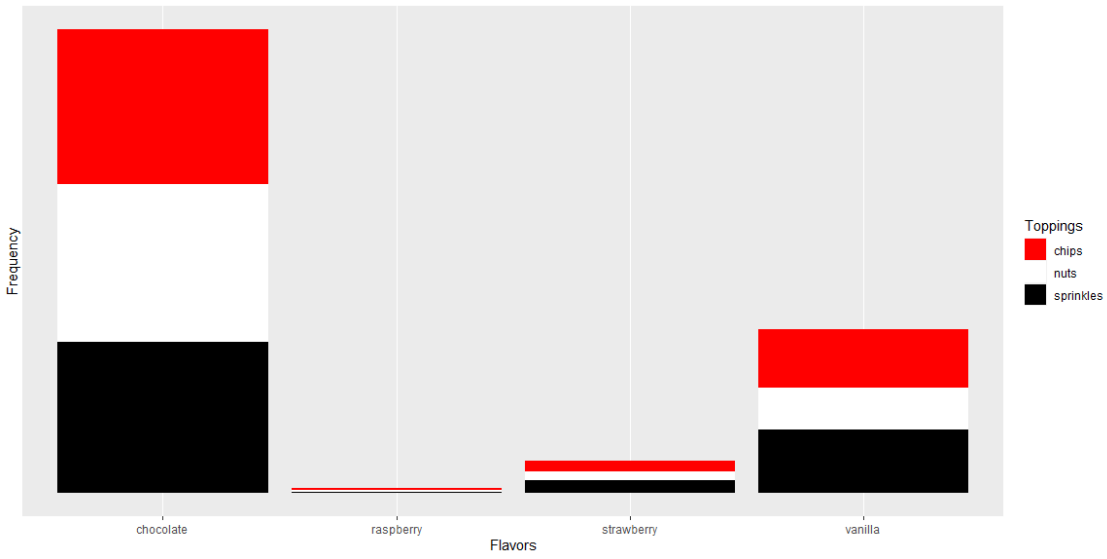
HW_09

izd3

Use only commands & functions that are shown in the indicated chapter or prior chapters.

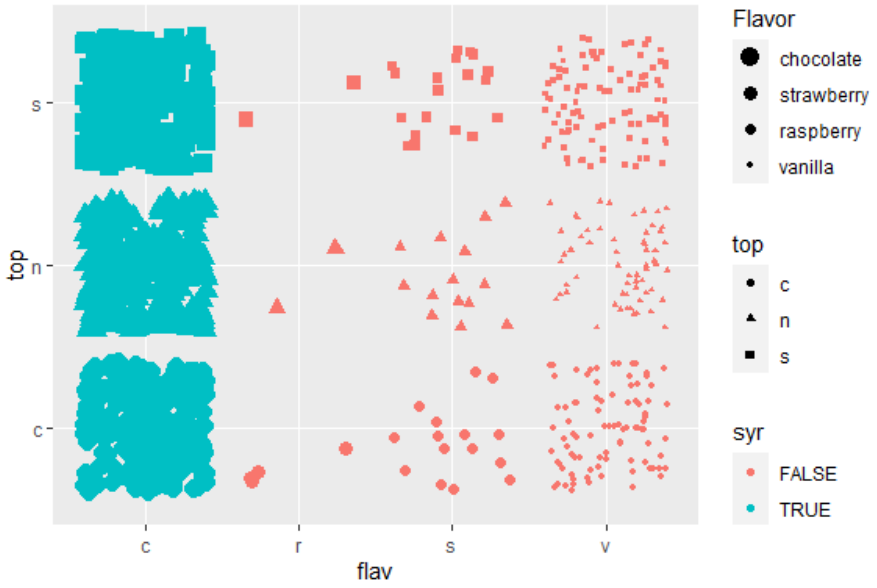
Problem #01 - Chapter 34 Exercise #01B

```
# Show your work here
library(ggplot2)

## Warning: package 'ggplot2' was built under R version 4.2.3

library(scales)
scalesGraph000+scale_x_discrete(name='Flavors',labels=c('chocolate',
                                                        'raspberry'
                                                        ,'strawberry',
                                                        'vanilla'))+
  scale_fill_manual(values=c('red','white','black'),breaks = c('c','n','s'),
                    labels=c('chips','nuts','sprinkles'),name='Toppings')+
  scale_y_continuous(name='Frequency',breaks = NULL)
```



