

Exercise 4: Base R vs. Tidyverse

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Base R tasks

1. Download the food_coded.csv file
2. Load the CSV file into your R environment.

```
food <- read.csv("food_coded.csv")
```

3. Extract the first 95 rows.

```
foodextraction <- food[1:95,]  
head(foodextraction)
```

```
##      GPA Gender breakfast calories_chicken calories_day calories_scone coffee  
## 1  2.4      2         1             430          NaN          315          1  
## 2 3.654      1         1             610           3          420          2  
## 3  3.3      1         1             720           4          420          2  
## 4  3.2      1         1             430           3          420          2  
## 5  3.5      1         1             720           2          420          2  
## 6 2.25      1         1             610           3          980          2
```

```
##      comfort_food  
## 1              none  
## 2 chocolate, chips, ice cream  
## 3 frozen yogurt, pizza, fast food  
## 4 Pizza, Mac and cheese, ice cream  
## 5 Ice cream, chocolate, chips  
## 6 Candy, brownies and soda.
```

```
##      comfort_food_reasons  
## 1 we dont have comfort  
## 2 Stress, bored, anger  
## 3 stress, sadness  
## 4 Boredom  
## 5 Stress, boredom, cravings  
## 6 None, i don't eat comfort food. I just eat when i'm hungry.
```

```
##      comfort_food_reasons_coded cook comfort_food_reasons_coded.1 cuisine  
## 1              9      2              9      NaN  
## 2              1      3              1      1  
## 3              1      1              1      3  
## 4              2      2              2      2  
## 5              1      1              1      2  
## 6              4      3              4      NaN
```

```
##  
## 1  
## 2 I eat about three times a day with some snacks. I try to eat healthy but it doesn't always
```

```

## 3 toast and fruit for breakfast, salad for lun
## 4 College diet, cheap and easy :
## 5 I try to eat healthy but often struggle because of living on campus. I still try to keep the choic
## 6 My current diet is terrible. I barely ha
## diet_current_coded drink
## 1 1 1
## 2 2 2
## 3 3 1
## 4 2 2
## 5 2 2
## 6 2 2
##
## 1
## 2
## 3 sometimes choosing to eat f
## 4
## 5 I have eaten generally the same foods but I do find myself eating the same food frequently due to v
## 6
## eating_changes_coded eating_changes_coded1 eating_out employment ethnic_food
## 1 1 1 3 3 1
## 2 1 2 2 2 4
## 3 1 3 2 3 5
## 4 1 3 2 3 5
## 5 3 4 2 2 4
## 6 1 3 1 3 4
## exercise father_education father_profession fav_cuisine fav_cuisine_coded
## 1 1 5 profesor Arabic cuisine 3
## 2 1 2 Self employed Italian 1
## 3 2 2 owns business italian 1
## 4 3 2 Mechanic Turkish 3
## 5 1 4 IT Italian 1
## 6 2 1 Taxi Driver African 6
## fav_food food_childhood fries fruit_day
## 1 1 rice and chicken 2 5
## 2 1 chicken and biscuits, beef soup, baked beans 1 4
## 3 3 mac and cheese, pizza, tacos 1 5
## 4 1 Beef stroganoff, tacos, pizza 2 4
## 5 3 Pasta, chicken tender, pizza 1 4
## 6 3 Fries, plaintain & fried fish 1 2
## grade_level greek_food healthy_feeling
## 1 2 5 2
## 2 4 4 5
## 3 3 5 6
## 4 4 5 7
## 5 4 4 6
## 6 2 2 4
##
## healthy_meal
## 1 looks not oily
## 2 Grains, Veggies, (more of grains and veggies), small protein and fruit with dairy
## 3 usually includes natural ingredients; nonprocessed food
## 4 Fresh fruits& vegetables, organic meats
## 5 A lean protein such as grilled chicken, green vegetables and brown rice or other whole grain
## 6 Requires veggies, fruits and a cooked meal.
##

