FunctionHw(3/21)

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Function for the Portal Data Set

```
surveys <-read.csv(file = "../data-raw/surveys.csv")
species <-read.csv(file = "../data-raw/species.csv")
plots <- read.csv(file = "../data-raw/plots.csv")
intersect(colnames(surveys), colnames(species))
```

```
## [1] "species_id"
```

```
a = inner_join(surveys, species, by = "species_id")
head(a)
```

```
##   record_id month day year plot_id species_id sex hindfoot_length weight
## 1         1     7  16 1977       2         NL   M              32     NA
## 2         2     7  16 1977       3         NL   M              33     NA
## 3         3     7  16 1977       2         DM   F              37     NA
## 4         4     7  16 1977       7         DM   M              36     NA
## 5         5     7  16 1977       3         DM   M              35     NA
## 6         6     7  16 1977       1         PF   M              14     NA
##         genus  species   taxa
## 1     Neotoma albigula Rodent
## 2     Neotoma albigula Rodent
## 3   Dipodomys merriami Rodent
## 4   Dipodomys merriami Rodent
## 5   Dipodomys merriami Rodent
## 6 Perognathus   flavus Rodent
```

```
my_function <- function(a, genus_name = "Dipodomys", species_name = "merriami") {
  a %>%
  group_by(year) %>%
  filter(genus == genus_name | species == species_name) %>%
  summarize(count = n()) -> output
  return(output)
}
my_function(a = a)
```

```
## # A tibble: 26 x 2
##     year count
```

```
##      <int> <int>
##  1  1977    374
##  2  1978    731
##  3  1979    444
##  4  1980    929
##  5  1981   1036
##  6  1982   1080
##  7  1983    976
##  8  1984    580
##  9  1985    990
## 10  1986    610
## # ... with 16 more rows
```

```
my_function(a =a) %>%
  ggplot(mapping = aes(x = year, y = count)) +
  geom_line(color = "pink")
```
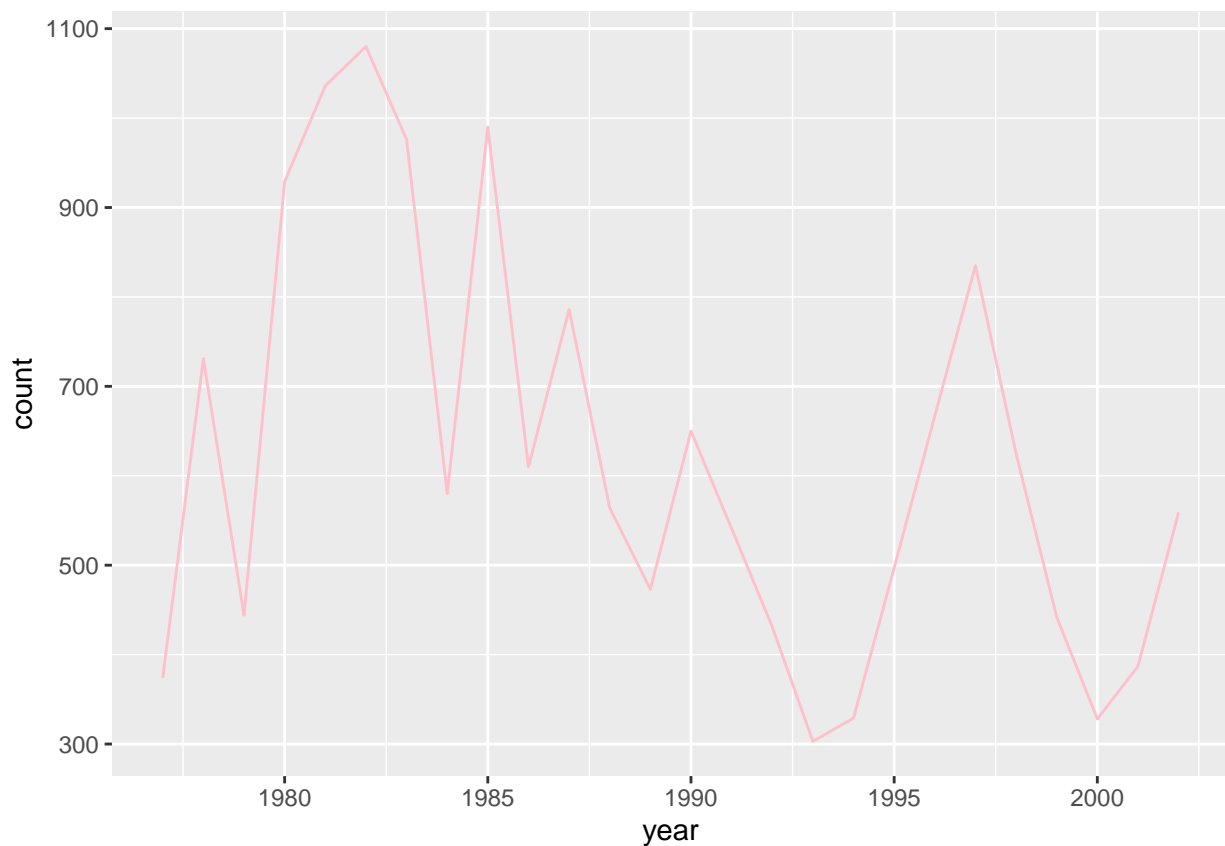


```
my_function(a = a, "Chaetodipus", "penicillatus") %>%
  ggplot(mapping = aes(x = year, y = count)) +
  geom_point(size = 1, color = "yellow" ) +
  geom_line(size = 2, color = "red") +
  labs(x = "year", y = "Number of Individuals")
```

```
## Warning: Using `size` aesthetic for lines was deprecated in ggplot2 3.4.0.
## i Please use `linewidth` instead.
```