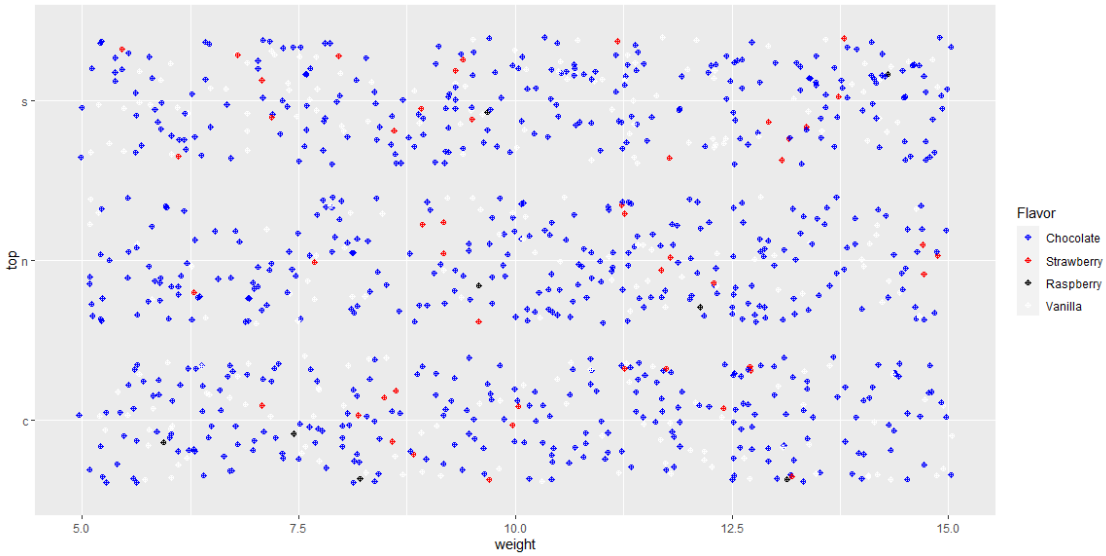
Problem #02 - Chapter 34 Exercise #02B

```
# Show your work here
scalesGraph001+scale_size_manual(name='Flavor',
                                 labels=c('chocolate','strawberry',
                                          'raspberry','vanilla'),
                                 values = c(4,3,2,1))
```



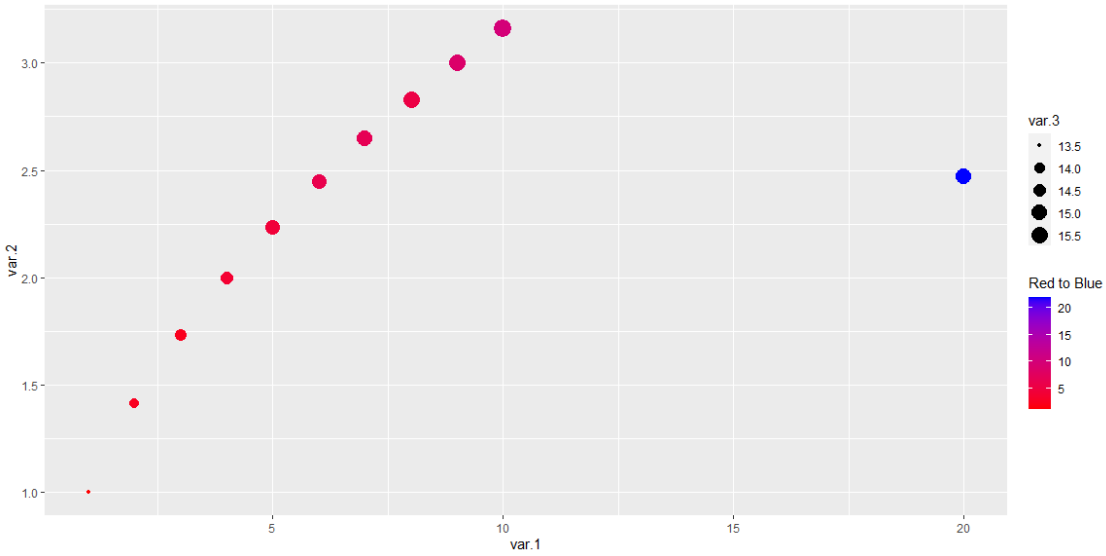
Problem #03 - Chapter 34 Exercise #04A (top left)

```
# Show your work here
scaled001.dat|>
  ggplot(mapping = aes(x=weight,y=top,color=flav))+geom_jitter(shape=10)+
  scale_color_manual(name='Flavor',breaks = c('c','s','r','v'),

labels=c('Chocolate','Strawberry','Raspberry','Vanilla'),
                     values = c('blue','red','black','white'))
```