```

```

## 1
## 2 Try to eat 5-6 small meals a day. While trying to properly distribute carbs, protein, fruits, vegg
## 3 i would say my ideal diet is
## 4 Healthy, fresh veggies/fruits
## 5 Ideally I would like to be able to eat healthier foods in order
## 6 My ideal diet is to eat 3 times a day including breakfast on time. E
## ideal_diet_coded income indian_food italian_food life_rewarding
## 1 8 5 5 5 1
## 2 3 4 4 4 1
## 3 6 6 5 5 7
## 4 2 6 5 5 2
## 5 2 6 2 5 1
## 6 2 1 5 5 4
## marital_status
## 1 1
## 2 2
## 3 2
## 4 2
## 5 1
## 6 2
##
## 1
## 2
## 3 chicken and rice with veggies, pasta, some ki
## 4 Grilled chicken \nStuffed Sh
## 5 Chicken Parmesan, Pulled Pork, Spagi
## 6 Anything they'd want. I'd ask them before hand what they want to eat and it depends on which type
## mother_education mother_profession nutritional_check on_off_campus
## 1 1 unemployed 5 1
## 2 4 Nurse RN 4 1
## 3 2 owns business 4 2
## 4 4 Special Education Teacher 2 1
## 5 5 Substance Abuse Conselor 3 1
## 6 1 Hair Braider 1 1
## parents_cook pay_meal_out persian_food self_perception_weight soup sports
## 1 1 2 5 3 1 1
## 2 1 4 4 3 1 1
## 3 1 3 5 6 1 2
## 4 1 2 5 5 1 2
## 5 1 4 2 4 1 1
## 6 2 5 5 5 1 2
## thai_food tortilla_calories turkey_calories type_sports veggies_day vitamins
## 1 1 1165 345 car racing 5 1
## 2 2 725 690 Basketball 4 2
## 3 5 1165 500 none 5 1
## 4 5 725 690 nan 3 1
## 5 4 940 500 Softball 4 2
## 6 4 940 345 None. 1 2
## waffle_calories weight
## 1 1315 187
## 2 900 155
## 3 900 I'm not answering this.
## 4 1315 Not sure, 240
## 5 760 190

