Lab-06

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2/24/2022

```
library(tidyverse)
```

```
## -- Attaching packages ------------------------------------- tidyverse 1.3.1 --
```

```
## 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   2.1.1      v forcats 0.5.1
```

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

Exercise 1: singer

```
songs <- read_csv("https://raw.githubusercontent.com/bwiernik/progdata-class/master/data/singer/songs.cs
```

```
## Rows: 22 Columns: 3
## -- Column specification ---------------------------------------------------
## Delimiter: ","
## chr (2): title, artist_name
## dbl (1): year
##
## 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.
```

```
locations <- read_csv("https://raw.githubusercontent.com/bwiernik/progdata-class/master/data/singer/loc
```

```
## Rows: 14 Columns: 4
## -- Column specification ---------------------------------------------------
## Delimiter: ","
## chr (4): artist_name, city, release, title
##
## 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.
```

```
(time <- as_tibble(songs) |>
   rename(song = title))
```

```
## # A tibble: 22 x 3
##    song                     artist_name      year
##    <chr>                    <chr>           <dbl>
##  1 Corduroy                 Pearl Jam        1994
##  2 Grievance                Pearl Jam        2000
##  3 Stupidmop                Pearl Jam        1994
##  4 Present Tense            Pearl Jam        1996
```

```
##  5 MFC                                   Pearl Jam        1998
##  6 Lukin                                 Pearl Jam        1996
##  7 It's Lulu                             The Boo Radleys  1995
##  8 Sparrow                               The Boo Radleys  1992
##  9 Martin_ Doom! It's Seven O'Clock      The Boo Radleys  1995
## 10 Leaves And Sand                       The Boo Radleys  1993
## # ... with 12 more rows
```

```r
(album <- as_tibble(locations) |>
   select(title, everything()) |>
   rename(album = release,
          song  = title))
```

```
## # A tibble: 14 x 4
##    song                                            artist_name   city   album
##    <chr>                                           <chr>         <chr>  <chr>
##  1 "Grievance"                                     Pearl Jam     Seatt~ Binau~
##  2 "Stupidmop"                                     Pearl Jam     Seatt~ Vital~
##  3 "Present Tense"                                 Pearl Jam     Seatt~ No Co~
##  4 "MFC"                                           Pearl Jam     Seatt~ Live ~
##  5 "Lukin"                                         Pearl Jam     Seatt~ Seatt~
##  6 "Stuck On Amber"                                The Boo Rad~  Liver~ Wake ~
##  7 "It's Lulu"                                     The Boo Rad~  Liver~ Best ~
##  8 "Sparrow"                                       The Boo Rad~  Liver~ Every~
##  9 "High as Monkeys"                               The Boo Rad~  Liver~ Kings~
## 10 "Butterfly McQueen"                             The Boo Rad~  Liver~ Giant~
## 11 "My One and Only Love"                          Carly Simon   New Y~ Moonl~
## 12 "It Was So Easy  (LP Version)"                  Carly Simon   New Y~ No Se~
## 13 "I've Got A Crush On You"                       Carly Simon   New Y~ Cloud~
## 14 "Manha De Carnaval (Theme from \"Black Orpheus\")" Carly Simon New Y~ Into ~
```

1-

```r
time |>
  left_join(album, by = c("song","artist_name"))
```

```
## # A tibble: 22 x 5
##    song                                artist_name      year city       album
##    <chr>                               <chr>           <dbl> <chr>      <chr>
##  1 Corduroy                            Pearl Jam        1994 <NA>       <NA>
##  2 Grievance                           Pearl Jam        2000 Seattle,~  Binaural
##  3 Stupidmop                           Pearl Jam        1994 Seattle,~  Vitalogy
##  4 Present Tense                       Pearl Jam        1996 Seattle,~  No Code
##  5 MFC                                 Pearl Jam        1998 Seattle,~  Live On Two~
##  6 Lukin                               Pearl Jam        1996 Seattle,~  Seattle Was~
##  7 It's Lulu                           The Boo Radleys  1995 Liverpoo~  Best Of
##  8 Sparrow                             The Boo Radleys  1992 Liverpoo~  Everything'~
##  9 Martin_ Doom! It's Seven O'Clock    The Boo Radleys  1995 <NA>       <NA>
## 10 Leaves And Sand                     The Boo Radleys  1993 <NA>       <NA>
## # ... with 12 more rows
```

2-

```r
time |>
  full_join(album, by = c("song","artist_name"))
```

```
## # A tibble: 23 x 5
```

```
##    song                            artist_name    year city       album
##    <chr>                           <chr>         <dbl> <chr>      <chr>
##  1 Corduroy                        Pearl Jam      1994 <NA>       <NA>
##  2 Grievance                       Pearl Jam      2000 Seattle,~ Binaural
##  3 Stupidmop                       Pearl Jam      1994 Seattle,~ Vitalogy
##  4 Present Tense                   Pearl Jam      1996 Seattle,~ No Code
##  5 MFC                             Pearl Jam      1998 Seattle,~ Live On Two~
##  6 Lukin                           Pearl Jam      1996 Seattle,~ Seattle Was~
##  7 It's Lulu                       The Boo Radleys 1995 Liverpoo~ Best Of
##  8 Sparrow                         The Boo Radleys 1992 Liverpoo~ Everything'~
##  9 Martin_ Doom! It's Seven O'Clock The Boo Radleys 1995 <NA>       <NA>
## 10 Leaves And Sand                 The Boo Radleys 1993 <NA>       <NA>
## # ... with 13 more rows
```