Problem #04 - Chapter 35 Exercise #01D

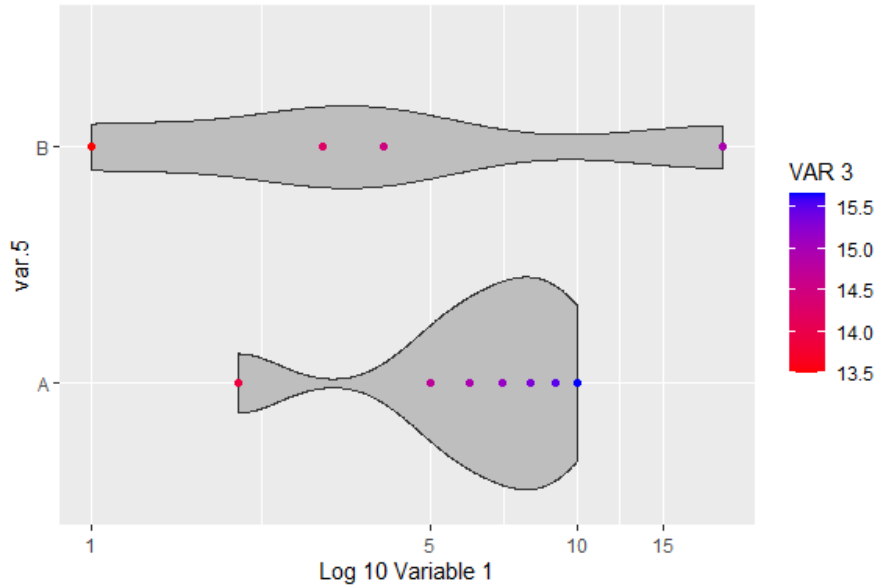
```
# Show your work here
scalesGraph002+scale_color_gradient(name='Red to Blue',
                                    low = 'red',high = 'blue')
```



Problem #05 - Chapter 35 Exercise #03A (red - blue)

```
# Show your work here
scaled002.tib|>
  ggplot(mapping =
aes(x=var.1,y=var.5,color=var.3))+geom_violin(fill='grey')+
  geom_point()+
  scale_x_log10(name='Log 10 Variable 1',breaks=c(1,5,10,15))+
  scale_color_gradient(name='VAR 3',low = 'red',high = 'blue')
```

```
## Warning: The following aesthetics were dropped during statistical
transformation: colour
## ℹ This can happen when ggplot fails to infer the correct grouping
structure in
##   the data.
## ℹ Did you forget to specify a `group` aesthetic or to convert a numerical
##   variable into a factor?
```



Problem #06 - Chapter 37 Exercise #03B

```
# Show your work here
library(forcats)

## Warning: package 'forcats' was built under R version 4.2.3

fact<-factor(factorData005.fact,levels = c('four star','three star'
                                           ,'two star','one star','zero
star'))
table(fact)

## fact
##  four star three star   two star   one star  zero star
##          0          0          0          7         38

unclass(fact)

##   [1]  4 NA  5 NA NA NA  5 NA  4  5 NA NA NA  5 NA NA  4  4 NA NA NA  5 NA
NA NA
##  [26]  5  4  5  5 NA  5 NA  5  5  5 NA NA  5 NA  5  5  5  5 NA  5 NA NA  5
NA  5
##  [51] NA  5 NA NA NA NA  5 NA  5 NA NA  4 NA NA  5 NA  5  5  5  5 NA NA NA
NA  5
##  [76] NA  5 NA NA  5  5  5 NA NA NA NA  5 NA NA NA  4 NA NA  5 NA NA  5  5
NA  5
## attr(,"levels")
## [1] "four star"  "three star" "two star"   "one star"   "zero star"
```

Problem #07 - Chapter 37 Exercise #04B

```
# Show your work here
table(factorData005.fact)

## factorData005.fact
##  four stars    one star three stars   zero star
##          19           7          36          38

factorData005.fact<-fct_recode(factorData005.fact,`no stars`="zero stars",
                               `one,two, or three stars`='one star',
                               `one,two, or three stars`='two stars',
                `one,two, or three stars`='three stars')

## Warning: Unknown levels in `f`: zero stars, two stars

table(factorData005.fact)

## factorData005.fact
##              four stars one,two, or three stars               zero star
##                      19                      43                      38
```

Problem #08 - Chapter 33 Exercise #05E

```
# Show your work here
  test<-data.frame(factorData006.fact=fct_infreq(factorData006.fact),
                   factorData004.fact =factorData004.fact)
test$factorData004.fact=factor(test$factorData004.fact,levels =
LETTERS[11:20])
test|>
  ggplot(mapping = aes(x=factorData006.fact,fill=factorData004.fact))+
  geom_bar()+
  scale_fill_manual(breaks = LETTERS[11:20],
                    labels=LETTERS[11:20],
                    values = c('red','white','red','white','red','white',
                               'red','white','red','white'),drop=FALSE)+
  scale_x_discrete(breaks=c('reference','gnat','pig'),labels=c('REFERENCE',
                                                               'GNAT',
                                                               'PIG'))
```