My elaborated analysis

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1 analysis.rmd

1.1 First function

For doubling the number, you might use the function 'double_me'.

```
library(coursepackageberlin)
a <- 2
double_me(a)
```

```
## [1] 4
```

See this visual (1):

2 Challenge

1. simple table and plot
2. add captions and crossref to those
3. add bib file and cite
4. Add second simple function to R/
5.
   - test
6. pass tests

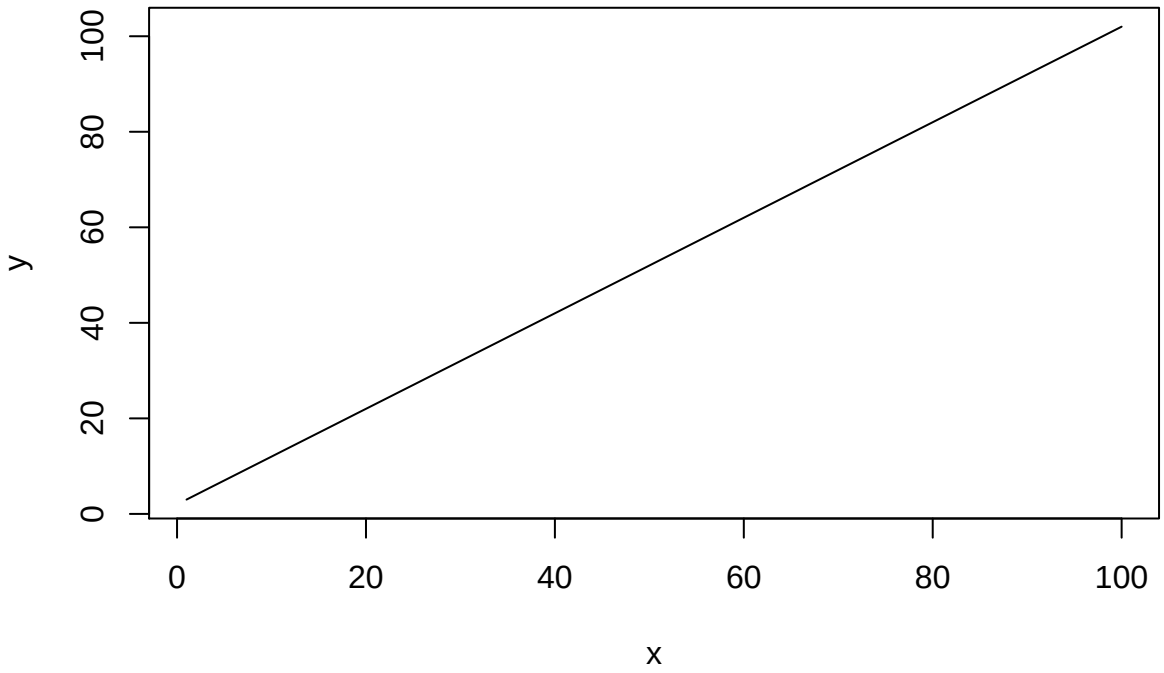

Figure 1: A figure caption.

3 Solution

We simulate a number of characters:

```
my_letters <- sample(letters, size = 500, replace = T)
```

now we table that

```
table(my_letters)
```

```
## my_letters
##  a  b  c  d  e  f  g  h  i  j  k  l  m  n  o  p  q  r  s  t  u  v  w  x  y
## 19 18 21 21 20 17 22 20 21 17 16 19 15 19 26 14 16 21 18 17 20 25 25 15 17
##  z
## 21
```

and in more beautiful

```
knitr::kable(as.data.frame(table(my_letters)), caption = "Letter frequency table")
```

and plot frequency

```
library(ggplot2)
my_plot_letters <- as.data.frame(table(my_letters))
ggplot(data=my_plot_letters, aes(x=my_letters, y=Freq)) + geom_bar(stat = "identity")
```

see solution table (1) and figure (2). for more information consult (R Core Team 2016).

Sampling letters can also be archieved by a function:

```
my_new_letters <- sample_letters(50)
```

We can use that to make a lorem ipsum

Table 1: Letter frequency table

my_letters	Freq
a	19
b	18
c	21
d	21
e	20
f	17
g	22
h	20
i	21
j	17
k	16
l	19
m	15
n	19
o	26
p	14
q	16
r	21
s	18
t	17
u	20
v	25
w	25
x	15
y	17
z	21

