

R version 3.0.0 (2013-04-03) -- "Masked Marvel"
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 Platform: x86_64-w64-mingw32/x64 (64-bit)

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Natural language support but running in an English locale

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Type 'demo()' for some demos, 'help()' for on-line help, or
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 Type 'q()' to quit R.

```
> #Script Name:  FKincheloe_HW05_Script.R
> #Location:    C:\Users\kinchelf\Documents\STAT604-FA16\Assignments604-16.3
> #Created by Faron Kincheloe
> #Creation Date:  09/10/16
> #Purpose:  Practice working with vectors, matrices, and data frames.  Analyze Oklahoma school data.
> #Last executed:  09/10/16
>
> YOUR CODE GOES HERE
[1] "2016-09-10 20:38:03 CDT"
>
> #1 housekeeping
> YOUR CODE GOES HERE
character(0)
> YOUR CODE GOES HERE
>
> #2 load previously saved workspace
> YOUR CODE GOES HERE
>
> #show contents of workspace
> YOUR CODE GOES HERE
[1] "Oklahoma"
>
> #3 Create a new data frame of schools containing HS in the name
> YOUR CODE GOES HERE
> # show the structure of the new data frame
> YOUR CODE GOES HERE
'data.frame':  461 obs. of  11 variables:
 $ School   : Factor w/ 1636 levels "7TH & 8TH GRADE CTR",...: 6 7 9 14 16 21 25 28 30 33 ...
 $ LocCity  : Factor w/ 442 levels "ACHILLE","ADA",...: 1 2 3 4 5 7 8 9 10 11 ...
 $ MailCity : Factor w/ 429 levels "ACHILLE","ADA",...: 1 2 3 4 5 7 8 9 10 11 ...
 $ County   : Factor w/ 77 levels "ADAIR COUNTY",...: 7 62 46 58 41 26 2 62 33 76 ...
 $ Teachers: num  7.6 40.5 19.6 10.6 9 7.6 5 10 66.3 21.8 ...
```

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                                FKincheloe_HW05_Console.txt
$ Grade9 : int 30 NA 82 32 25 38 7 28 269 64 ...
$ Grade10 : int 31 168 62 30 27 25 14 34 266 69 ...
$ Grade11 : int 31 186 65 31 27 20 5 40 239 46 ...
$ Grade12 : int 34 148 76 28 19 23 12 26 264 61 ...
$ HSTotal : int 126 502 285 121 98 106 38 128 1038 240 ...
$ PTRatio : num 16.6 12.4 14.5 11.4 10.9 ...
>
> #4 Read in zip code database into a data frame for future use
> YOUR CODE GOES HERE
> # show the structure of the new data frame
> YOUR CODE GOES HERE
'data.frame': 42522 obs. of 16 variables:
 $ zip : int 501 544 601 602 603 604 605 606 610 611 ...
 $ type : Factor w/ 4 levels "MILITARY","PO BOX",...: 4 4 3 3 3 2 2 3 3 2 ...
 $ primary_city : Factor w/ 18758 levels "Aaronsburg","Abbeville",...: 7537 7537 73 96 97 97 97 10044 363 388
...
 $ acceptable_cities : Factor w/ 7163 levels "", "115 Crm Firms",...: 1 1 1 1 5571 5571 1 1 1 1 ...
 $ unacceptable_cities : Factor w/ 10469 levels "", "1000 Palms",...: 5694 5804 2921 324 1050 1 1 9849 1849 1 ...
 $ state : Factor w/ 62 levels "AA","AE","AK",...: 43 43 48 48 48 48 48 48 48 48 ...
 $ county : Factor w/ 1924 levels "", "Abbeville County",...: 1663 1663 9 1 10 1 1 1058 1 1 ...
 $ timezone : Factor w/ 27 levels "", "America/Anchorage",...: 20 20 24 1 24 1 1 24 1 1 ...
 $ area_codes : Factor w/ 2100 levels "", "201", "201,212",...: 1219 1219 1597 1596 1596 1 1 1597 1596 1 ...
 $ latitude : num 40.8 40.8 18.2 18.4 18.4 ...
 $ longitude : num -73 -73 -66.7 -67.2 -67.2 ...
 $ world_region : Factor w/ 8 levels "AF","AS","AU",...: NA NA NA NA NA NA NA NA NA ...
 $ country : Factor w/ 61 levels "AE","AF","AQ",...: 60 60 60 60 60 60 60 60 60 60 ...
 $ decommissioned : int 0 0 0 0 0 0 0 0 0 0 ...
 $ estimated_population: int 384 0 0 0 0 0 0 0 0 0 ...
 $ notes : Factor w/ 11 levels "", "; Decommissioned, from MPSA Ballot;Country and installation from
MPSA Ballot",...: 1 1 1 1 1 1 1 1 1 1 ...
>
> #5a Create a data frame of Oklahoma zips. Remove PO BOX and Decommissioned zips
> YOUR CODE GOES HERE
>
> #5b Change the name of primary_city to MailCity
> YOUR CODE GOES HERE
>
> #5c Change the names of the cities to upper case
> YOUR CODE GOES HERE
>
> #5d create a zip3 column using the first 3 digits of the zip code
> YOUR CODE GOES HERE
>
> #5e Display information on new data frame
> YOUR CODE GOES HERE
'data.frame': 607 obs. of 5 variables:
 $ zip : int 73002 73003 73004 73005 73006 73007 73008 73009 73010 73011 ...
 $ MailCity : chr "ALEX" "EDMOND" "AMBER" "ANADARKO" ...
 $ county : Factor w/ 1924 levels "", "Abbeville County",...: 682 1261 682 250 250 1261 1261 250 1079 682
...
 $ estimated_population: int 910 19960 743 6595 2723 1561 15228 1039 13603 0 ...

