Algorithm

```
library(tidyverse)
library(haven)
library(palmerpenguins)
```

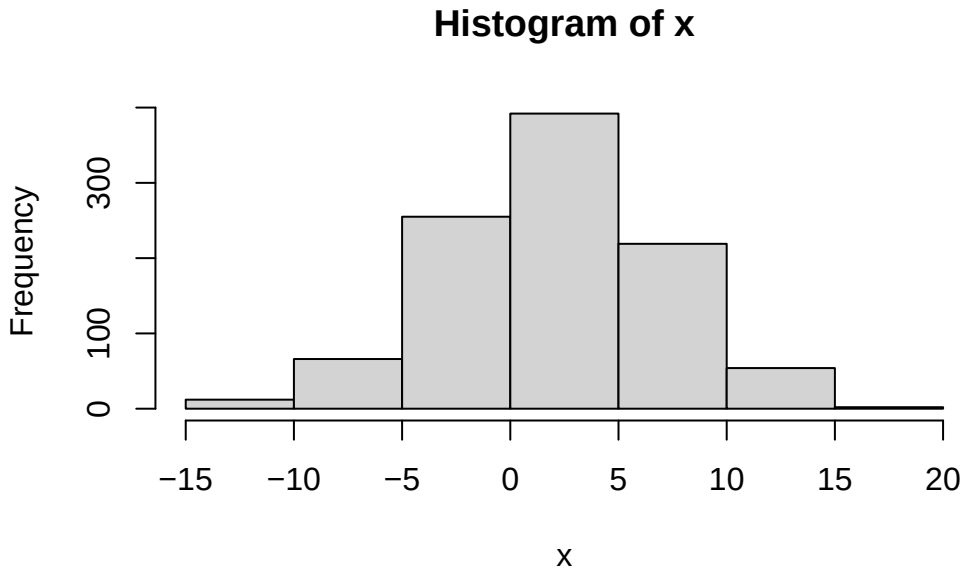
Import dataset

```
PR <- read_spss("BDPR7RFL.SAV")

PR_df <-PR |>
  select(HV226, HV206, HV208, HV243A, HV221, HV209, HV242) |>
  rename(cooking_fuel= HV226, Electricity = HV206,
         Television = HV208, Mobile.phone = HV243A, Landline = HV221,
         Refrigerator = HV209, separate.kitchen = HV209) ## Renaming Variable

head(PR_df)
```

```
# A tibble: 6 x 7
  cooking_fuel Electricity Television Mobile.phone Landline  separate.kitchen
  <dbl+lbl>    <dbl+lbl>   <dbl+lbl>  <dbl+lbl>    <dbl+lbl> <dbl+lbl>
1 8 [Wood]     0 [No]      0 [No]     1 [Yes]      0 [No]    0 [No]
2 8 [Wood]     0 [No]      0 [No]     1 [Yes]      0 [No]    0 [No]
3 8 [Wood]     0 [No]      0 [No]     1 [Yes]      0 [No]    0 [No]
4 8 [Wood]     0 [No]      0 [No]     1 [Yes]      0 [No]    0 [No]
5 8 [Wood]     0 [No]      0 [No]     1 [Yes]      0 [No]    0 [No]
6 8 [Wood]     0 [No]      0 [No]     1 [Yes]      0 [No]    0 [No]
# i 1 more variable: HV242 <dbl+lbl>
```

