

Basic workflow

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Coding basics

```
1/200*30
```

```
## [1] 0.15
```

```
sin(pi/2)
```

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

```
# You can also assign a value to a variable
```

```
x<- 3*4
```

```
# object_name<-value
```

What's in a name?

We need to use `_` and `.`

```
# i_use_snake_case
```

```
# otherPeopleUseCameCase
```

```
# some.people.use.periods
```

```
# And_aFew.People.RENOUNCEconvention
```

```
# You can inspect an object by typing its name
```

```
x
```

```
## [1] 12
```

```
# make another assignment
```

```
this_is_a_really_long_time<-2.5
```

```
this_is_a_really_long_time<-3.5
```

```
# Make another assignment
```

```
r_rocks<-2^3
```

```
# r_rock and R_rocks is not gonna be work
```

Calling functions

```
# function_name(arg1=var1,arg2=val2)
```

Remember when you design a function your environment will help you store the function and also the variable you assigned

Exercise

1. Why does this code not work?

```
my_variable<-10  
# my_variable
```

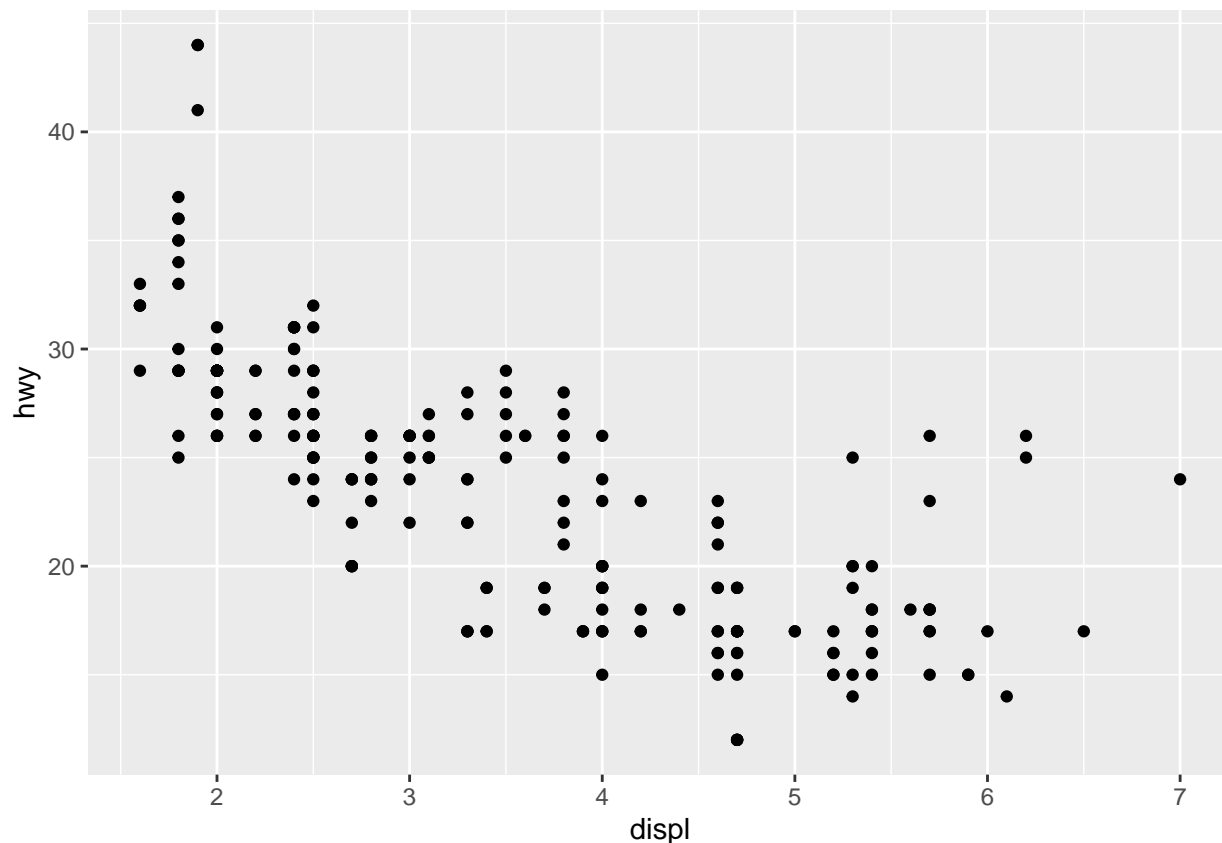
Answer

You should change my_variable to my variable...