```

4. Look at the following variables using both name and column index/number.

- GPA
- calories_chicken
- drink
- fav_cuisine
- father_profession
- mother_profession

```
a<- food[food$GPA==3.3 ,]
b<-as.data.frame(food[, 'GPA'])
```

```
food[, 'GPA']
```

```
## [1] "2.4"      "3.654"    "3.3"      "3.2"      "3.5"
## [6] "2.25"     "3.8"      "3.3"      "3.3"      "3.3"
## [11] "3.5"      "3.904"    "3.4"      "3.6"      "3.1"
## [16] "nan"      "4"        "3.6"      "3.4"      "2.2"
## [21] "3.3"      "3.87"     "3.7"      "3.7"      "3.9"
## [26] "2.8"      "3.7"      "3"        "3.2"      "3.5"
## [31] "4"        "4"        "3.4"      "2.8"      "3.65"
## [36] "3"        "3.7"      "3.4"      "3.89"     "3"
## [41] "3.4"      "2.9"      "3.6"      "3.5"      "3.2"
## [46] "3.605"    "3.8"      "2.8"      "3.5"      "3.83"
## [51] "3.6"      "3.3"      "3.3"      "3.292"    "3.5"
## [56] "3.35"     "3.8"      "2.8"      "3.5"      "3.7"
## [61] "3.6"      "Personal  " "3.9"      "2.6"      "3.5"
## [66] "3.2"      "3"        "3.6"      "3.2"      "3.67"
## [71] "3.73"     "4"        "3.1"      "3.79 bitch" "2.71"
## [76] "3"        "3.7"      "3.1"      "3"        "3.9"
## [81] "3.4"      "3.5"      "3.7"      "3.7"      "3.83"
## [86] "2.6"      "3"        "3.2"      "3.5"      "3.2"
## [91] "3.68"     "3.8"      "3.3"      "3.2"      "3.75"
## [96] "3.5"      "3.92"     "3.9"      "3.9"      "3.2"
## [101] "3.5"      "3.4"      "nan"      "3.7"      "Unknown"
## [106] "3"        "3"        "3.8"      "3.8"      "3.4"
## [111] "3.7"      "2.9"      "3.9"      "3.6"      "2.8"
## [116] "3.3"      "3.4"      "3.77"     "3.63"     "3.2"
## [121] "3.5"      "3"        "3.882"    "3"        "3.9"
```

```
food[, 1]
```

```
## [1] "2.4"      "3.654"    "3.3"      "3.2"      "3.5"
## [6] "2.25"     "3.8"      "3.3"      "3.3"      "3.3"
## [11] "3.5"      "3.904"    "3.4"      "3.6"      "3.1"
## [16] "nan"      "4"        "3.6"      "3.4"      "2.2"
## [21] "3.3"      "3.87"     "3.7"      "3.7"      "3.9"
## [26] "2.8"      "3.7"      "3"        "3.2"      "3.5"
## [31] "4"        "4"        "3.4"      "2.8"      "3.65"
## [36] "3"        "3.7"      "3.4"      "3.89"     "3"
## [41] "3.4"      "2.9"      "3.6"      "3.5"      "3.2"
## [46] "3.605"    "3.8"      "2.8"      "3.5"      "3.83"
## [51] "3.6"      "3.3"      "3.3"      "3.292"    "3.5"
## [56] "3.35"     "3.8"      "2.8"      "3.5"      "3.7"
```

```
