Homework 5 - Programming

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Problem 1

I successfully completed the swirl lessons for this assignment.

Problem 2

The file is created and in the correct place.

Problem 3

There are several things that are important for showing data in a good figure. First, it must be easy to read and understand without much explanation. If it is too hard to understand, most people will not take the time to figure out what it represents. It is also important for the correct type of figure to be selected depending on what kind of data is being portrayed. There are many other important factors in creating a good figure, but many of them depend on the type of figure chosen.

Problem 4

```
## [1] 0.3
```

```
##  [1] 0 1 0 0 0 0 1 0 1 0
```

```
##       [,1] [,2] [,3] [,4] [,5] [,6] [,7] [,8] [,9] [,10]
##  [1,]    1    1    0    0    1    0    0    0    0     0
##  [2,]    0    1    0    1    0    1    1    0    1     1
##  [3,]    1    0    0    0    0    0    1    1    0     0
##  [4,]    1    1    0    0    0    0    0    1    1     0
##  [5,]    0    0    0    0    0    1    0    0    0     0
##  [6,]    0    0    0    0    1    0    0    0    1     0
##  [7,]    0    0    1    0    1    1    0    0    0     0
##  [8,]    0    0    1    0    1    0    0    0    0     0
##  [9,]    1    0    0    1    0    0    0    0    1     1
## [10,]    1    1    0    0    0    0    1    0    1     0
```

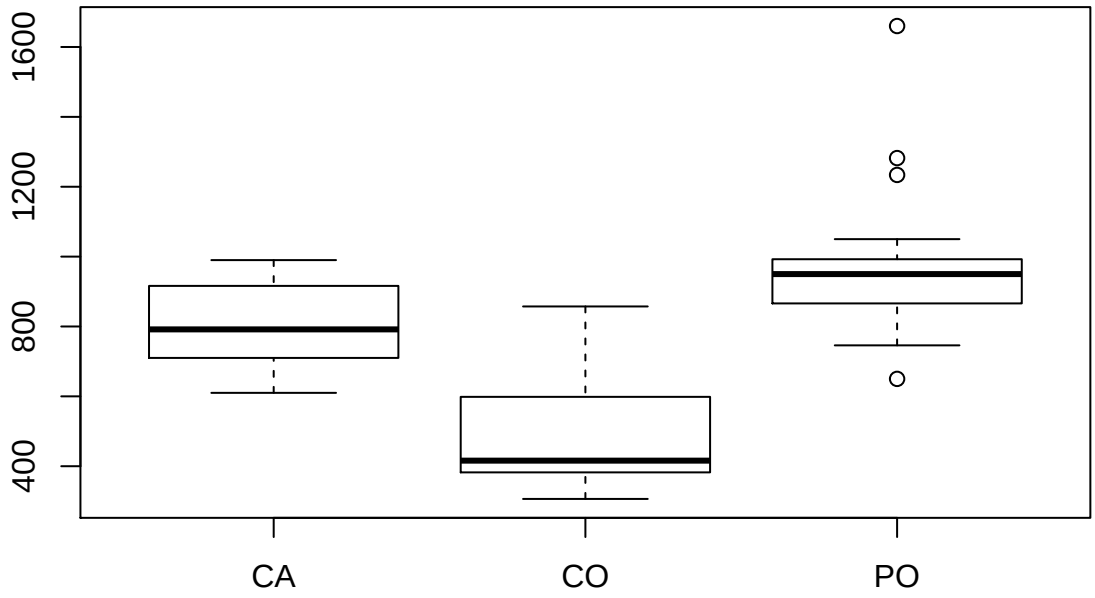
```
##  [1] 0.5 0.4 0.2 0.2 0.4 0.3 0.3 0.2 0.5 0.2
```

