# Information Visualization Project (COMP3045 UNMC)

# Coursework 1.2

Rationale Document

Student Name: Loh Jin Xian

Student ID: 016763

Lecturer: Dr Marina Ng

Information visualization is at the intersection of both data and design. Time and efforts are required to make sure that the bar chart is both easily readable and interpreted by the users while still keeping a touch of aesthetics that keeps the user engaged at all time. Since the data being visualized for this coursework is set to be bar chart, there are a few things that needs to be considered during the design process of this bar chart:

1. **Colors and fonts**

The first thing that the user will notice is both the colors and fonts of the bar chart. Therefore, careful consideration had been made to pick a color palette that is clean and delicate to the audience. The colors should complement each other naturally and stick to a consistent theme throughout the whole bar chart. For this bar chart, a minimalistic color palette is chosen by having dark background color and light blue color for the bar chart to increase the contrast between the foreground and background, which will direct the audience’s flow of attention to the bar chart naturally without any instructions given. Besides that, crisp and simplistic font is chosen for the texts present in the visualization to ensure the clarity of texts are high to the audience.

1. **Interactivity**

Since the data is visualized in bar chart, adding interactivity to the visualization is essential to increase audience’s interaction with the data being presented. In this bar chart visualization, a dropdown selector was added to give control to the audience to pick the data that they want to see. Other that that, the bar chart will be highlighted when the audience hovers the mouse on the bar, further enhancing the visual feedback given to the audience. At the same time, a tooltip will appear when audience hover over the bar chart, displaying the y-value inside the tooltip. Buttons are also added where audience can click in the buttons to change the color of the bar chart to their liking.

1. **Data visualization**

As said earlier, the data are visualized in bar chart. A bar chart can take a large variety of forms, however there are common features that provide the chart with its ability to extract meaning from data. Bar chart can be presented either vertically or horizontally to show comparisons among categories. One axis of the chart will be showing a specific categorie being compared, and the other axis represents a discrete value.

1. **Narrative**

Hidden in every data visualization is a narrative that wants to be told by the designer. In this bar chart, the narrative is very specific. It is the difference of numbers for Malaysia population throughout the years from 1955 till 2019. This type of narrative can give the audience a sense of comparisons on how far Malaysia have grown into a bigger country.

1. **Knowledge of design issue**

While designing the bar chart visualization, there are many instances where the bar chart would not scale accordingly to the data extracted from the csv file. This particular problem causes the whole bar chart to give the wrong information to the audience that is looking and studying the bar chart. After some trials and errors, the problem was finally solved by using mathematic formulae to calculate and scale the bar char, ensuring that different data would still be scaled in the right way.