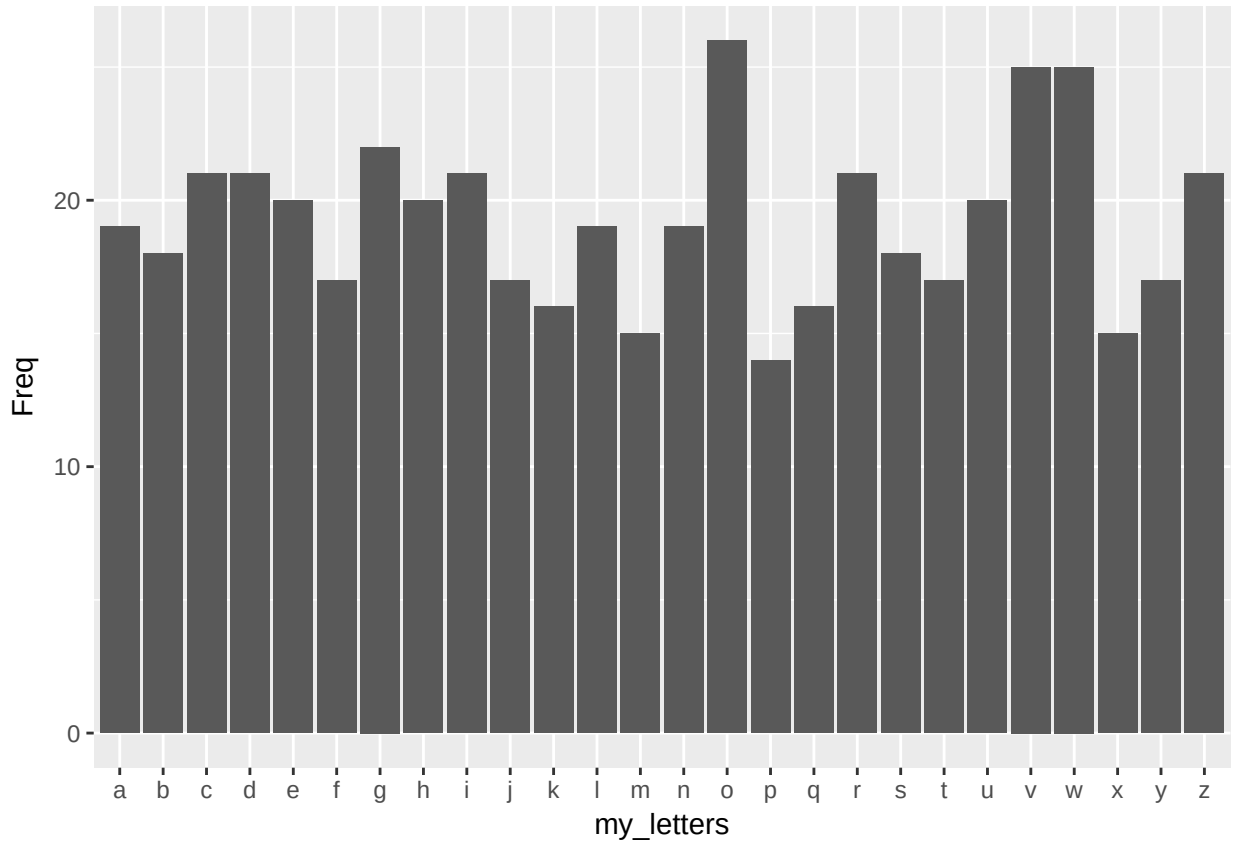

Figure 2: Letter frequency

```r
x <- make_lorem_ipsum(100)
x
```

```
## [1] "u ucktifxzkk gvfw unovpuqdn tumzsen xufrll cgxj oct wvhajuram mapbnmkjvm drwwuu vzfh njrcxglp ab
```

and reuse it

```r
cat(paste(rep(x,10), collapse = "\n"))
```

```
## u ucktifxzkk gvfw unovpuqdn tumzsen xufrll cgxj oct wvhajuram mapbnmkjvm drwwuu vzfh njrcxglp abaucxl
## u ucktifxzkk gvfw unovpuqdn tumzsen xufrll cgxj oct wvhajuram mapbnmkjvm drwwuu vzfh njrcxglp abaucxl
## u ucktifxzkk gvfw unovpuqdn tumzsen xufrll cgxj oct wvhajuram mapbnmkjvm drwwuu vzfh njrcxglp abaucxl
## u ucktifxzkk gvfw unovpuqdn tumzsen xufrll cgxj oct wvhajuram mapbnmkjvm drwwuu vzfh njrcxglp abaucxl
## u ucktifxzkk gvfw unovpuqdn tumzsen xufrll cgxj oct wvhajuram mapbnmkjvm drwwuu vzfh njrcxglp abaucxl
## u ucktifxzkk gvfw unovpuqdn tumzsen xufrll cgxj oct wvhajuram mapbnmkjvm drwwuu vzfh njrcxglp abaucxl
## u ucktifxzkk gvfw unovpuqdn tumzsen xufrll cgxj oct wvhajuram mapbnmkjvm drwwuu vzfh njrcxglp abaucxl
## u ucktifxzkk gvfw unovpuqdn tumzsen xufrll cgxj oct wvhajuram mapbnmkjvm drwwuu vzfh njrcxglp abaucxl
## u ucktifxzkk gvfw unovpuqdn tumzsen xufrll cgxj oct wvhajuram mapbnmkjvm drwwuu vzfh njrcxglp abaucxl
## u ucktifxzkk gvfw unovpuqdn tumzsen xufrll cgxj oct wvhajuram mapbnmkjvm drwwuu vzfh njrcxglp abaucxl
```

R Core Team. 2016. *R: A Language and Environment for Statistical Computing.* Vienna, Austria: R Foundation for Statistical Computing. https://www.R-project.org/.