Bonus Question 1

Ian Murphy 2019-09-19

Bonus Question 1

Load Packages

```
# load your packages here:
library(gapminder)
library(tidyverse)
```

We are given the following code:

```
gapminder %>%
filter(country == c("Rwanda", "Afghanistan"))
```

```
## # A tibble: 12 x 6
##
      country
                   continent year lifeExp
                                                 pop gdpPercap
##
      <fct>
                   <fct>
                             <int>
                                      <dbl>
                                               <int>
                                                          <dbl>
##
   1 Afghanistan Asia
                              1957
                                       30.3 9240934
                                                           821.
   2 Afghanistan Asia
                              1967
                                       34.0 11537966
                                                           836.
   3 Afghanistan Asia
##
                              1977
                                       38.4 14880372
                                                           786.
##
   4 Afghanistan Asia
                              1987
                                       40.8 13867957
                                                           852.
##
   5 Afghanistan Asia
                              1997
                                       41.8 22227415
                                                           635.
   6 Afghanistan Asia
                                       43.8 31889923
##
                              2007
                                                           975.
##
    7 Rwanda
                   Africa
                              1952
                                       40
                                             2534927
                                                           493.
##
   8 Rwanda
                   Africa
                                       43
                                             3051242
                                                           597.
                              1962
   9 Rwanda
                   Africa
                                       44.6 3992121
                                                           591.
                              1972
## 10 Rwanda
                   Africa
                              1982
                                       46.2 5507565
                                                           882.
## 11 Rwanda
                   Africa
                              1992
                                       23.6
                                             7290203
                                                           737.
                                       43.4 7852401
## 12 Rwanda
                   Africa
                              2002
                                                           786.
```

And when we run it, we only get a subset of the data from Rwanda and Afghanistan. In order to do this properly, there are 2 different ways which could work. Firstly, we could replace the "==" with "%in%". This will produce the countries of either Rwanda or Afghanistan. Secondly, we could use the "|" operator. These 2 methods are demonstrated below.

```
gapminder %>%
filter(country %in% c("Rwanda", "Afghanistan"))
```

```
## # A tibble: 24 x 6
##
      country
                  continent year lifeExp
                                                 pop gdpPercap
##
      <fct>
                  <fct>
                             <int>
                                     <dbl>
                                                         <dbl>
                                               <int>
                                      28.8
##
    1 Afghanistan Asia
                              1952
                                            8425333
                                                          779.
##
    2 Afghanistan Asia
                              1957
                                      30.3 9240934
                                                          821.
   3 Afghanistan Asia
                              1962
                                      32.0 10267083
                                                          853.
##
   4 Afghanistan Asia
                              1967
                                      34.0 11537966
                                                          836.
    5 Afghanistan Asia
                              1972
                                      36.1 13079460
                                                          740.
                                                          786.
##
   6 Afghanistan Asia
                              1977
                                      38.4 14880372
   7 Afghanistan Asia
                              1982
                                      39.9 12881816
                                                          978.
  8 Afghanistan Asia
                              1987
                                      40.8 13867957
                                                          852.
##
    9 Afghanistan Asia
                              1992
                                      41.7 16317921
                                                          649.
```

```
## 10 Afghanistan Asia
                                     41.8 22227415
                                                         635.
                             1997
## # ... with 14 more rows
gapminder %>%
  filter(country == "Rwanda" | country == "Afghanistan")
## # A tibble: 24 x 6
##
      country
                  continent year lifeExp
                                               pop gdpPercap
##
      <fct>
                  <fct>
                                    <dbl>
                                                        <dbl>
                            <int>
                                             <int>
                                                        779.
## 1 Afghanistan Asia
                             1952
                                     28.8 8425333
## 2 Afghanistan Asia
                                                        821.
                             1957
                                     30.3 9240934
## 3 Afghanistan Asia
                             1962
                                     32.0 10267083
                                                        853.
## 4 Afghanistan Asia
                             1967
                                     34.0 11537966
                                                        836.
## 5 Afghanistan Asia
                             1972
                                     36.1 13079460
                                                        740.
## 6 Afghanistan Asia
                             1977
                                     38.4 14880372
                                                        786.
## 7 Afghanistan Asia
                                     39.9 12881816
                                                        978.
                             1982
## 8 Afghanistan Asia
                             1987
                                     40.8 13867957
                                                        852.
## 9 Afghanistan Asia
                             1992
                                     41.7 16317921
                                                         649.
## 10 Afghanistan Asia
                             1997
                                     41.8 22227415
                                                         635.
```

Either of these methods will produce the desired result.

... with 14 more rows