cases
France

Observations::

- Total number of cases have increased more or less with time but the rate of increase has been different in different locations.
- For example in france the curve in graph one shows a steep increase indicating sharp increase in the number of cases where as in Sweden increase in number of cases is slow
- In Terms of wealth most countries with high and low GDP Per capita income have low Total number of cases where are countries with comparatively moderate GDP per capita have high number of cases
- Total number of cases started to decrease With the increase in the number of vaccines, after the administered vaccines reached a certain point. Similar pattern is observed with booster vaccines administered but the decline in the number of cases is more sharp.
- The patterns are not consistent across the geographic locations since many other factors affect the number of cases such as the public awareness, local climatic conditions, preventive measures such as curfews and social distancing etc.

Conclusion:

- https://www.tutorialspoint.com/online_d3js_editor.php
- https://canvas.hw.ac.uk/courses/5296/assignments/67275
- https://stackoverflow.com/questions/11246758/how-to-get-unique-values-in-an-array