## [61] "3.6"      "Personal " "3.9"      "2.6"      "3.5"
## [66] "3.2"      "3"         "3.6"      "3.2"      "3.67"
## [71] "3.73"     "4"         "3.1"      "3.79 bitch" "2.71"
## [76] "3"        "3.7"      "3.1"      "3"        "3.9"
## [81] "3.4"      "3.5"      "3.7"      "3.7"      "3.83"
## [86] "2.6"      "3"         "3.2"      "3.5"      "3.2"
## [91] "3.68"     "3.8"      "3.3"      "3.2"      "3.75"
## [96] "3.5"      "3.92"     "3.9"      "3.9"      "3.2"
## [101] "3.5"      "3.4"      "nan"      "3.7"      "Unknown"
## [106] "3"        "3"         "3.8"      "3.8"      "3.4"
## [111] "3.7"      "2.9"      "3.9"      "3.6"      "2.8"
## [116] "3.3"      "3.4"      "3.77"     "3.63"     "3.2"
## [121] "3.5"      "3"         "3.882"    "3"        "3.9"
```

```
food[, 'calories_chicken']
```

```
## [1] 430 610 720 430 720 610 610 720 430 430 610 720 430 610 610 430 265 430
## [19] 720 430 610 610 610 610 720 720 610 610 610 265 720 610 610 720 610 610
## [37] 610 720 610 720 430 720 610 430 610 610 430 430 430 430 720 610 610 610
## [55] 610 610 720 610 610 610 610 610 610 610 610 610 720 610 430 720 610 720
## [73] 610 720 265 610 610 265 720 720 430 610 265 430 720 265 610 720 720 610
## [91] 720 610 720 720 610 265 430 720 720 430 610 610 610 610 720 720 430 430
## [109] 430 610 610 265 610 430 610 610 610 610 430 610 610 265 720 720 430
```

```
food[, 4]
```

```
## [1] 430 610 720 430 720 610 610 720 430 430 610 720 430 610 610 430 265 430
## [19] 720 430 610 610 610 610 720 720 610 610 610 265 720 610 610 720 610 610
## [37] 610 720 610 720 430 720 610 430 610 610 430 430 430 430 720 610 610 610
## [55] 610 610 720 610 610 610 610 610 610 610 610 610 720 610 430 720 610 720
## [73] 610 720 265 610 610 265 720 720 430 610 265 430 720 265 610 720 720 610
## [91] 720 610 720 720 610 265 430 720 720 430 610 610 610 610 720 720 430 430
## [109] 430 610 610 265 610 430 610 610 610 610 430 610 610 265 720 720 430
```

```
food[, 'drink']
```

```
## [1] 1 2 1 2 2 2 1 2 1 1 2 1 2 2 2 2 1 2
## [19] 1 2 2 NaN 1 1 2 1 1 2 1 2 1 2 2 1 1 1
## [37] 2 2 1 2 2 1 2 1 1 1 2 1 2 1 1 1 1 2
## [55] 1 2 1 1 2 2 2 1 1 NaN 1 1 2 2 2 2 1 1
## [73] 2 2 2 1 2 2 1 2 2 2 2 1 2 2 2 2 2 1
## [91] 2 2 2 2 2 2 2 2 2 2 1 1 2 2 1 2 2 1
## [109] 2 2 1 2 1 2 2 2 1 1 1 1 2 1 1 2 1
```

```
food[, 16 ]
```

```
## [1] 1 2 1 2 2 2 1 2 1 1 2 1 2 2 2 2 1 2
## [19] 1 2 2 NaN 1 1 2 1 1 2 1 2 1 2 2 1 1 1
## [37] 2 2 1 2 2 1 2 1 1 1 2 1 2 1 1 1 1 2
## [55] 1 2 1 1 2 2 2 1 1 NaN 1 1 2 2 2 2 1 1
## [73] 2 2 2 1 2 2 1 2 2 2 2 1 2 2 2 2 2 1
## [91] 2 2 2 2 2 2 2 2 2 2 1 1 2 2 1 2 2 1
## [109] 2 2 1 2 1 2 2 2 1 1 1 1 2 1 1 2 1
```

```
indexoffood <- foodextraction[,c(1,4,16,26,25,45)]
```

