

hw_2

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1. Here are my fixed code

```
mtcars[mtcars$cyl < 6,]
```

```
##           mpg cyl  disp  hp drat   wt  qsec vs am gear carb
## Datsun 710    22.8  4 108.0  93 3.85 2.320 18.61  1  1    4    1
## Merc 240D     24.4  4 146.7  62 3.69 3.190 20.00  1  0    4    2
## Merc 230      22.8  4 140.8  95 3.92 3.150 22.90  1  0    4    2
## Fiat 128      32.4  4  78.7  66 4.08 2.200 19.47  1  1    4    1
## Honda Civic   30.4  4  75.7  52 4.93 1.615 18.52  1  1    4    2
## Toyota Corolla 33.9  4  71.1  65 4.22 1.835 19.90  1  1    4    1
## Toyota Corona 21.5  4 120.1  97 3.70 2.465 20.01  1  0    3    1
## Fiat X1-9     27.3  4  79.0  66 4.08 1.935 18.90  1  1    4    1
## Porsche 914-2 26.0  4 120.3  91 4.43 2.140 16.70  0  1    5    2
## Lotus Europa  30.4  4  95.1 113 3.77 1.513 16.90  1  1    5    2
## Volvo 142E    21.4  4 121.0 109 4.11 2.780 18.60  1  1    4    2
```

```
mtcars[0:3,]
```

```
##           mpg cyl disp  hp drat   wt  qsec vs am gear carb
## Mazda RX4     21.0  6 160 110 3.90 2.620 16.46  0  1    4    4
## Mazda RX4 Wag 21.0  6 160 110 3.90 2.875 17.02  0  1    4    4
## Datsun 710     22.8  4 108  93 3.85 2.320 18.61  1  1    4    1
```

```
mtcars[mtcars$cyl == 8,]
```

```
##           mpg cyl  disp  hp drat   wt  qsec vs am gear carb
## Hornet Sportabout 18.7  8 360.0 175 3.15 3.440 17.02  0  0    3    2
## Duster 360        14.3  8 360.0 245 3.21 3.570 15.84  0  0    3    4
## Merc 450SE        16.4  8 275.8 180 3.07 4.070 17.40  0  0    3    3
## Merc 450SL        17.3  8 275.8 180 3.07 3.730 17.60  0  0    3    3
## Merc 450SLC       15.2  8 275.8 180 3.07 3.780 18.00  0  0    3    3
## Cadillac Fleetwood 10.4  8 472.0 205 2.93 5.250 17.98  0  0    3    4
## Lincoln Continental 10.4  8 460.0 215 3.00 5.424 17.82  0  0    3    4
## Chrysler Imperial 14.7  8 440.0 230 3.23 5.345 17.42  0  0    3    4
## Dodge Challenger  15.5  8 318.0 150 2.76 3.520 16.87  0  0    3    2
## AMC Javelin       15.2  8 304.0 150 3.15 3.435 17.30  0  0    3    2
## Camaro Z28        13.3  8 350.0 245 3.73 3.840 15.41  0  0    3    4
## Pontiac Firebird   19.2  8 400.0 175 3.08 3.845 17.05  0  0    3    2
## Ford Pantera L     15.8  8 351.0 264 4.22 3.170 14.50  0  1    5    4
## Maserati Bora      15.0  8 301.0 335 3.54 3.570 14.60  0  1    5    8
```

```
mtcars[mtcars$cyl > 4 | 6, ]
```

##	mpg	cyl	disp	hp	drat	wt	qsec	vs	am	gear	carb
## Mazda RX4	21.0	6	160.0	110	3.90	2.620	16.46	0	1	4	4
## Mazda RX4 Wag	21.0	6	160.0	110	3.90	2.875	17.02	0	1	4	4
## Datsun 710	22.8	4	108.0	93	3.85	2.320	18.61	1	1	4	1
## Hornet 4 Drive	21.4	6	258.0	110	3.08	3.215	19.44	1	0	3	1
## Hornet Sportabout	18.7	8	360.0	175	3.15	3.440	17.02	0	0	3	2
## Valiant	18.1	6	225.0	105	2.76	3.460	20.22	1	0	3	1
## Duster 360	14.3	8	360.0	245	3.21	3.570	15.84	0	0	3	4
## Merc 240D	24.4	4	146.7	62	3.69	3.190	20.00	1	0	4	2
## Merc 230	22.8	4	140.8	95	3.92	3.150	22.90	1	0	4	2
## Merc 280	19.2	6	167.6	123	3.92	3.440	18.30	1	0	4	4
## Merc 280C	17.8	6	167.6	123	3.92	3.440	18.90	1	0	4	4
## Merc 450SE	16.4	8	275.8	180	3.07	4.070	17.40	0	0	3	3
## Merc 450SL	17.3	8	275.8	180	3.07	3.730	17.60	0	0	3	3
## Merc 450SLC	15.2	8	275.8	180	3.07	3.780	18.00	0	0	3	3
## Cadillac Fleetwood	10.4	8	472.0	205	2.93	5.250	17.98	0	0	3	4
## Lincoln Continental	10.4	8	460.0	215	3.00	5.424	17.82	0	0	3	4
## Chrysler Imperial	14.7	8	440.0	230	3.23	5.345	17.42	0	0	3	4
## Fiat 128	32.4	4	78.7	66	4.08	2.200	19.47	1	1	4	1
## Honda Civic	30.4	4	75.7	52	4.93	1.615	18.52	1	1	4	2
## Toyota Corolla	33.9	4	71.1	65	4.22	1.835	19.90	1	1	4	1
## Toyota Corona	21.5	4	120.1	97	3.70	2.465	20.01	1	0	3	1
## Dodge Challenger	15.5	8	318.0	150	2.76	3.520	16.87	0	0	3	2
## AMC Javelin	15.2	8	304.0	150	3.15	3.435	17.30	0	0	3	2
## Camaro Z28	13.3	8	350.0	245	3.73	3.840	15.41	0	0	3	4
## Pontiac Firebird	19.2	8	400.0	175	3.08	3.845	17.05	0	0	3	2
## Fiat X1-9	27.3	4	79.0	66	4.08	1.935	18.90	1	1	4	1
## Porsche 914-2	26.0	4	120.3	91	4.43	2.140	16.70	0	1	5	2
## Lotus Europa	30.4	4	95.1	113	3.77	1.513	16.90	1	1	5	2
## Ford Pantera L	15.8	8	351.0	264	4.22	3.170	14.50	0	1	5	4
## Ferrari Dino	19.7	6	145.0	175	3.62	2.770	15.50	0	1	5	6
## Maserati Bora	15.0	8	301.0	335	3.54	3.570	14.60	0	1	5	8
## Volvo 142E	21.4	4	121.0	109	4.11	2.780	18.60	1	1	4	2

2. For this question, the following code is missing 5 values because x is giving a number between 1 to 5 and x is equal to NA which represents all missing values.
3. With the code `mtcars[1:15]` it doesnt define the columns so the data would have a place to go. With `mtcars[1:15,]` it gives the colums its names and the data are able to go to the appropriate locations
4. The code created two dimensional data of numbers from a vector of data. the code also creates 3 rows and 3 columns.It also uses the `is.na()` function to check which elements of the data is missing