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$ ZipRegion      : chr "730" "730" "730" "730" ...
> YOUR CODE GOES HERE
  zip MailCity      county estimated_population ZipRegion
31831 73002      ALEX      Grady County           910      730
31832 73003      EDMOND    Oklahoma County       19960      730
31833 73004      AMBER      Grady County           743      730
31834 73005      ANADARKO    Caddo County        6595      730
31835 73006      APACHE      Caddo County        2723      730
31836 73007      ARCADIA    Oklahoma County       1561      730
31837 73008      BETHANY    Oklahoma County      15228      730
31838 73009      BINGER      Caddo County         1039      730
31839 73010      BLANCHARD   McClain County      13603      730
31840 73011      BRADLEY      Grady County           0      730
31841 73012      EDMOND    Oklahoma County      18114      730
31842 73013      EDMOND    Oklahoma County     34848      730
31843 73014      CALUMET    Canadian County       1165      730
31844 73015      CARNEGIE    Caddo County         2145      730
31845 73016      CASHION    Kingfisher County     1571      730
31846 73017      CEMENT      Caddo County         1294      730
31847 73018      CHICKASHA    Grady County       13507      730
31848 73019      NORMAN    Cleveland County         0      730
31849 73020      CHOCTAW    Oklahoma County     17389      730
31850 73021      COLONY      Washita County         0      730
>
> #6 Merge the zip data with the Oklahoma High School data
> YOUR CODE GOES HERE
> YOUR CODE GOES HERE
[1] 1980 15
>
> #7 Create a data frame of unduplicated High Schools
> YOUR CODE GOES HERE
> YOUR CODE GOES HERE
'data.frame': 428 obs. of 15 variables:
 $ MailCity      : Factor w/ 429 levels "ACHILLE","ADA",...: 2 2 2 2 3 4 5 7 8 9 ...
 $ School        : Factor w/ 1636 levels "7TH & 8TH GRADE CTR",...: 803 7 1479 189 9 14 16 21 25 28 ...
 $ LocCity       : Factor w/ 442 levels "ACHILLE","ADA",...: 2 2 2 2 3 4 5 7 8 9 ...
 $ County        : Factor w/ 77 levels "ADAIR COUNTY",...: 62 62 62 62 46 58 41 26 2 62 ...
 $ Teachers      : num 10.7 40.5 11 26.9 19.6 10.6 9 7.6 5 10 ...
 $ Grade9        : int NA NA 33 NA 82 32 25 38 7 28 ...
 $ Grade10       : int 62 168 49 116 62 30 27 25 14 34 ...
 $ Grade11       : int 42 186 43 88 65 31 27 20 5 40 ...
 $ Grade12       : int 45 148 46 98 76 28 19 23 12 26 ...
 $ HSTotal       : int 149 502 171 302 285 121 98 106 38 128 ...
 $ PTRatio       : num 13.9 12.4 15.6 11.2 14.5 ...
 $ zip           : int 74820 74820 74820 74820 74330 74331 74824 73002 73716 74825 ...
 $ county        : Factor w/ 1924 levels "", "Abbeville County",...: 1370 1370 1370 1370 1078 486 1003 682 26
1370 ...
 $ estimated_population: int 21190 21190 21190 21190 2224 4536 998 910 0 1644 ...
 $ ZipRegion        : chr "748" "748" "748" "748" ...
>
> #8 Display the 25 smallest and largest schools based on number of Teachers

```

> YOUR CODE GOES HERE

	ZipRegion	School	MailCity	County	HSTotal
48	744	BOYNTON-MOTON HS	BOYNTON	MUSKOGEE COUNTY	0
