Homework 1

Eric Zou

Honor code:

"I have neither given nor received unauthorized assistance on this assignment." E.Z.

I receive help from " " and give help to " ".

Problem 1

Assign the character string "6" to x and the character string "8" to y. Try the $x + y$ and see what will return. If you see an error, copy and paste the error message and explain why this happens. If a code contains an error, it can not be rendered to pdf. Please use `#` at the beginning of the line with an error to comment it out. Use `x=as.numeric(x)` and `x=as.numeric(y)` to convert character string to numerical type and try $x + y$ again.

```
x = "6"
y = "8"
#x+y
```

It gives the error"Show in New Window Error in x + y : non-numeric argument to binary operator". This happens because the " " around the numbers turn it into a characer string rather than a numerical type, and you cannot add two character strings.

```
x = as.numeric(x)
y = as.numeric(y)
x+y
```

```
## [1] 14
```

Works this time!

Problem 2

Use `as.logical()` function to convert the character string "123" into a logical type. Convert the number 12 and number 0 into a logical type.

```
as.logical("123")
```

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

```
as.logical(12)
```

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

```
as.logical(0)
```

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

Problem 3

Let x=11 and y=0. Convert x and y into logical type and calculate their sum.

```
x = 11
y = 0
x = as.logical(x)
y = as.logical(y)
x+y
```

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

Problem 4

Use `ls()` function list all variables in globe environment. Then, remove all variables from the globe environment.

```
ls()
```

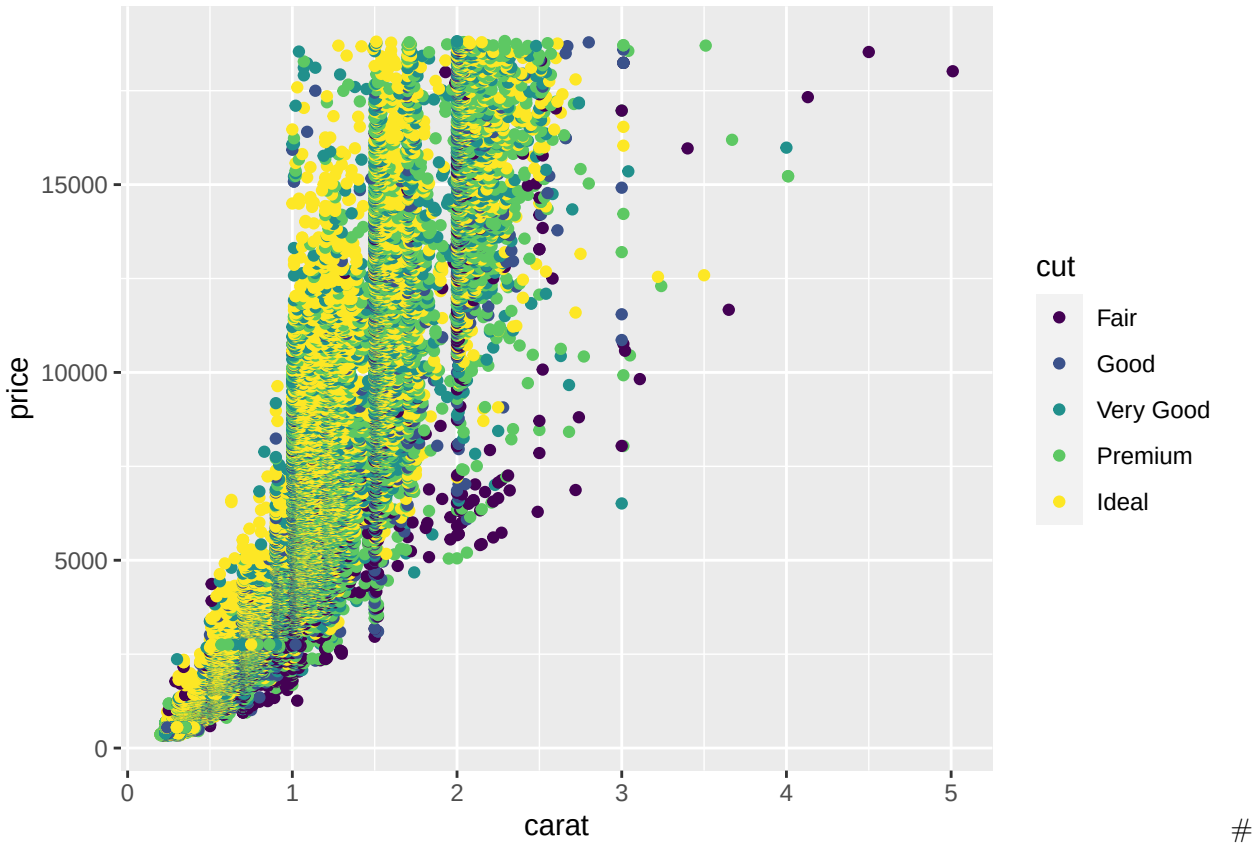
```
## [1] "x" "y"
```

```
rm(list = ls())
```

Problem 5

Install ggplot2 package (`install.packages('ggplot2')`) and load the package (`library(ggplot2)`). Run the following code: `ggplot(diamonds, aes(x=carat, y=price, color=cut)) + geom_point()`.

```
#install.packages('ggplot2')
library(ggplot2)
ggplot(diamonds, aes(x=carat, y=price, color=cut)) + geom_point()
```



#

Problem 6 Output the homework solution into a pdf file.