Raissa’s reference document

## Introduction

My neighbour’s name is Anna. She chose:

* Mauritius
* Canada

1. Mauritius
2. Canada

## Warning: package 'dplyr' was built under R version 3.5.1

## Warning: package 'bindrcpp' was built under R version 3.5.1

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| country | continent | year | lifeExp | pop | gdpPercap |
| Canada | Americas | 1952 | 68.750 | 14785584 | 11367.161 |
| Canada | Americas | 1957 | 69.960 | 17010154 | 12489.950 |
| Canada | Americas | 1962 | 71.300 | 18985849 | 13462.486 |
| Canada | Americas | 1967 | 72.130 | 20819767 | 16076.588 |
| Canada | Americas | 1972 | 72.880 | 22284500 | 18970.571 |
| Canada | Americas | 1977 | 74.210 | 23796400 | 22090.883 |
| Canada | Americas | 1982 | 75.760 | 25201900 | 22898.792 |
| Canada | Americas | 1987 | 76.860 | 26549700 | 26626.515 |
| Canada | Americas | 1992 | 77.950 | 28523502 | 26342.884 |
| Canada | Americas | 1997 | 78.610 | 30305843 | 28954.926 |
| Canada | Americas | 2002 | 79.770 | 31902268 | 33328.965 |
| Canada | Americas | 2007 | 80.653 | 33390141 | 36319.235 |
| Poland | Europe | 1952 | 61.310 | 25730551 | 4029.330 |
| Poland | Europe | 1957 | 65.770 | 28235346 | 4734.253 |
| Poland | Europe | 1962 | 67.640 | 30329617 | 5338.752 |
| Poland | Europe | 1967 | 69.610 | 31785378 | 6557.153 |
| Poland | Europe | 1972 | 70.850 | 33039545 | 8006.507 |
| Poland | Europe | 1977 | 70.670 | 34621254 | 9508.141 |
| Poland | Europe | 1982 | 71.320 | 36227381 | 8451.531 |
| Poland | Europe | 1987 | 70.980 | 37740710 | 9082.351 |
| Poland | Europe | 1992 | 70.990 | 38370697 | 7738.881 |
| Poland | Europe | 1997 | 72.750 | 38654957 | 10159.584 |
| Poland | Europe | 2002 | 74.670 | 38625976 | 12002.239 |
| Poland | Europe | 2007 | 75.563 | 38518241 | 15389.925 |

## Warning: package 'pander' was built under R version 3.5.1

A table with pander

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| country | continent | year | lifeExp | pop | gdpPercap |
| Canada | Americas | 1952 | 68.75 | 14785584 | 11367 |
| Canada | Americas | 1957 | 69.96 | 17010154 | 12490 |
| Canada | Americas | 1962 | 71.3 | 18985849 | 13462 |
| Canada | Americas | 1967 | 72.13 | 20819767 | 16077 |
| Canada | Americas | 1972 | 72.88 | 22284500 | 18971 |
| Canada | Americas | 1977 | 74.21 | 23796400 | 22091 |
| Canada | Americas | 1982 | 75.76 | 25201900 | 22899 |
| Canada | Americas | 1987 | 76.86 | 26549700 | 26627 |
| Canada | Americas | 1992 | 77.95 | 28523502 | 26343 |
| Canada | Americas | 1997 | 78.61 | 30305843 | 28955 |
| Canada | Americas | 2002 | 79.77 | 31902268 | 33329 |
| Canada | Americas | 2007 | 80.65 | 33390141 | 36319 |
| Poland | Europe | 1952 | 61.31 | 25730551 | 4029 |
| Poland | Europe | 1957 | 65.77 | 28235346 | 4734 |
| Poland | Europe | 1962 | 67.64 | 30329617 | 5339 |
| Poland | Europe | 1967 | 69.61 | 31785378 | 6557 |
| Poland | Europe | 1972 | 70.85 | 33039545 | 8007 |
| Poland | Europe | 1977 | 70.67 | 34621254 | 9508 |
| Poland | Europe | 1982 | 71.32 | 36227381 | 8452 |
| Poland | Europe | 1987 | 70.98 | 37740710 | 9082 |
| Poland | Europe | 1992 | 70.99 | 38370697 | 7739 |
| Poland | Europe | 1997 | 72.75 | 38654957 | 10160 |
| Poland | Europe | 2002 | 74.67 | 38625976 | 12002 |
| Poland | Europe | 2007 | 75.56 | 38518241 | 15390 |

## Tip from Raissa

We are now going to make a table with the huxtable package. This is very helpful for conditional formatting specially when outputting to a word docume

library(huxtable)

## Warning: package 'huxtable' was built under R version 3.5.1

library(flextable)

## Warning: package 'flextable' was built under R version 3.5.1

dfHt <- huxtable(df,add\_colnames = TRUE)   
  
condition <- which(dfHt$year>1990)  
dfHt <- dfHt %>% set\_text\_color(condition, everywhere,'blue')   
  
dfHt <- dfHt %>% set\_all\_borders(everywhere,everywhere,1) %>% set\_all\_border\_colors(everywhere,everywhere,'green')  
  
output\_format <- knitr::opts\_knit$get("rmarkdown.pandoc.to")  
 if(('word\_document' %in% output\_format)|('docx' %in% output\_format)){  
huxtable::as\_flextable(dfHt) } else {  
 dfHt  
}