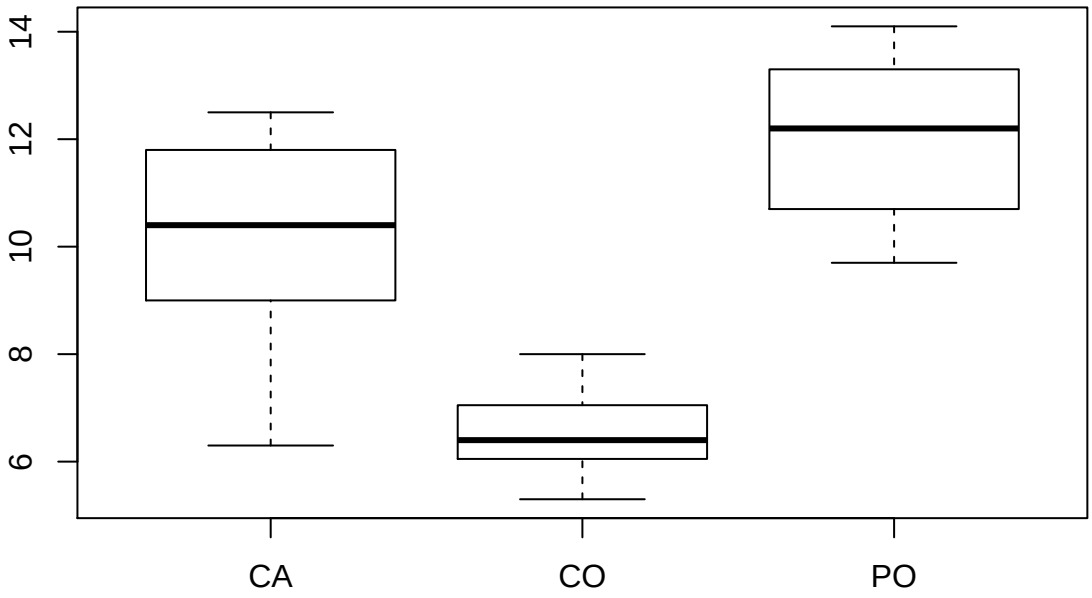
```
##  [1] 0.3 0.6 0.3 0.4 0.1 0.2 0.3 0.2 0.4 0.4
```

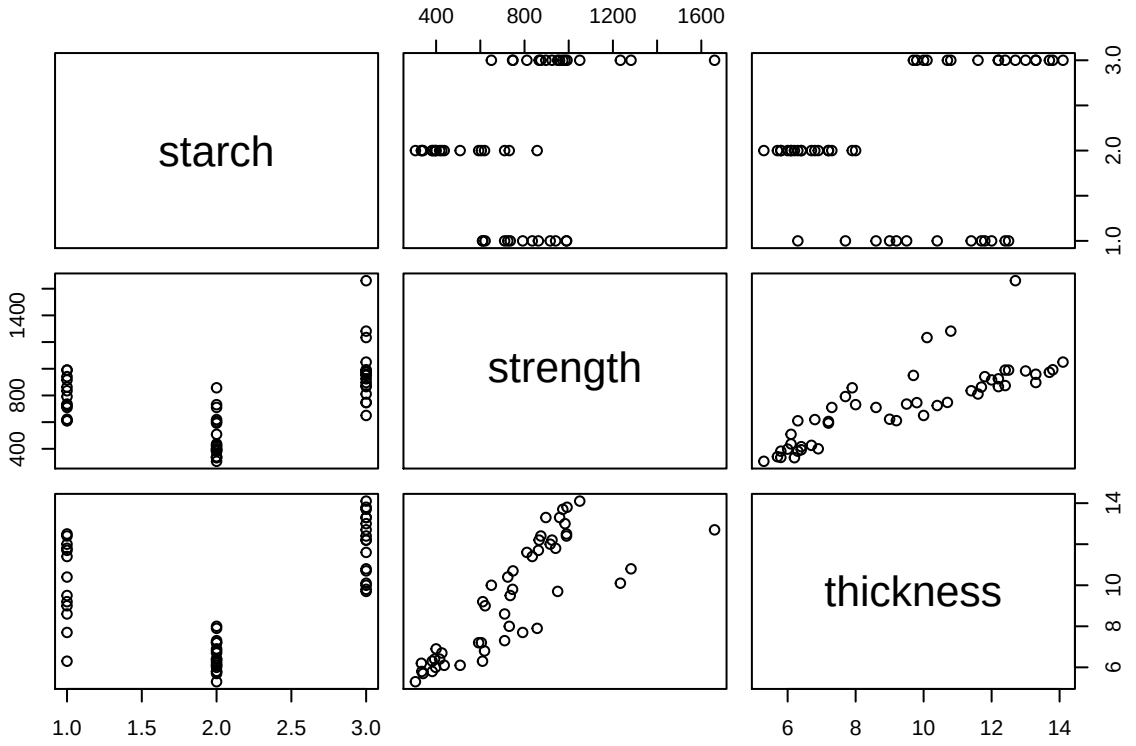
Problem 5

```
##  starch     strength        thickness
##  CA:13   Min.   : 306.4   Min.   : 5.300
```

