Homework 6

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library(tidyverse)

## -- Attaching packages --------------------------------------- tidyverse 1.3.2 --  
## v ggplot2 3.3.5 v purrr 0.3.4  
## v tibble 3.1.6 v dplyr 1.0.8  
## v tidyr 1.2.0 v stringr 1.4.0  
## v readr 2.1.2 v forcats 0.5.1  
## -- Conflicts ------------------------------------------ tidyverse\_conflicts() --  
## x dplyr::filter() masks stats::filter()  
## x dplyr::lag() masks stats::lag()

library(dplyr)  
  
  
# ======================================================================  
# Question 1  
# ======================================================================  
TopColleges2019 <- read\_csv("ForbesAmericasTopColleges2019.csv")

## Rows: 650 Columns: 17  
## -- Column specification --------------------------------------------------------  
## Delimiter: ","  
## chr (5): Name, City, State, Public/Private, Website  
## dbl (12): Rank, Undergraduate Population, Student Population, Net Price, Ave...  
##   
## i Use `spec()` to retrieve the full column specification for this data.  
## i Specify the column types or set `show\_col\_types = FALSE` to quiet this message.

# ======================================================================  
# Question 2  
# ======================================================================  
TopColleges2019 %>%  
 filter(Name %in%   
 c("Howard University",  
 "American University",  
 "George Washington University")) %>%  
 select(Name, Rank) %>%  
 arrange(desc(Rank))

## # A tibble: 3 x 2  
## Name Rank  
## <chr> <dbl>  
## 1 Howard University 388  
## 2 American University 126  
## 3 George Washington University 78

# ======================================================================  
# Question 3  
# ======================================================================  
TopColleges2019 %>%  
 slice(384:394) %>%  
 select(Name, Rank)

## # A tibble: 11 x 2  
## Name Rank  
## <chr> <dbl>  
## 1 St. Edward's University 384  
## 2 University of Hawaii, Manoa 385  
## 3 Augustana College 386  
## 4 Covenant College 387  
## 5 Howard University 388  
## 6 Union University (TN) 389  
## 7 Iona College 390  
## 8 Lipscomb University 391  
## 9 Carroll College 392  
## 10 Berry College 393  
## 11 Elizabethtown College 394

# ======================================================================  
# Question 4  
# ======================================================================  
TopColleges2019 %>%  
 filter(Rank >= 384, Rank <= 394) %>%  
 select(Name, Rank)

## # A tibble: 11 x 2  
## Name Rank  
## <chr> <dbl>  
## 1 St. Edward's University 384  
## 2 University of Hawaii, Manoa 385  
## 3 Augustana College 386  
## 4 Covenant College 387  
## 5 Howard University 388  
## 6 Union University (TN) 389  
## 7 Iona College 390  
## 8 Lipscomb University 391  
## 9 Carroll College 392  
## 10 Berry College 393  
## 11 Elizabethtown College 394

# ======================================================================  
# Question 5  
# ======================================================================  
TM <- tribble(  
 ~Name, ~Gender, ~Weight, ~Height, ~Age, ~EducationLevel,  
 #-----|-------|---------|-------|-------|---------------  
 "Leon", "Male", 202, "6ft0in", 30, "BS",  
 "Mary", "Female", 140, "5ft4in", 28, "BS",  
 "Alice","Female", 133, "5ft7in", 34, "MS",  
 "Ralph", "Male", 188, "6ft2in", 31, "MS",  
 "Brenda","Female", 176, "5ft8in", 27, "BS"  
)  
  
  
TM

## # A tibble: 5 x 6  
## Name Gender Weight Height Age EducationLevel  
## <chr> <chr> <dbl> <chr> <dbl> <chr>   
## 1 Leon Male 202 6ft0in 30 BS   
## 2 Mary Female 140 5ft4in 28 BS   
## 3 Alice Female 133 5ft7in 34 MS   
## 4 Ralph Male 188 6ft2in 31 MS   
## 5 Brenda Female 176 5ft8in 27 BS

RC <- read\_csv("Name,Gender,Weight,Height,Age,EducationLevel   
 Leon,Male,202,6ft0in,30,BS  
 Mary,Female,140,5ft4in,28,BS  
 Alice,Female,133,5ft7in,34,MS  
 Ralph,Male,188,6ft2in,31,MS  
 Brenda,Female,176,5ft8in,27,BS")

## Rows: 5 Columns: 6  
## -- Column specification --------------------------------------------------------  
## Delimiter: ","  
## chr (4): Name, Gender, Height, EducationLevel  
## dbl (2): Weight, Age  
##   
## i Use `spec()` to retrieve the full column specification for this data.  
## i Specify the column types or set `show\_col\_types = FALSE` to quiet this message.

RC

## # A tibble: 5 x 6  
## Name Gender Weight Height Age EducationLevel  
## <chr> <chr> <dbl> <chr> <dbl> <chr>   
## 1 Leon Male 202 6ft0in 30 BS   
## 2 Mary Female 140 5ft4in 28 BS   
## 3 Alice Female 133 5ft7in 34 MS   
## 4 Ralph Male 188 6ft2in 31 MS   
## 5 Brenda Female 176 5ft8in 27 BS

read\_csv("Name,Gender,Weight,Height,Age,EducationLevel\nLeon,Male,202,6ft0in,30,BS\n  
 Mary,Female,140,5ft4in,28,BS\nAlice,Female,133,5ft7in,34,MS\n  
 Ralph,Male,188,6ft2in,31,MS\nBrenda,Female,176,5ft8in,27,BS") -> NL

## Rows: 5 Columns: 6  
## -- Column specification --------------------------------------------------------  
## Delimiter: ","  
## chr (4): Name, Gender, Height, EducationLevel  
## dbl (2): Weight, Age  
##   
## i Use `spec()` to retrieve the full column specification for this data.  
## i Specify the column types or set `show\_col\_types = FALSE` to quiet this message.

NL

## # A tibble: 5 x 6  
## Name Gender Weight Height Age EducationLevel  
## <chr> <chr> <dbl> <chr> <dbl> <chr>   
## 1 Leon Male 202 6ft0in 30 BS   
## 2 Mary Female 140 5ft4in 28 BS   
## 3 Alice Female 133 5ft7in 34 MS   
## 4 Ralph Male 188 6ft2in 31 MS   
## 5 Brenda Female 176 5ft8in 27 BS