

# COS30045

## LAB 4.1 Design Studio



### Overview

In this lab you will be given a sample data set and asked to identify the different data and attribute types. You will also think about some questions about this data set that might be answered by a visualisation.

`ardd_fatalities_Jan2020_0.xlsx` (download from Canvas)

Download and review this data set before attempting this exercise.

### 1 Interpreting the data set

Complete the LAB 4.1 Quiz.

### 2 Visualisation Design

Think of three questions you would like to answer with that require a data visualisation.

For each data question you will need to consider the following:

Which data attributes (columns) do you need to answer this question?

Do you need to transform any of the data?

Does the data type change when you transform the data? If so how.

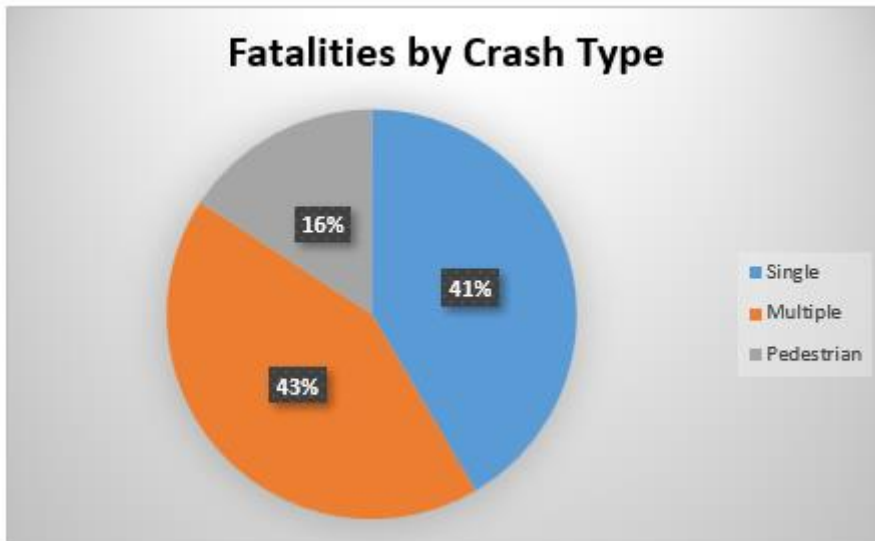
Make a sketch of how you think your visualisation might look and add to this document.

## Your Question 1



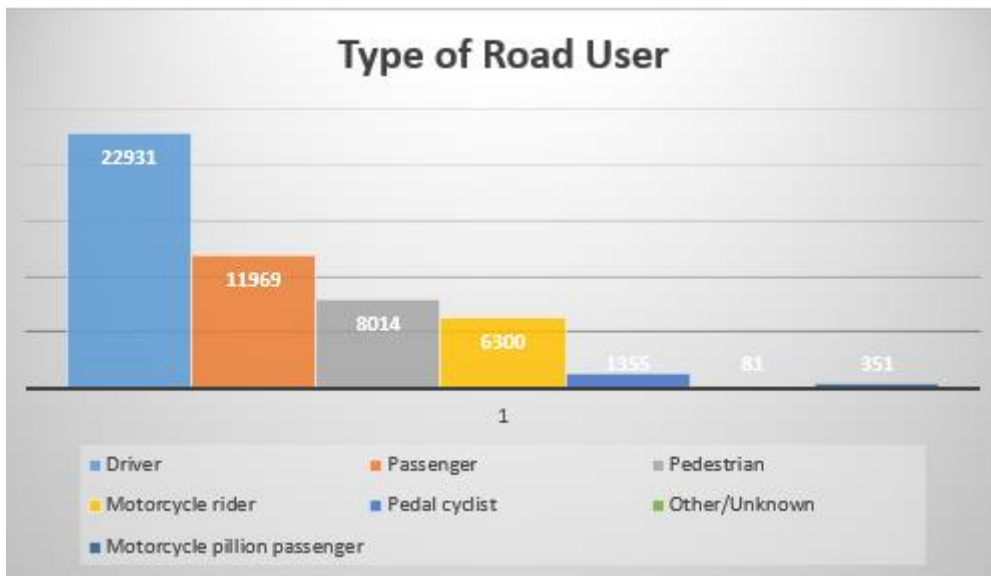
1. Data attributes: Time Periods (Year), Number of Fatalities.
2. Yes, the years column was transformed into time periods. Initially, the data consists of individual years. I have aggregated these individual records into broader time periods (decades).
3. Yes, the data type change when I transform the data. The initial data of time periods which is 'Year' column. 'Year' is under integer type, when transform to time periods the data type was change to a string type. For the number of fatalities remain the same.

## Your Question 2



1. Data attributes: Crash Type, Percentage of Fatalities.
2. Yes, the dataset was transformed to percentage calculation to compare each crash type relative to the overall fatalities easily.
3. Yes, the data type change when raw fatality counts transforming into percentages. These counts involve changing from integers to decimal or percentages. The transformation involves dividing of number fatalities and multiplying by 100 to and convert it into percentages.

## Your Question 3



1. Data attributes: Road User, Number of Fatalities.
2. No, because the graph is a column bar chart. It allows to perform the original data out by numbers without any transformation.
3. Yes, I have transformed -9 as unknown but the type of road user remains categorical after any aggregation. The number of fatalities remains numeric.

Include this file as evidence for your Demonstration 2