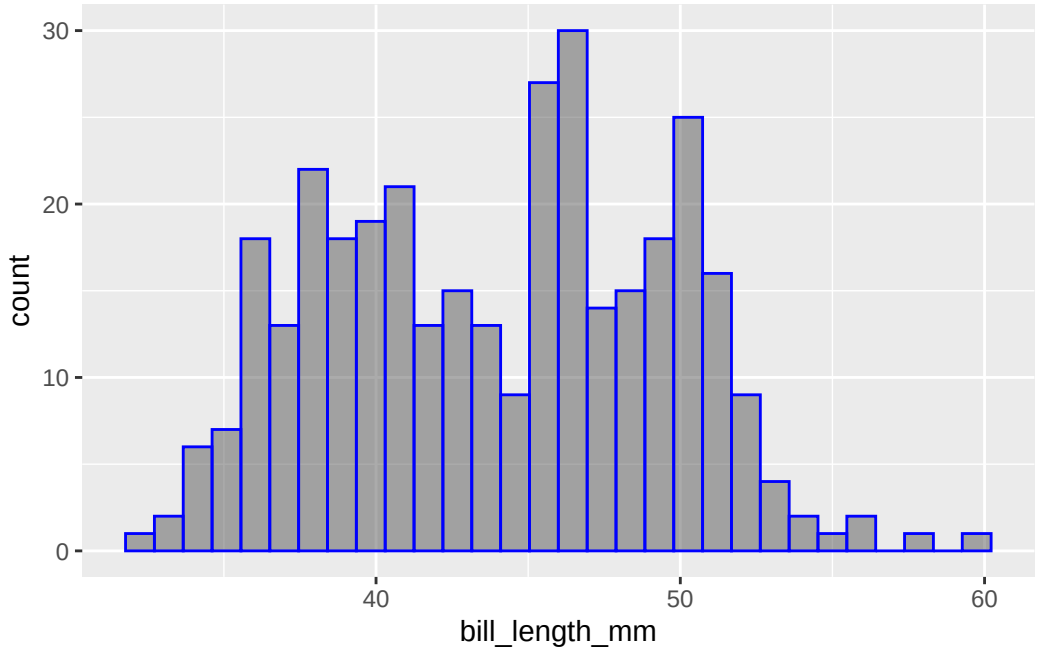
Generate data from Normal Distribution

```
x <- rnorm(1000,2,5)
hist(x)
```




```
penguins |>
  ggplot(aes(x= bill_length_mm))+
  geom_histogram(bins = 30,col = "Blue",alpha=0.5)
```

```
Warning: Removed 2 rows containing non-finite values (`stat_bin()`).
```

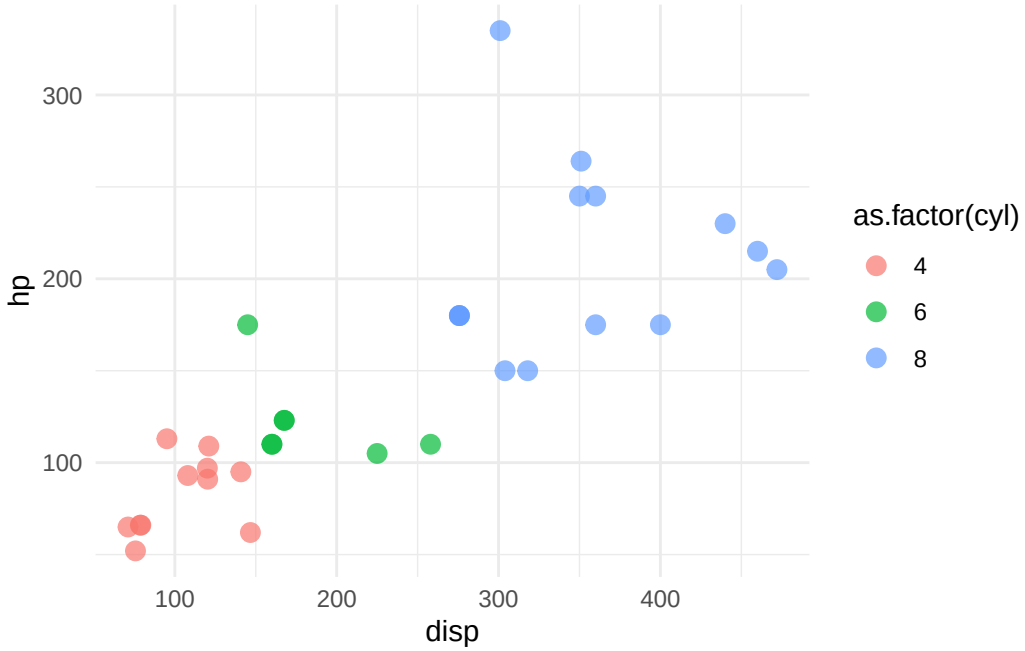


Data Cleaning

```
head(mtcars)
```

```
                   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
Hornet 4 Drive    21.4   6  258 110 3.08 3.215 19.44  1  0    3    1
Hornet Sportabout 18.7   8  360 175 3.15 3.440 17.02  0  0    3    2
Valiant           18.1   6  225 105 2.76 3.460 20.22  1  0    3    1
```

```
ggplot(mtcars,aes(x= disp,y=hp,col=as.factor(cyl)))+
  geom_point(alpha=0.7,size=3)+
  theme_minimal()
```


300
200
100
hp
100
200
300
400
disp
as.factor(cyl)
4
6
8