5. Create a new variable for how healthy each person feels but convert the scale from 1 to 10 to 1 to 100.

```
food$healthy_feeling
```

```
## [1] 2 5 6 7 6 4 4 3 7 3 9 1 9 8 2 6 7 8 6 4 5 8 2 4 5
## [26] 8 9 9 4 9 7 5 5 7 1 2 7 4 6 3 10 6 6 6 8 3 4 8 2 9
## [51] 8 8 1 5 10 8 1 9 4 7 3 2 2 8 3 3 3 2 8 3 3 5 3 1 8
## [76] 6 4 4 8 1 4 2 8 4 9 7 3 5 7 7 7 5 8 6 7 10 2 1 8 3
## [101] 2 3 7 4 9 2 7 5 6 5 8 9 10 9 7 10 5 9 5 7 5 5 6 1 3
```

```
food.new <- food
food.new$healthy_feeling <- (food$healthy_feeling)*10
head(food.new$healthy_feeling)
```

```
## [1] 20 50 60 70 60 40
```

6. Filter to students who are female and have GPAs that are above 3.0.

```
gpa_female <- food[food$Gender=="1" & food$GPA > 3.0,]
head(gpa_female)
```

```
## GPA Gender breakfast calories_chicken calories_day calories_scone coffee
## 2 3.654 1 1 610 3 420 2
## 3 3.3 1 1 720 4 420 2
## 4 3.2 1 1 430 3 420 2
## 5 3.5 1 1 720 2 420 2
## 8 3.3 1 1 720 3 420 1
## 9 3.3 1 1 430 NaN 420 1
```

```
## comfort_food
## 2 chocolate, chips, ice cream
## 3 frozen yogurt, pizza, fast food
## 4 Pizza, Mac and cheese, ice cream
## 5 Ice cream, chocolate, chips
## 8 Ice cream, cheeseburgers, chips.
## 9 Donuts, ice cream, chips
```

```
##
```

```
## 2
```

```
## 3
```

```
## 4
```

```
## 5
```

```
## 8 I eat comfort food when im stressed out from school(finals week), when I`m sad, or when i am dealing
```

```
## 9
```

```
## comfort_food_reasons_coded cook comfort_food_reasons_coded.1 cuisine
```

```
## 2 1 3 1 1
```

```
## 3 1 1 1 3
```

```
## 4 2 2 2 2
```

```
## 5 1 1 1 2
```

```
## 8 1 3 1 1
```

```
## 9 2 3 2 1
```

```
##
```

```
## 2 I eat about three times a day with some snacks. I try to eat healthy but it doesn't always
```

```
## 3 toast and fruit for breakfast, salad for lunch
```

```
## 4 College diet, cheap and easy
```

```
## 5 I try to eat healthy but often struggle because of living on campus. I still try to keep the choices
```

```
## 8 I eat a
```

```
## 9
```

```
## diet_current_coded drink
```

```
## 2 2 2
```

```

## 3          3      1
## 4          2      2
## 5          2      2
## 8          1      2
## 9          1      1
##
## 2
## 3
## 4
## 5 I have eaten generally the same foods but I do find myself eating the same food frequently due to v
## 8
## 9
## eating_changes_coded eating_changes_coded1 eating_out employment ethnic_food
## 2          1          2          2          2          4
## 3          1          3          2          3          5
## 4          1          3          2          3          5
## 5          3          4          2          2          4
## 8          2          5          2          2          2
## 9          2          8          5          2          5
## exercise father_education father_profession fav_cuisine
## 2          1          2      Self employed      Italian
## 3          2          2      owns business      italian
## 4          3          2      Mechanic      Turkish
## 5          1          4          IT      Italian
## 8          2          3      Business guy Anything american style.
## 9      NaN          5 High School Principal      Seafood
## fav_cuisine_coded fav_food food_childhood fries
## 2          1          1 chicken and biscuits, beef soup, baked beans      1
## 3          1          3      mac and cheese, pizza, tacos      1
## 4          3          1      Beef stroganoff, tacos, pizza      2
## 5          1          3      Pasta, chicken tender, pizza      1
## 8          5          1      chicken, cheesey potatoes, and hot dogs      1
## 9          1          3      Shrimp, spaghetti      1
## fruit_day grade_level greek_food healthy_feeling
## 2          4          4          4          5
## 3          5          3          5          6
## 4          4          4          5          7
## 5          4          4          4          6
## 8          5          2          3          3
## 9          4          1          5          7
##
## healthy_meal
## 2      Grains, Veggies, (more of grains and veggies), small protein and fruit with dairy
## 3      usually includes natural ingredients; nonprocessed food
## 4      Fresh fruits& vegetables, organic meats
## 5 A lean protein such as grilled chicken, green vegetables and brown rice or other whole grain
## 8      A healthy meal has a piece of meat followed by a lot of fruit and veggies
## 9      Colorful
##
## 2 Try to eat 5-6 small meals a day. While trying to properly distribute carbs, protein, fruits, vegg
## 3      i would say my ideal diet is
## 4      Healthy, fresh veggies/fruits
## 5      Ideally I would like to be able to eat healthier foods in order
## 8      My ideal diet is filled with a lot of fruit and chicken. I also really enjoy eggs any type o
## 9      The s

```

```

## ideal_diet_coded income indian_food italian_food life_rewarding
## 2 3 4 4 4 1
## 3 6 6 5 5 7
## 4 2 6 5 5 2
## 5 2 6 2 5 1
## 8 2 5 1 3 3
## 9 6 5 5 5 8
## marital_status
## 2 2
## 3 2
## 4 2
## 5 1
## 8 1
## 9 2
## meals_dinner_friend
## 2 Pasta, steak, chicken
## 3 chicken and rice with veggies, pasta, some kind of healthy recipe
## 4 Grilled chicken \nStuffed Shells\nHomemade Chili
## 5 Chicken Parmesan, Pulled Pork, Spaghetti and meatballs
## 8 chicken, steak, pasta
## 9 Pasta, Fish, Steak
## mother_education mother_profession nutritional_check on_off_campus
## 2 4 Nurse RN 4 1
## 3 2 owns business 4 2
## 4 4 Special Education Teacher 2 1
## 5 5 Substance Abuse Conselor 3 1
## 8 2 cook 4 1
## 9 5 Elementary School Teacher 2 1
## parents_cook pay_meal_out persian_food self_perception_weight soup sports
## 2 1 4 4 3 1 1
## 3 1 3 5 6 1 2
## 4 1 2 5 5 1 2
## 5 1 4 2 4 1 1
## 8 1 5 1 3 1 2
## 9 2 3 5 4 2 2
## thai_food tortilla_calories turkey_calories type_sports veggies_day vitamins
## 2 2 725 690 Basketball 4 2
## 3 5 1165 500 none 5 1
## 4 5 725 690 nan 3 1
## 5 4 940 500 Softball 4 2
## 8 1 725 500 none 4 2
## 9 5 725 345 none 3 2
## waffle_calories weight
## 2 900 155
## 3 900 I'm not answering this.
## 4 1315 Not sure, 240
## 5 760 190
## 8 1315 137
## 9 760 180

