Statistical Computing , Assignment 2020
Due Date 9 January 2021

1. In groups of not more than 2 people
2. Use the questionnaire loaded on the Teams platform to collect data from 20 people (not necessarily students).
3. Write all your commands in one script file that you should save as "Script.R"
4. Capture the collected data in the form of a data frame with a name of your choice
5. For the data frame that you created above,
   (a) Write an R command to extract the element in the 7^{th} row 6^{th} column.
   (b) Write an R command to extract the 10^{th} row.
   (c) Write an R command to extract the 15^{th} column.
   (d) Write an R command to extract the elements in rows 15, 1,20 columns 3 to 6
   (e) Write an R command to extract all people who believe that mathematics is a difficult subject.
   (f) Write an R command to extract data on all the female respondents who believe that mathematics is a difficult subject.
   (g) Write an R command to extract the data for all respondents who are not Tsonga.
   (h) Write an R command to extract the data for all respondents who are either Tsonga or Venda.
   (i) Add a new variable called heightcat and created by dividing the heights into 2 equal categories named "short", and "tall".
   (j) Write an R command to extract respondents whose height exceeds 150cm.
   (k) Sort your data frame in descending order of height.
   (l) Export your data frame to the file "final.csv"
   (m) Create a histogram of the heights of these individuals. Comment on the histogram.
   (n) Create a well labeled bar graph to depict the distribution of the tribes of the respondents. Label the axis, and give a title to the bar graph. Comment on the bar graph.
   (o) Perform a chi-squared test to determine if the color choice is independent of gender? Comment on the results of the chi-square test
6. Email (in one package), the original data file, the script file and the file "final.csv" to alphonce.bere@univen.ac.za. **Dont forget to put your student numbers as comments at the top of the R script.**
7. Submit your written comments on items 5(m), 5(n) and 5(o) to my office.