Preparation:

To start your assignment, you first need to select the data you wish to visualize. These data might be from your previous studies, data from your work, any research project or some data you've obtained from elsewhere as long as your data contain ***at least 5 attributes (columns) with at least 3 different data types***.

Tasks:

In your report, you are asked to ***describe and argue with appropriate references***:

1. The nature of the data: what do those data represent/describe? how were they originally collected? (This is not asking where 'you' obtained this dataset from.)
2. Who are the consumers of such data? Why did they need this dataset? How are they using this dataset?
3. How are those data typically depicted or conveyed to those audiences? Present your explanation/argument with respect to data types and why the data needed to be visually represented in a certain way.
4. What sort of questions are asked and answered **through** such typical visualization you've mentioned in #3?
5. What might be typical mistakes people make in depicting those data?
6. How would ***YOU*** visualise those data differently? Using the symbolic representations from Semiology of Graphics, describe and explain how you would define the imposition of your visualisation, and how you would assign each data type to various visual variables.
7. Provide a sample of your visualization derived from the symbolic representation from #6. (You can use any visualization tool to create your visualization or you can provide hand sketches).
8. Explain how you derived your visualisation in #7 from the symbolic representation in #6.
9. Derive an equivalent but different symbolic representation of your answer from #6, and explain the equivalency. Simply reallocating different data elements to the different axis/visual variables within the same symbolic representation will not attract any marks.
10. Provide an example of your alternative visualization derived from the symbolic representation from #9, and describe/explain how you assigned each data type to be used for the axes and various visual variables. (You can use any visualization tool to create your visualization or you can provide hand sketches).