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| country | continent | year | lifeExp | pop | gdpPercap |
| Canada | Americas | 1952 | 68.8 | 14785584 | 1.14e+04 |
| Canada | Americas | 1957 | 70 | 17010154 | 1.25e+04 |
| Canada | Americas | 1962 | 71.3 | 18985849 | 1.35e+04 |
| Canada | Americas | 1967 | 72.1 | 20819767 | 1.61e+04 |
| Canada | Americas | 1972 | 72.9 | 22284500 | 1.9e+04 |
| Canada | Americas | 1977 | 74.2 | 23796400 | 2.21e+04 |
| Canada | Americas | 1982 | 75.8 | 25201900 | 2.29e+04 |
| Canada | Americas | 1987 | 76.9 | 26549700 | 2.66e+04 |
| Canada | Americas | 1992 | 78 | 28523502 | 2.63e+04 |
| Canada | Americas | 1997 | 78.6 | 30305843 | 2.9e+04 |
| Canada | Americas | 2002 | 79.8 | 31902268 | 3.33e+04 |
| Canada | Americas | 2007 | 80.7 | 33390141 | 3.63e+04 |
| Poland | Europe | 1952 | 61.3 | 25730551 | 4.03e+03 |
| Poland | Europe | 1957 | 65.8 | 28235346 | 4.73e+03 |
| Poland | Europe | 1962 | 67.6 | 30329617 | 5.34e+03 |
| Poland | Europe | 1967 | 69.6 | 31785378 | 6.56e+03 |
| Poland | Europe | 1972 | 70.8 | 33039545 | 8.01e+03 |
| Poland | Europe | 1977 | 70.7 | 34621254 | 9.51e+03 |
| Poland | Europe | 1982 | 71.3 | 36227381 | 8.45e+03 |
| Poland | Europe | 1987 | 71 | 37740710 | 9.08e+03 |
| Poland | Europe | 1992 | 71 | 38370697 | 7.74e+03 |
| Poland | Europe | 1997 | 72.8 | 38654957 | 1.02e+04 |
| Poland | Europe | 2002 | 74.7 | 38625976 | 1.2e+04 |
| Poland | Europe | 2007 | 75.6 | 38518241 | 1.54e+04 |

## Plots

We are now going to create a plot for our two countries

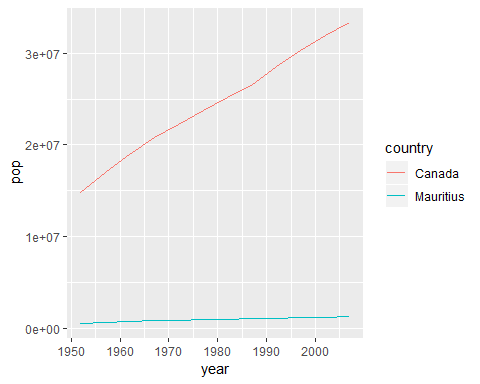


Figure 1 Population of my two countries

## Using in-line code and parameter

Remember how we include parameters in our YAML header. I can now ask RMarkdown to include those names here. RMarkdown will print the first parameter if I put the inline code as follows:

* Mauritius
* Canada

## Using loops

[1] “Mauritius” [1] “Canada”

You can put some text here before the tables

Table 1 Population of Mauritius

|  |  |  |
| --- | --- | --- |
| year | country | pop |
| 1952 | Canada | 14785584 |
| 1957 | Canada | 17010154 |
| 1962 | Canada | 18985849 |
| 1967 | Canada | 20819767 |
| 1972 | Canada | 22284500 |
| 1977 | Canada | 23796400 |
| 1982 | Canada | 25201900 |
| 1987 | Canada | 26549700 |
| 1992 | Canada | 28523502 |
| 1997 | Canada | 30305843 |
| 2002 | Canada | 31902268 |
| 2007 | Canada | 33390141 |

Table 2 Population of Canada

|  |  |  |
| --- | --- | --- |
| year | country | pop |
| 1952 | Canada | 14785584 |
| 1957 | Canada | 17010154 |
| 1962 | Canada | 18985849 |
| 1967 | Canada | 20819767 |
| 1972 | Canada | 22284500 |
| 1977 | Canada | 23796400 |
| 1982 | Canada | 25201900 |
| 1987 | Canada | 26549700 |
| 1992 | Canada | 28523502 |
| 1997 | Canada | 30305843 |
| 2002 | Canada | 31902268 |
| 2007 | Canada | 33390141 |

## Referring to figures and tables

If we want to refer to a figure: \* if we are using bookdown formats (e.g bookdown::pdf\_document2 or bookdown::word\_document2) we can use “\(**???**)()” and the chunk name. \* E.g here we will say Figure 1 to refer to the figure in the code chunk named plot. (easier to have 1 plot per code chunk) \* to refer to the table for our first country we can use: Table 1

* we can also add “caption=”\\label{tab:tab2}" to the the caption and use “\label{…}” if we are exporting to pdf\_document

## Citing documents

To have a bibliography, you can use a .bib file (you can export those from a number of reference managers such as JabRef and Mendeley). Here I have created a bibliography which includes the knitr package and the huxtable package. I can refer to them using the labels for them.

For example: The knitr package (Xie 2018) is the basis of R markdown.

## Bibliography

Xie, Yihui. 2018. *Knitr: A General-Purpose Package for Dynamic Report Generation in R*. <https://CRAN.R-project.org/package=knitr>.