```

7. Find the mean and standard deviation for the following variables, and summarize them in a data frame.

- chicken_calories
- tortilla_calories
- turkey_calories

- waffle_calories

```
food.new <- food[,c(4,54,55,60)]
m <- sapply(food.new, mean, na.rm = T)
sd <- sapply(food.new, sd, na.rm = T)
calories_m_md <- rbind (m, sd)
head(calories_m_md)

##      calories_chicken thai_food tortilla_calories waffle_calories
## m          577.3200  3.336000          947.5806          1073.4000
## sd          131.2142  1.436528          202.0902          248.6671
```

8. Summarize GPA and weight within the gender and cuisine variables.

```
class(food$weight)

## [1] "character"
food$weight <- as.numeric(food$weight)

## Warning: NAs introduced by coercion
food$GPA <- as.numeric(food$GPA)

## Warning: NAs introduced by coercion
food_men <- food[food$Gender ==2,]
food_women <- food[food$Gender ==1,]

gpa_mean_men <- tapply(food_men$GPA, food_men$cuisine, mean, na.rm = T)
gpa_sd_men <- tapply(food_men$GPA, food_men$cuisine, sd, na.rm =T)

gpa_mean_women <- tapply(food_women$GPA, food_women$cuisine, mean, na.rm = T)
gpa_sd_women <- tapply(food_women$GPA, food_women$cuisine, sd, na.rm = T)

weight_mean_men <- tapply(food_men$weight, food_men$cuisine, mean, na.rm = T)
weight_sd_men <- tapply(food_men$weight, food_men$cuisine, mean, na.rm = T)

weight_mean_women <- tapply(food_women$weight, food_women$cuisine, mean, na.rm = T)
weight_sd_women <- tapply(food_women$weight, food_women$cuisine, mean, na.rm = T)
```

Tidyverse tasks

1. Download the facebook-fact-check.csv

```
fb_fact <- read.csv ("facebook-fact-check.csv")
library(tidyverse)

## -- Attaching packages ----- tidyverse 1.3.1 --
## v ggplot2 3.3.5      v purrr  0.3.4
## v tibble  3.1.5      v dplyr  1.0.7
## v tidyr   1.1.4      v stringr 1.4.0
## v readr   2.0.0      v forcats 0.5.1

## -- Conflicts ----- tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()    masks stats::lag()
```

2. Load the CSV file into your R environment.

3. Extract the last 500 rows.

```
fb_extract <- fb_fact %>% slice_tail(n = 500)
head(fb_extract)
```

```
##   account_id      post_id  Category    Page
## 1 62317591679 1.015386e+16 mainstream Politico
## 2 62317591679 1.015386e+16 mainstream Politico
## 3 62317591679 1.015386e+16 mainstream Politico
## 4 62317591679 1.015386e+16 mainstream Politico
## 5 62317591679 1.015386e+16 mainstream Politico
## 6 62317591679 1.015386e+16 mainstream Politico
##                                     Post.URL Date.Published
## 1 https://www.facebook.com/politico/posts/10153861466546680 2016-09-26
## 2 https://www.facebook.com/politico/posts/10153861478296680 2016-09-26
## 3 https://www.facebook.com/politico/posts/10153861481676680 2016-09-26
## 4 https://www.facebook.com/politico/posts/10153861491796680 2016-09-26
## 5 https://www.facebook.com/politico/posts/10153861497961680 2016-09-26
## 6 https://www.facebook.com/politico/posts/10153861505681680 2016-09-26
##   Post.Type      Rating Debate share_count reaction_count comment_count
## 1    video mostly true    yes      6857      28505      1636
## 2    video mostly true    yes        48        536       215
## 3    link  mostly true    yes     1849      2352       181
## 4    video mostly true    yes        91     1294       141
## 5    video mostly true    yes        24       321        73
## 6    video mostly true    yes       337     1519       473
```

Hint: Check out the [top_n() page] (https://rdrr.io/github/YTLogos/dplyr/man/top_n.html) to figure out how to use top_n().