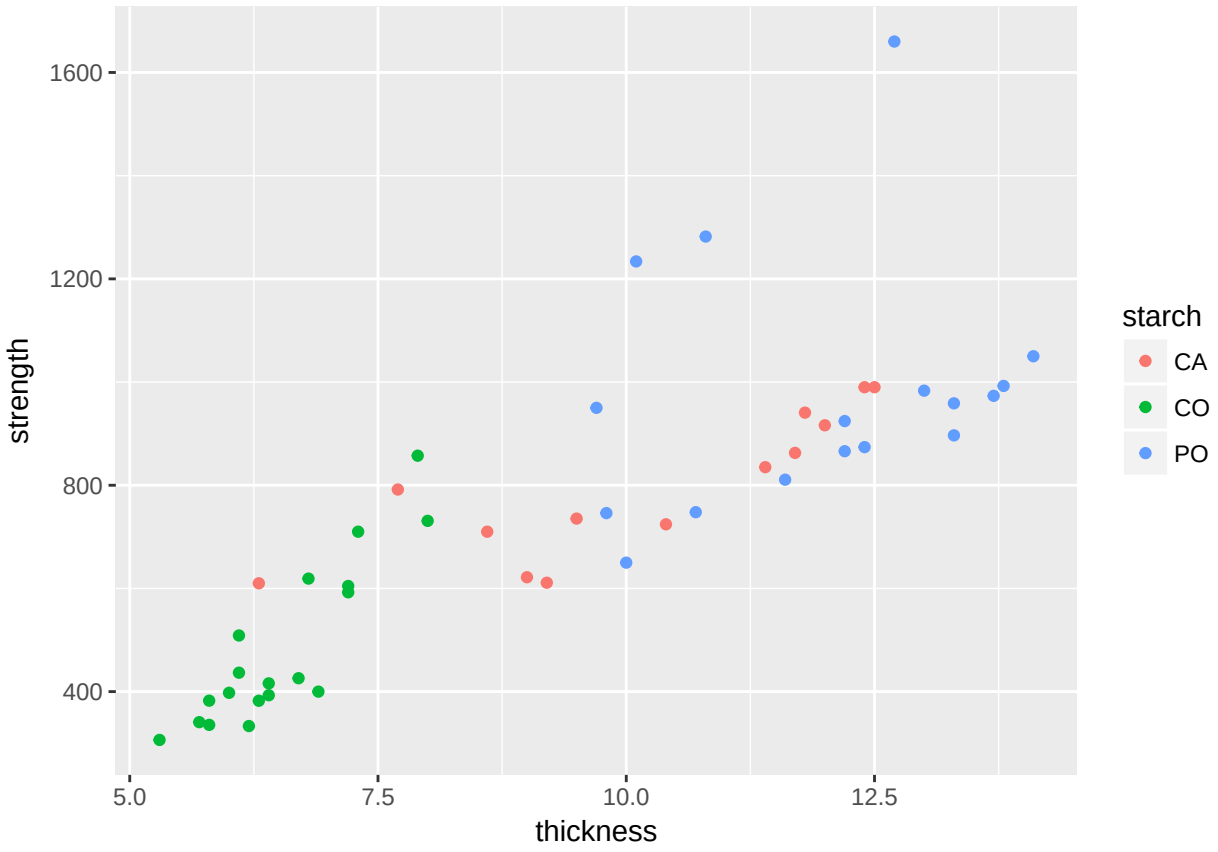
```
##  CO:19   1st Qu.: 508.8   1st Qu.: 6.700
##  PO:17   Median : 735.4   Median : 9.500
##          Mean   : 737.0   Mean   : 9.388
##          3rd Qu.: 924.4   3rd Qu.:12.000
##          Max.   :1660.0   Max.   :14.100
```

