

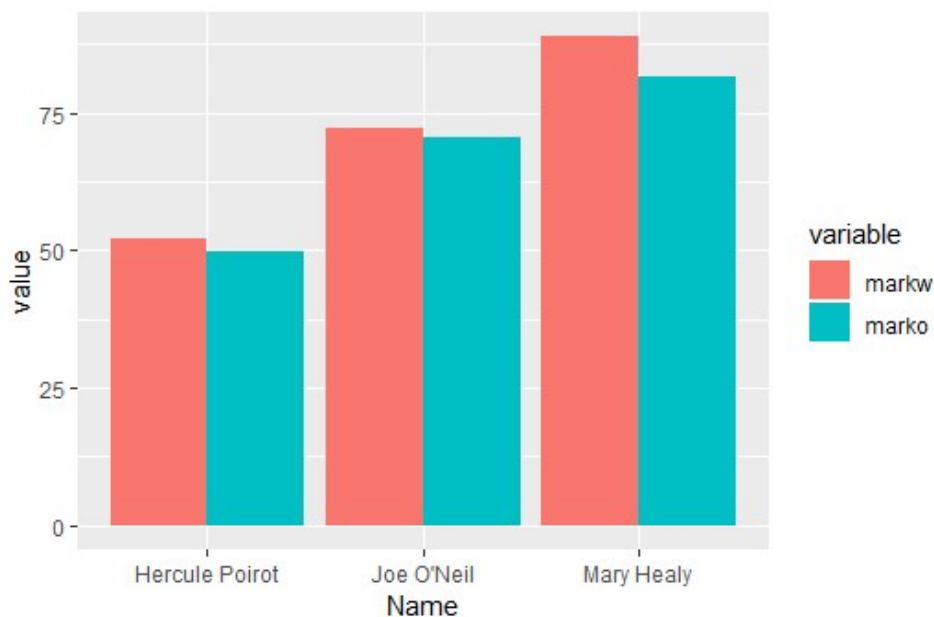
Visualisation in R Part 2

Lab 7

In this lab you will attempt to recreate the following graphs using Rstudio and ggplot.

Side by Side

Exercise 1: Looking at last week's studentresults file, plot the results for the written and oral exams in two bars per student. (4 marks)



In order to plot those results in a bar chart with written and oral in separate bars, we need to convert the table into what is called long table format. The table will then look like:

Original Table

	Name	markw	marko
1	Hercule Poirot	52.06667	49.73333
2	Joe O'Neil	72.20000	70.40000
3	Mary Healy	88.86667	81.40000

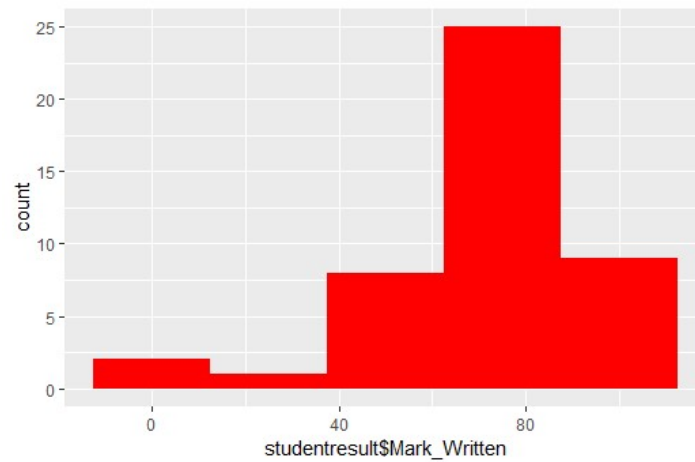
Long Table Format

	Name	variable	value
1	Hercule Poirot	markw	52.06667
2	Joe O'Neil	markw	72.20000
3	Mary Healy	markw	88.86667
4	Hercule Poirot	marko	49.73333
5	Joe O'Neil	marko	70.40000
6	Mary Healy	marko	81.40000

- Create the long table using the function `melt` from the `reshape2` package
- Now, use `ggplot` to plot the different values, using `value` for y axis and `variable` for fill colour, as well as `position dodge` to place written and oral bars beside each other instead of stacked.

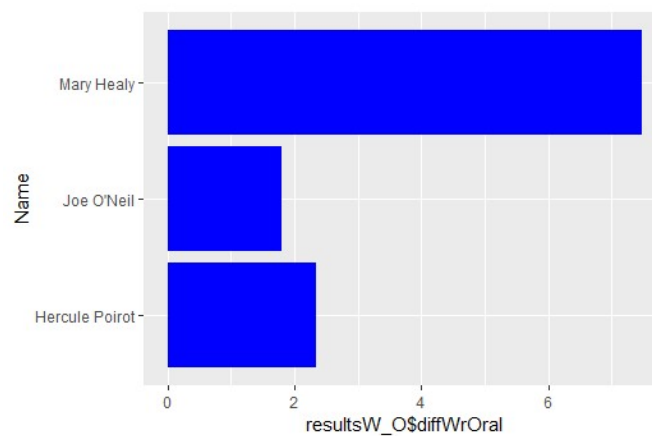
Histogram

Exercise 2: Plot one variable counting the instances that fall in each bin (**Histogram**). Bin size can be adjusted with the command **binwidth**. (1 mark)



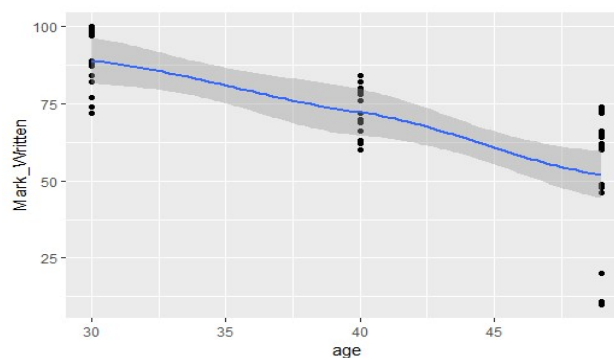
Horizontal Bar Chart

Change the orientation of a bar chart to be horizontal rather than vertical. (1 mark)



Scatterplots - Fitting lines and smoothing methods

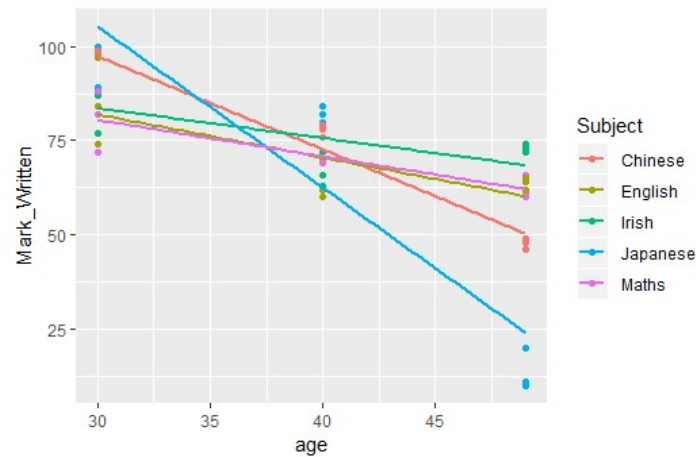
Part 1: Fit a line to a scatter plot of age against Written Marks. (1 mark)



Options method :LOESS, LM

se: confidence interval display(TRUE,FALSE)

Part 2: Create a scatter plot with a separate line for each data series (per subject). (1 mark)



Bubble Charts

Create a bubble chart using ggplot by creating a scatter plot and adding the third dimension in the aesthetic option size. A fourth dimension can be added using the colour fill. (2 marks)

