HW3_Blevins_Matthew

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Problem 1

I successfully completed the swirl lessons and installed the Exploratory Data Analysis courses.

Problem 2

If you are reading this, then the file was successfully created and pushed to my github repository.

Problem 3

There are several things that I took away from the two style guides from the lecture. Firstly, it shows that there are still some style suggestions that are either controversial or being updated over time. This means that one should note the style other collaborators have been using if they are jumping into the middle of a project. The style guides also provide some nice tips for those who are just getting into coding to help keep things neat and tidy. It can be intimidating to begin coding for the first time, so it certainly helps to maintain a uniform style that makes things easier to read. Similarly to writing, everyone is going to develop their own style of coding, but there are still some basic rules that everyone should follow for simplicity's sake. Some of the things that I will do specifically are to make sure that I am indenting appropriately so that the code is more readable, using appropriate spacing in my code, and avoiding the use of underscores in identifiers.

Problem 4

When using lintr, I received a lot of comments about spacing. It told me to use spaces around my operators instead of typing them all together. I had been writing them all together previously, but it does make the code more readable when there are spaces around them.
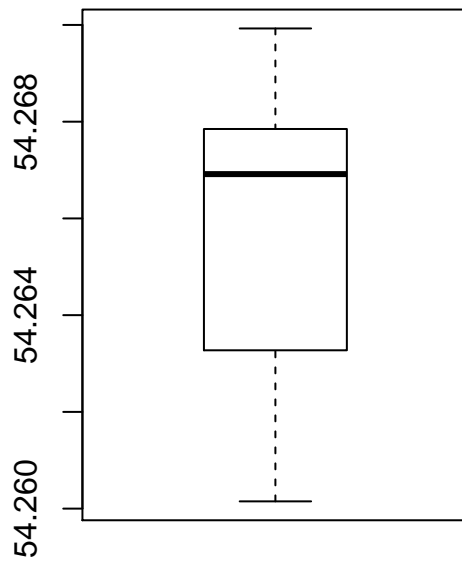
Problem 5

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

Table 1: Means, Standard Dev., and Correlation for Devs.

Observer	Dev1 Average	Dev2 Average	Dev1 SD	Dev2 SD	Correlation
1	54.26610	47.83472	16.76983	26.93974	-0.0641284
2	54.26873	47.83082	16.76924	26.93573	-0.0685864
3	54.26732	47.83772	16.76001	26.93004	-0.0683434
4	54.26327	47.83225	16.76514	26.93540	-0.0644719
5	54.26030	47.83983	16.76774	26.93019	-0.0603414
6	54.26144	47.83025	16.76590	26.93988	-0.0617148

| Observer	Dev1 Average	Dev2 Average	Dev1 SD	Dev2 SD	Correlation
7	54.26881	47.83545	16.76670	26.94000	-0.0685042
8	54.26785	47.83590	16.76676	26.93610	-0.0689797
9	54.26588	47.83150	16.76885	26.93861	-0.0686092
10	54.26734	47.83955	16.76896	26.93027	-0.0629611
11	54.26993	47.83699	16.76996	26.93768	-0.0694456
12	54.26692	47.83160	16.77000	26.93790	-0.0665752
13	54.26015	47.83972	16.76996	26.93000	-0.0655833