2. Tweak each of the following R commands so that they run correctly

Answer

```
library(tidyverse)  
  
## Warning: package 'tidyverse' was built under R version 3.5.2  
## -- Attaching packages ----- tidyverse 1.3.0 --  
## v ggplot2 3.2.1      v purrr  0.3.3  
## v tibble  2.1.3      v dplyr  0.8.3  
## v tidyr   1.0.0      v stringr 1.4.0  
## v readr   1.3.1      v forcats 0.4.0  
  
## Warning: package 'ggplot2' was built under R version 3.5.2  
## Warning: package 'tibble' was built under R version 3.5.2  
## Warning: package 'tidyr' was built under R version 3.5.2  
## Warning: package 'purrr' was built under R version 3.5.2  
## Warning: package 'dplyr' was built under R version 3.5.2  
## Warning: package 'stringr' was built under R version 3.5.2  
## Warning: package 'forcats' was built under R version 3.5.2  
  
## -- Conflicts ----- tidyverse_conflicts() --  
## x dplyr::filter() masks stats::filter()  
## x dplyr::lag()    masks stats::lag()  
  
ggplot(data=mpg)+  
  geom_point(mapping=aes(x=displ,y=hwy))
```



```
filter(mpg,cyl==8)
```

```
## # A tibble: 70 x 11
##   manufacturer model      displ  year  cyl trans  drv    cty   hwy fl    class
##   <chr>          <chr>    <dbl> <int> <int> <chr> <chr> <int> <int> <chr> <chr>
## 1 audi          a6 quatt~  4.2  2008     8 auto(~ 4    16    23 p    mids~
## 2 chevrolet     c1500 su~  5.3  2008     8 auto(~ r    14    20 r    suv
## 3 chevrolet     c1500 su~  5.3  2008     8 auto(~ r    11    15 e    suv
## 4 chevrolet     c1500 su~  5.3  2008     8 auto(~ r    14    20 r    suv
## 5 chevrolet     c1500 su~  5.7  1999     8 auto(~ r    13    17 r    suv
## 6 chevrolet     c1500 su~  6    2008     8 auto(~ r    12    17 r    suv
## 7 chevrolet     corvette  5.7  1999     8 manua~ r    16    26 p    2sea~
## 8 chevrolet     corvette  5.7  1999     8 auto(~ r    15    23 p    2sea~
## 9 chevrolet     corvette  6.2  2008     8 manua~ r    16    26 p    2sea~
## 10 chevrolet     corvette  6.2  2008     8 auto(~ r    15    25 p    2sea~
## # ... with 60 more rows
```

```
filter(diamonds,carat>3)
```

```
## # A tibble: 32 x 10
##   carat cut      color clarity depth table price      x      y      z
##   <dbl> <ord>    <ord> <ord>    <dbl> <dbl> <int> <dbl> <dbl> <dbl>
## 1  3.01 Premium I      I1      62.7  58  8040  9.1   8.97  5.67
## 2  3.11 Fair J      I1      65.9  57  9823  9.15  9.02  5.98
## 3  3.01 Premium F      I1      62.2  56  9925  9.24  9.13  5.73
## 4  3.05 Premium E      I1      60.9  58 10453  9.26  9.25  5.66
## 5  3.02 Fair I      I1      65.2  56 10577  9.11  9.02  5.91
## 6  3.01 Fair H      I1      56.1  62 10761  9.54  9.38  5.31
```

```
## 7 3.65 Fair H I1 67.1 53 11668 9.53 9.48 6.38
## 8 3.24 Premium H I1 62.1 58 12300 9.44 9.4 5.85
## 9 3.22 Ideal I I1 62.6 55 12545 9.49 9.42 5.92
## 10 3.5 Ideal H I1 62.8 57 12587 9.65 9.59 6.03
## # ... with 22 more rows
```

```
# completed
```

3. Press Alt + Shift + K. What happens? How can you get to the same place using the menus?

Answer

We can see all the command we can use.