**Basic documentation**

The purpose of this app is to help users easily keep track of the population change, fertility rate, number of migrations and more in countries of their interest. Data that were used to come up with the visualization are linked below, each imported with different purposes and are labeled in comments in the source code. Potential users of this data visualization would be the government officials or global organizations that are sensitive to the fertility rate and number of migrants each year from and to a specific country. The answer to the question I’m trying to seek is the relationship between the fertility rate and the percentage of urban population of a country. The results matched my expectations, and I was able to reaffirm my belief with objective data. The same goes with the situation of immigration in the 3rd tab. Some improvements could be made on including countries that are not present in Googlevis map. I could include more datasets in the future to account for the missing countries.

**Development Process**

I used 3 different datasets in order to include all variables that were of my interest: Migration, Continents, year, etc. The tidying process is self-explanatory in my source code. I had to change the country names like US South Korea, North Korea, and Russia as each dataset had different names for the same country. I also unified the variable name to “Country” in each data so it could easily get merged. After merging datasets by Country, I made sure there was no NA value in any of the cell in my data so it could display my visualization.

**Design Decisions**

**What?**

Data and Dataset Types:

Tables – items, attributes

Dataset Availability:

Both static and dynamic.

Attribute Types:

Categorical: Country, Country code, Continent

Continuous: Yearly Change, Net Change, Density, Fertility, Migrants, year, Median Age, Urban pop, World Share, population

Ordering Direction :

Chronological year

**Why?**

Actions:

Search for datasets online (mostly in Kaggle)

Compare datasets and tidy them in a way they can be merged.

Derive conclusion about the trend in the dataset.

Targets:

Each tab displaying different attributes of the dataset

Interesting analysis by dividing countries by its continent

Incorporation of google map visualization displaying the largest to the smallest country.

**How?**

Encode:

Use of boxplots for migrants and scatterplots for comparison of 2 variables.

Manipulate:

I can adjust the data visualization using selectInput and sliderInput on the left.

Facet:

Superimpose based on the number of continents one chooses.

Reduce:

Data tidying process elaborated on the source code.

**Data Sources :**

<https://www.kaggle.com/imdevskp/world-population-19602018>

<https://www.kaggle.com/general/160035>

https://www.kaggle.com/vaishnavivenkatesan/world-population