4. Look at the even-numbered column indices only. Identify them by name.

```
row_odd <- seq_len(nrow(fb_extract)) %% 2
data_row_odd <- fb_extract[row_odd == 1, ]
colnames(data_row_odd)
```

```
## [1] "account_id"      "post_id"          "Category"          "Page"
## [5] "Post.URL"        "Date.Published"   "Post.Type"         "Rating"
## [9] "Debate"          "share_count"      "reaction_count"    "comment_count"
```

5. Using mutate, create a new variable called post_type_coded that renames each post type to the following:

- link = 1
- photo = 2
- text = 3
- video = 4

Hint: look up case_when within tidyverse. You can also use if_else

```
fb_extract <- fb_extract %>%
  mutate(post_type_coded = ifelse("Post.Type" == "link", '1',
                                ifelse("Post.Type" == 'photo', '2',
                                ifelse("Post.Type" == 'text', '3', '4')))))
```

6. Arrange page names in reverse order.

```
fb_extract <- fb_extract %>% arrange(desc(Page))
head(fb_extract)
```

```
##      account_id      post_id Category      Page
## 1 1.145179e+14 1.462399e+15      left The Other 98%
## 2 1.145179e+14 1.462468e+15      left The Other 98%
## 3 1.145179e+14 1.462507e+15      left The Other 98%
## 4 1.145179e+14 1.462536e+15      left The Other 98%
## 5 1.145179e+14 1.462680e+15      left The Other 98%
## 6 1.145179e+14 1.462684e+15      left The Other 98%
##
##                                     Post.URL Date.Published
## 1 https://www.facebook.com/TheOther98/posts/1462399387104368      2016-09-19
## 2 https://www.facebook.com/TheOther98/posts/1462468047097502      2016-09-19
## 3 https://www.facebook.com/TheOther98/posts/1462507497093557      2016-09-19
## 4 https://www.facebook.com/TheOther98/posts/1462535517090755      2016-09-19
## 5 https://www.facebook.com/TheOther98/posts/1462679840409656      2016-09-19
## 6 https://www.facebook.com/TheOther98/posts/1462684057075901      2016-09-19
##      Post.Type      Rating Debate share_count reaction_count comment_count
## 1      photo no factual content          2          26990          590
## 2      video      mostly true          NA          7580          364
## 3      link      mostly true      26726          20354          1471
## 4      link      mostly true      3899          12225          378
## 5      link      mostly true      483          5317          101
## 6      video      mostly true      688          3329          37
##      post_type_coded
## 1          4
## 2          4
## 3          4
## 4          4
## 5          4
## 6          4
```

7. Find the mean and standard deviation for the following variables, and summarize them.

- share_count
- reaction_count
- comment_count

```
fb_fact %>%
  summarise(share_count = mean(share_count, na.rm=T),
            reaction_count = mean(reaction_count, na.rm=T),
            comment_count = mean(comment_count, na.rm=T))
```

```
##      share_count reaction_count comment_count
## 1      4044.816      5364.285      516.1022
```

8. Summarize the mean and standard deviations in Question 7 with the “mainstream” values in the category variable.

```
fb_main <- fb_fact %>%
  filter(Category == "mainstream") %>%
  summarize(share_count_m = mean(share_count, na.rm=T),
            reaction_count_m = mean(reaction_count, na.rm=T),
            comment_count_m = mean(comment_count, na.rm=T),
            share_count_sd = sd(reaction_count, na.rm=T),
            reaction_count_sd = sd(reaction_count, na.rm=T),
            comment_count_sd = sd(comment_count, na.rm=T))
```

Submit

Email me (laaker@wisc.edu) the link to your `ps811-exercises` repository when you are done.