3-

```r
time |>
  anti_join(album, by = "song")
```

```
## # A tibble: 9 x 3
##    song                            artist_name      year
##    <chr>                           <chr>           <dbl>
## 1 Corduroy                         Pearl Jam        1994
## 2 Martin_ Doom! It's Seven O'Clock The Boo Radleys  1995
## 3 Leaves And Sand                  The Boo Radleys  1993
## 4 Comb Your Hair                   The Boo Radleys  1998
## 5 Mine Again                       Mariah Carey     2005
## 6 Don't Forget About Us            Mariah Carey     2005
## 7 Babydoll                         Mariah Carey     1997
## 8 Don't Forget About Us            Mariah Carey     2005
## 9 Vision Of Love                   Mariah Carey     1990
```

4-

```r
time |>
  anti_join(album, by = "artist_name")
```

```
## # A tibble: 5 x 3
##    song                  artist_name    year
##    <chr>                 <chr>         <dbl>
## 1 Mine Again             Mariah Carey  2005
## 2 Don't Forget About Us Mariah Carey  2005
## 3 Babydoll               Mariah Carey  1997
## 4 Don't Forget About Us Mariah Carey  2005
## 5 Vision Of Love         Mariah Carey  1990
```

5-

```r
time |>
  full_join(album, by = "song")
```

```
## # A tibble: 23 x 6
##    song           artist_name.x   year artist_name.y  city       album
##    <chr>          <chr>         <dbl> <chr>          <chr>      <chr>
##  1 Corduroy       Pearl Jam      1994 <NA>           <NA>       <NA>
##  2 Grievance      Pearl Jam      2000 Pearl Jam      Seattle,~ Binaural
##  3 Stupidmop      Pearl Jam      1994 Pearl Jam      Seattle,~ Vitalogy
##  4 Present Tense  Pearl Jam      1996 Pearl Jam      Seattle,~ No Code
```

```
##  5 MFC            Pearl Jam      1998 Pearl Jam       Seattle,~ Live On Two Le~
##  6 Lukin          Pearl Jam      1996 Pearl Jam       Seattle,~ Seattle Washin~
##  7 It's Lulu      The Boo Radle~ 1995 The Boo Radle~ Liverpoo~ Best Of
##  8 Sparrow        The Boo Radle~ 1992 The Boo Radle~ Liverpoo~ Everything's A~
##  9 Martin_ Doom! ~ The Boo Radle~ 1995 <NA>          <NA>      <NA>
## 10 Leaves And Sand The Boo Radle~ 1993 <NA>          <NA>      <NA>
## # ... with 13 more rows
```

Exercise 2: LOTR

```
fell <- read_csv("https://raw.githubusercontent.com/jennybc/lotr-tidy/master/data/The_Fellowship_Of_The_
```

```
## Rows: 3 Columns: 4
## -- Column specification -------------------------------------------------
## Delimiter: ","
## chr (2): Film, Race
## dbl (2): Female, Male
##
## 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.
```

```
ttow <- read_csv("https://raw.githubusercontent.com/jennybc/lotr-tidy/master/data/The_Two_Towers.csv")
```

```
## Rows: 3 Columns: 4
## -- Column specification -------------------------------------------------
## Delimiter: ","
## chr (2): Film, Race
## dbl (2): Female, Male
##
## 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.
```

```
retk <- read_csv("https://raw.githubusercontent.com/jennybc/lotr-tidy/master/data/The_Return_Of_The_King
```

```
## Rows: 3 Columns: 4
## -- Column specification -------------------------------------------------
## Delimiter: ","
## chr (2): Film, Race
## dbl (2): Female, Male
##
## 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.
```

```
retk |>
  full_join(fell, by = c("Film", "Race", "Female", "Male")) |>
  full_join(ttow, by = c("Film", "Race", "Female", "Male"))
```

```
## # A tibble: 9 x 4
##   Film                     Race    Female  Male
##   <chr>                    <chr>    <dbl> <dbl>
## 1 The Return Of The King   Elf        183   510
## 2 The Return Of The King   Hobbit       2  2673
## 3 The Return Of The King   Man        268  2459
## 4 The Fellowship Of The Ring Elf     1229   971
## 5 The Fellowship Of The Ring Hobbit    14  3644
## 6 The Fellowship Of The Ring Man        0  1995
## 7 The Two Towers           Elf        331   513
```

```
## 8 The Two Towers            Hobbit      0  2463
## 9 The Two Towers            Man       401  3589
```

```r
fell |>
  anti_join(retk, by = "Race") |>
  anti_join(ttow, by = "Race")
```

```
## # A tibble: 0 x 4
## # ... with 4 variables: Film <chr>, Race <chr>, Female <dbl>, Male <dbl>
```