Dev1 Averages

Dev2 Averages
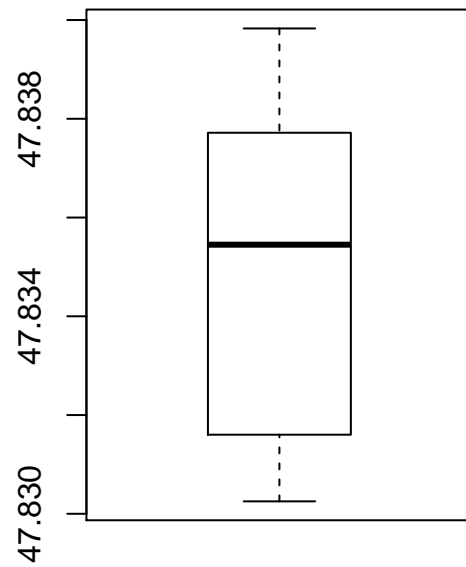

```
## Don't know how to automatically pick scale for object of type data.frame. Defaulting to continuous.
## Don't know how to automatically pick scale for object of type data.frame. Defaulting to continuous.
```
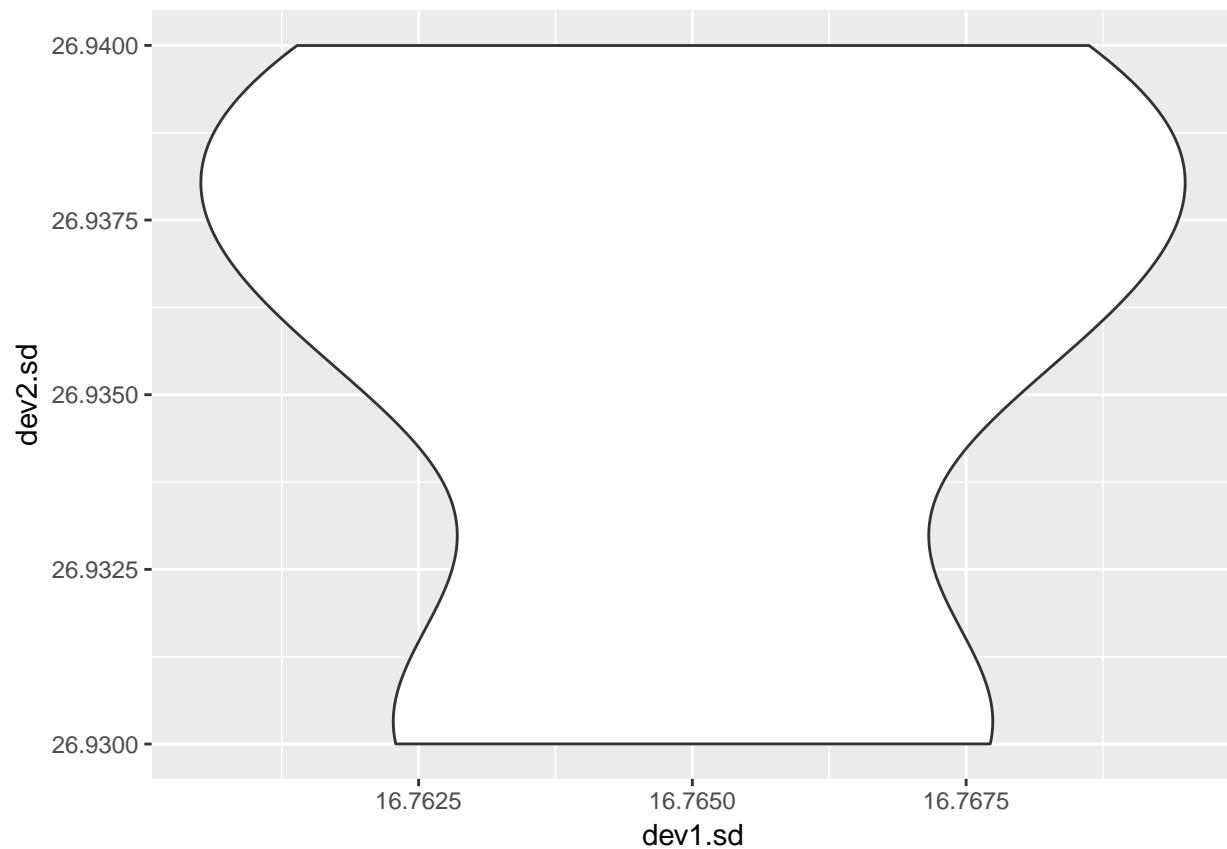
Problem 6

Table 2: Blood Pressure by Patient and Measurement Time

Patient	Measurement Time	Blood Pressure
1	Morning 1	133.34
1	Afternoon 1	133.36
1	Evening 1	133.45
1	Morning 2	126.54
1	Afternoon 2	127.36
1	Evening 2	131.88
2	Morning 1	110.94
2	Afternoon 1	110.85
2	Evening 1	110.92
2	Morning 2	124.69
2	Afternoon 2	128.86
2	Evening 2	132.39
3	Morning 1	118.54
3	Afternoon 1	118.56
3	Evening 1	118.67
3	Morning 2	125.46
3	Afternoon 2	129.43
3	Evening 2	134.43
4	Morning 1	137.94

