Week7InClassWork.rmd

Peyton Hall

02/22/2024

```
library(ggplot2)

#install.packages("tidyverse")
library(tidyverse)
```

```
## -- Attaching core tidyverse packages ------------------------ tidyverse 2.0.0 --
## v dplyr     1.1.4     v readr     2.1.5
## v forcats   1.0.0     v stringr   1.5.1
## v lubridate 1.9.3     v tibble    3.2.1
## v purrr     1.0.2     v tidyr     1.3.1
## -- Conflicts ------------------------------------------ tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()    masks stats::lag()
## i Use the conflicted package (<http://conflicted.r-lib.org/>) to force all conflicts to become errors
```

```
head(cars)
```

```
##   speed dist
## 1     4    2
## 2     4   10
## 3     7    4
## 4     7   22
## 5     8   16
## 6     9   10
```

```
cars %>% head() # use pipe operator, then print six lines
```

```
##   speed dist
## 1     4    2
## 2     4   10
## 3     7    4
## 4     7   22
## 5     8   16
## 6     9   10
```

```
round(sqrt(length(InsectSprays$count)),digits = 2)
```

```
## [1] 8.49
```

```
InsectSprays$count%>%
  length() %>%
  sqrt() %>%
  round(digits = 2)
```

```
## [1] 8.49
```

Select()

```
df<-data.frame(A=1:5, B=6:10, C=11:15)

df2<-select(df, A, C)

df3<-df%>%
  select(B,C)

df4<-df%>%
  select(-C)
```

Example

```
str(Orange)
```

```
## Classes 'nfnGroupedData', 'nfGroupedData', 'groupedData' and 'data.frame':   35 obs. of  3 variables
##  $ Tree         : Ord.factor w/ 5 levels "3"<"1"<"5"<"2"<..: 2 2 2 2 2 2 2 4 4 4 ...
##  $ age          : num  118 484 664 1004 1231 ...
##  $ circumference: num  30 58 87 115 120 142 145 33 69 111 ...
##  - attr(*, "formula")=Class 'formula'  language circumference ~ age | Tree
##   .. ..- attr(*, ".Environment")=<environment: R_EmptyEnv>
##  - attr(*, "labels")=List of 2
##   ..$ x: chr "Time since December 31, 1968"
##   ..$ y: chr "Trunk circumference"
##  - attr(*, "units")=List of 2
##   ..$ x: chr "(days)"
##   ..$ y: chr "(mm)"
```

```
Orange2<-Orange %>%
  select(Tree, circumference)
```

filter() function

```
df5<-filter(df,A>2)

df%>%filter(A>2)
```

```
##   A  B  C
## 1 3  8 13
## 2 4  9 14
## 3 5 10 15
```

```
df
```

```
##   A  B  C
## 1 1  6 11
## 2 2  7 12
## 3 3  8 13
## 4 4  9 14
## 5 5 10 15
```

```
df%>%filter(A>2,B<8)
```

```
## [1] A B C
## <0 rows> (or 0-length row.names)
```

```
df%>%filter(A>2 | B<7)
```

```
##   A  B  C
## 1 1  6 11
## 2 3  8 13
## 3 4  9 14
## 4 5 10 15
```

Example

```
ex1<-Orange%>% filter(Tree=="1")

ex2<-Orange%>% filter(Tree=="1", circumference>100)

ex3<-Orange%>% filter(Tree==1 & Tree==2 & Tree==3 & circumference>100)

ex4<-Orange%>% filter((Tree==1|Tree==2|Tree==3) & circumference>100)

ex4<-Orange%>% filter(Tree=="1"|Tree=="2"|Tree=="3", circumference>100)
ex5<-Orange%>% filter(Tree %in% c("1","2","3") & circumference>100)

df%>%filter(A%in%c(1,3,5))
```

```
##   A  B  C
## 1 1  6 11
## 2 3  8 13
## 3 5 10 15
```