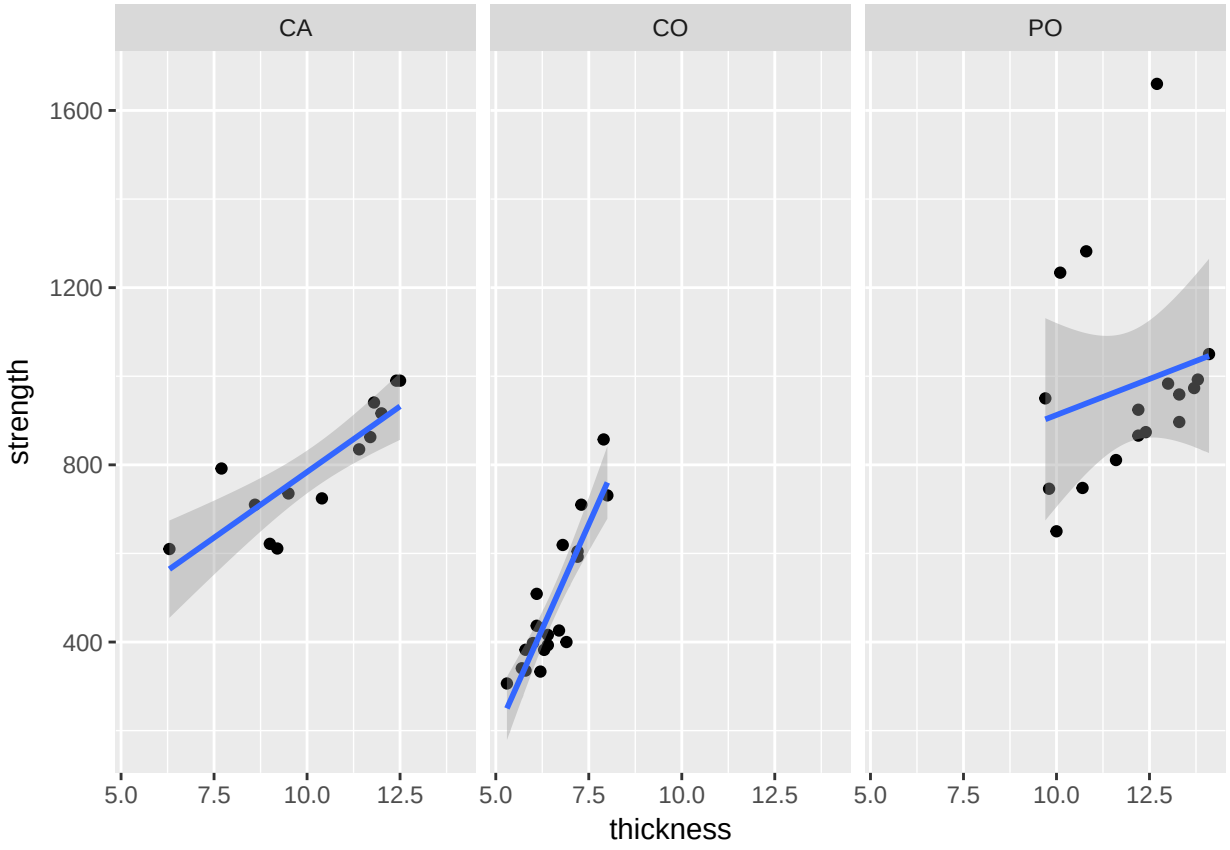



14
12
10
8
6
CA
CO
PO


starch
strength
thickness
400
800
1200
1600
1.0
2.0
3.0
400
800
1400
1.0
1.5
2.0
2.5
3.0
6
8
10
12
14

```
## [1] 0.8164981
```


strength
1600
1200
800
400
5.0
7.5
10.0
12.5
thickness
starch
CA
CO
PO



Problem 6

Part A

```
## Warning: package 'downloader' was built under R version 3.3.3
```

```
##
## Attaching package: 'data.table'
```

```
## The following objects are masked from 'package:dplyr':
##
##     between, first, last
```

Table 1: Number of Cities by State

abbreviation	citycount
NY	2207
PR	176
MA	703
RI	91
NH	284
ME	489
VT	309
CT	438
NJ	733

abbreviation	citycount
PA	2208
DE	98
DC	284
VA	1238
MD	619
WV	859
NC	1090
SC	539
GA	972
FL	1487
AL	838
TN	795
MS	533
KY	961
OH	1446
IN	989
MI	1170
IA	1060
WI	898
MN	1031
SD	394
ND	407
MT	405
IL	1587
MO	1170
KS	756
NE	620
LA	725
AR	709
OK	774
TX	2650
CO	659
WY	195
ID	325
UT	344
AZ	532
NM	426
NV	253
CA	2651
HI	139
OR	484
WA	732
AK	273
“‘	

Problem 7

If you are reading this, then the file was successfully pushed to github.