317	737	OKEENE JR-SR HS (JR)	OKEENE	BLAINE COUNTY	NA
200	748	HANNA HS	HANNA	MCINTOSH COUNTY	372
1978	740	WYNONA HS	WYNONA	OSAGE COUNTY	152
182	738	FREEDOM HS	FREEDOM	WOODS COUNTY	17
174	739	FELT HS	FELT	CIMARRON COUNTY	19
191	739	YARBROUGH HS	GOODWELL	TEXAS COUNTY	24
1964	748	GRAHAM HS	WELEETKA	OKFUSKEE COUNTY	189
234	739	KEYES HS	KEYES	CIMARRON COUNTY	20
259	736	LONE WOLF HS	LONE WOLF	KIOWA COUNTY	28
183	738	GAGE HS	GAGE	ELLIS COUNTY	36
157	735	ELDORADO HS	ELDORADO	JACKSON COUNTY	40
104	734	COLEMAN HS	COLEMAN	JOHNSTON COUNTY	67
133	748	DUSTIN HS	DUSTIN	HUGHES COUNTY	21
1458	745	PITTSBURG HS	PITTSBURG	PITTSBURG COUNTY	194
279	748	MILL CREEK HS	MILL CREEK	JOHNSTON COUNTY	52
1522	745	STRINGTOWN HS	STRINGTOWN	ATOKA COUNTY	80
118	735	DAVIDSON HS	DAVIDSON	TILLMAN COUNTY	41
46	749	BOKOSHE HS	BOKOSHE	LE FLORE COUNTY	50
190	739	GOODWELL HS	GOODWELL	TEXAS COUNTY	49
201	739	HARDESTY HS	HARDESTY	TEXAS COUNTY	26
9	737	ALINE-CLEO HS	ALINE	ALFALFA COUNTY	38
126	735	DUKE HS	DUKE	JACKSON COUNTY	50
278	734	MILBURN HS	MILBURN	JOHNSTON COUNTY	60
1444	735	OLUSTEE HS	OLUSTEE	JACKSON COUNTY	57

Teachers

48	1.1
317	2.3
200	2.4
1978	3.2
182	3.3
174	3.4
191	3.8
1964	4.1
234	4.2
259	4.3
183	4.4
157	4.5
104	4.6
133	4.6
1458	4.6
279	4.7
1522	4.7
118	4.8
46	4.9
190	4.9
201	4.9
9	5.0
126	5.0

278 5.0
1444 5.0

> YOUR CODE GOES HERE

	ZipRegion	School	MailCity	County	HSTotal
51	740	BROKEN ARROW HS	BROKEN ARROW	TULSA COUNTY	2260
229	740	JENKS HS	JENKS	TULSA COUNTY	2181
309	730	NORMAN NORTH HS	NORMAN	CLEVELAND COUNTY	2113
136	730	SANTA FE HS	EDMOND	OKLAHOMA COUNTY	1878
626	731	WESTMOORE HS	OKLAHOMA CITY	CLEVELAND COUNTY	1950
1980	730	YUKON HS	YUKON	CANADIAN COUNTY	2122
57	740	UNION INTERMEDIATE HS	BROKEN ARROW	TULSA COUNTY	2216
251	735	LAWTON HS	LAWTON	COMANCHE COUNTY	1864
141	730	NORTH HS	EDMOND	OKLAHOMA COUNTY	2358
1289	731	PUTNAM CITY NORTH HS	OKLAHOMA CITY	OKLAHOMA COUNTY	1987
304	730	NORMAN HS	NORMAN	CLEVELAND COUNTY	1680
1034	731	PUTNAM CITY WEST HS	OKLAHOMA CITY	OKLAHOMA COUNTY	1582
165	737	ENID HS	ENID	GARFIELD COUNTY	1674
830	731	PUTNAM CITY HS	OKLAHOMA CITY	OKLAHOMA COUNTY	1768
146	730	MEMORIAL HS	EDMOND	OKLAHOMA COUNTY	2021
320	731	U. S. GRANT HS	OKLAHOMA CITY	OKLAHOMA COUNTY	1563
1647	741	UNION HS	TULSA	TULSA COUNTY	2142
293	730	MUSTANG HS	MUSTANG	CANADIAN COUNTY	1750
291	744	MUSKOGEE HS	MUSKOGEE	MUSKOGEE COUNTY	1639
1460	746	PONCA CITY HS	PONCA CITY	KAY COUNTY	1561
1238	731	DEL CITY HS	OKLAHOMA CITY	OKLAHOMA COUNTY	1316
473	731	MIDWEST CITY HS	OKLAHOMA CITY	OKLAHOMA COUNTY	1590
248	735	EISENHOWER HS	LAWTON	COMANCHE COUNTY	1387
90	730	CHOCTAW HS	CHOCTAW	OKLAHOMA COUNTY	1453
92	740	CLAREMORE HS	CLAREMORE	ROGERS COUNTY	1265

	Teachers
51	129.3
229	126.5
309	121.4
136	119.9
626	119.7
1980	118.3
57	116.8
251	114.6
141	114.0
1289	107.5
304	107.2
1034	106.8
165	104.1
830	103.2
146	101.2
320	100.1
1647	97.9
293	97.1
291	96.1
1460	89.9
1238	87.0

473	86.9
248	84.1
90	83.5
92	80.8

```
>  
> #9 create csv file of schools including zipRegion and system time  
> YOUR CODE GOES HERE  
>
```