Patient	Measurement Time	Blood Pressure
4	Afternoon 1	137.80
4	Evening 1	137.77
4	Morning 2	125.95
4	Afternoon 2	130.72
4	Evening 2	134.28
5	Morning 1	139.52
5	Afternoon 1	139.62
5	Evening 1	139.59
5	Morning 2	125.90
5	Afternoon 2	130.13
5	Evening 2	134.44
6	Morning 1	139.23
6	Afternoon 1	139.11
6	Evening 1	139.36
6	Morning 2	127.85
6	Afternoon 2	132.03
6	Evening 2	137.37
7	Morning 1	117.96
7	Afternoon 1	117.81
7	Evening 1	117.85
7	Morning 2	125.55
7	Afternoon 2	132.05
7	Evening 2	132.17
8	Morning 1	119.59
8	Afternoon 1	119.42
8	Evening 1	119.48
8	Morning 2	125.80
8	Afternoon 2	129.87
8	Evening 2	134.97
9	Morning 1	116.12
9	Afternoon 1	116.00
9	Evening 1	115.93
9	Morning 2	125.11
9	Afternoon 2	128.09
9	Evening 2	133.97
10	Morning 1	128.38
10	Afternoon 1	128.48
10	Evening 1	128.41
10	Morning 2	125.75
10	Afternoon 2	131.94
10	Evening 2	132.68
11	Morning 1	125.17
11	Afternoon 1	125.25
11	Evening 1	125.34
11	Morning 2	128.77
11	Afternoon 2	130.05
11	Evening 2	134.75
12	Morning 1	134.62
12	Afternoon 1	134.41
12	Evening 1	134.55
12	Morning 2	125.26
12	Afternoon 2	131.13

Patient	Measurement Time	Blood Pressure
12	Evening 2	134.29
13	Morning 1	136.14
13	Afternoon 1	136.07
13	Evening 1	136.22
13	Morning 2	126.26
13	Afternoon 2	130.91
13	Evening 2	133.38
14	Morning 1	131.21
14	Afternoon 1	131.03
14	Evening 1	130.96
14	Morning 2	125.68
14	Afternoon 2	128.83
14	Evening 2	135.67
15	Morning 1	132.51
15	Afternoon 1	132.86
15	Evening 1	132.65
15	Morning 2	124.47
15	Afternoon 2	129.46
15	Evening 2	134.39

Problem 7

```
## [1] -23.06375 -22.73132 -22.78256 -22.77660 -22.77655        NA        NA
```

Problem 8

```
##
Read 18.3% of 766393 rows
Read 48.3% of 766393 rows
Read 58.7% of 766393 rows
Read 91.3% of 766393 rows
Read 766393 rows and 13 (of 13) columns from 0.070 GB file in 00:00:07

##
Read 0.0% of 21292116 rows
Read 1.6% of 21292116 rows
Read 3.9% of 21292116 rows
Read 5.9% of 21292116 rows
Read 7.0% of 21292116 rows
Read 7.9% of 21292116 rows
Read 9.2% of 21292116 rows
Read 10.7% of 21292116 rows
Read 11.6% of 21292116 rows
Read 13.3% of 21292116 rows
Read 15.0% of 21292116 rows
Read 16.7% of 21292116 rows
Read 18.2% of 21292116 rows
Read 18.5% of 21292116 rows
Read 19.7% of 21292116 rows
Read 20.7% of 21292116 rows
```

```
Read 22.0% of 21292116 rows
Read 23.7% of 21292116 rows
Read 25.2% of 21292116 rows
Read 26.4% of 21292116 rows
Read 27.4% of 21292116 rows
Read 29.0% of 21292116 rows
Read 29.2% of 21292116 rows
Read 29.9% of 21292116 rows
Read 31.7% of 21292116 rows
Read 32.9% of 21292116 rows
Read 34.3% of 21292116 rows
Read 36.3% of 21292116 rows
Read 38.5% of 21292116 rows
Read 39.5% of 21292116 rows
Read 41.1% of 21292116 rows
Read 42.6% of 21292116 rows
Read 44.3% of 21292116 rows
Read 45.6% of 21292116 rows
Read 47.5% of 21292116 rows
Read 49.5% of 21292116 rows
Read 50.8% of 21292116 rows
Read 51.7% of 21292116 rows
Read 53.6% of 21292116 rows
Read 55.0% of 21292116 rows
Read 56.5% of 21292116 rows
Read 57.8% of 21292116 rows
Read 59.1% of 21292116 rows
Read 60.8% of 21292116 rows
Read 62.3% of 21292116 rows
Read 63.9% of 21292116 rows
Read 65.3% of 21292116 rows
Read 67.3% of 21292116 rows
Read 69.8% of 21292116 rows
Read 72.1% of 21292116 rows
Read 74.4% of 21292116 rows
Read 76.8% of 21292116 rows
Read 79.0% of 21292116 rows
Read 81.3% of 21292116 rows
Read 83.3% of 21292116 rows
Read 85.7% of 21292116 rows
Read 87.9% of 21292116 rows
Read 90.2% of 21292116 rows
Read 92.3% of 21292116 rows
Read 94.0% of 21292116 rows
Read 96.5% of 21292116 rows
Read 98.8% of 21292116 rows
Read 21292116 rows and 7 (of 7) columns from 1.028 GB file in 00:01:46
```

Table 3: Total Number of Distinct Makes and Models

distinctMakes	distinctModels
190	9110

Problem 9

This step is complete!