RWorksheet_Cahutay#4b

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1. 5 x 5 Zero Matrix

```
vectorA <- c(1, 2, 3, 4, 5)
my_matrix <- matrix(0, nrow = 5, ncol = 5)

for (i in 1:5) {
  for (j in 1:5) {
    my_matrix[i, j] <- vectorA[abs(i - j) + 1] - 1
  }
}

print(my_matrix)
```

```
##      [,1] [,2] [,3] [,4] [,5]
## [1,]    0    1    2    3    4
## [2,]    1    0    1    2    3
## [3,]    2    1    0    1    2
## [4,]    3    2    1    0    1
## [5,]    4    3    2    1    0
```

2. Print string "*" using for loop.

```
for (i in 1:5){
  for (j in 1:i){
    cat("* ")
  }
  cat("\n")
}
```

```
## *
## * *
## * * *
## * * * *
## * * * * *
```

3. Print a Fibonacci sequence from the first input until the value reaches 500.

```r
printFibonacci <- function(start){
  first <- 0
  second <- 1
  next_num <- 0

  if (start == 1){
      cat(first, "", second, "", second, " ")
  }

  for (i in 0:start){
    next_num <- first + second
    first <- second
    second <- next_num
  }

  repeat{
    if (next_num > 500) break
    cat(next_num, " ")
    next_num <- first + second
    first <- second
    second <- next_num
  }
}

#start <- readline(prompt = "Enter starting term: ")
start <- 1
printFibonacci(start)
```

```
## 0  1  1  2  3  5  8  13  21  34  55  89  144  233  377
```

4. Import shoe size dataset

```r
#A. Imported the dataset and displayed the first 6 rows
shoe_data <- read.csv("shoesize_data.csv")
shoe_data[(1:6), ]
```

```
##   Shoe_Size Height Gender
## 1       6.5   66.0      F
## 2       9.0   68.0      F
## 3       8.5   64.5      F
## 4       8.5   65.0      F
## 5      10.5   70.0      M
## 6       7.0   64.0      F
```

```r
#B. Subset for gender
male <- subset(shoe_data, Gender == "M")
male
```

```
##    Shoe_Size Height Gender
## 5       10.5   70.0      M
## 9       13.0   72.0      M
## 11      10.5   74.5      M
```

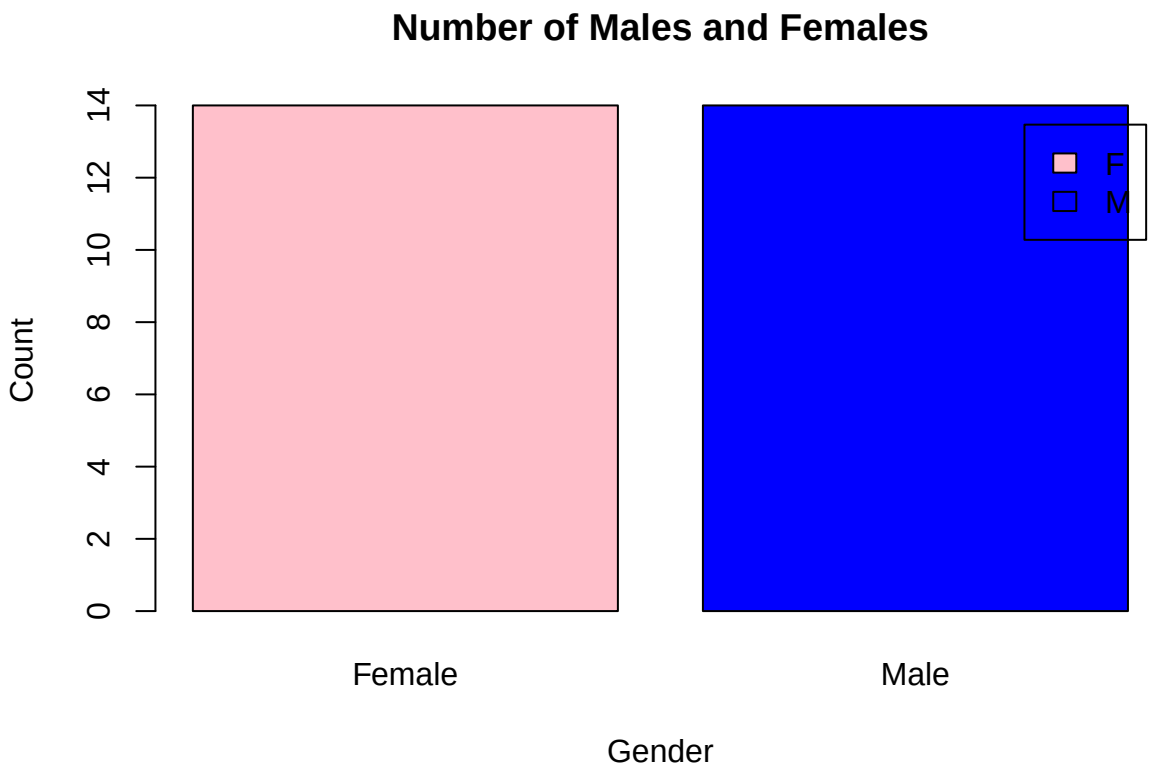
```
## 13      12.0   71.0      M
## 14      10.5   71.0      M
## 15      13.0   77.0      M
## 16      11.5   72.0      M
## 19      10.0   72.0      M
## 22       8.5   67.0      M
## 23      10.5   73.0      M
## 25      10.5   72.0      M
## 26      11.0   70.0      M
## 27       9.0   69.0      M
## 28      13.0   70.0      M
```

```r
female <- subset(shoe_data, Gender == "F")
female
```

```
##    Shoe_Size Height Gender
## 1        6.5   66.0      F
## 2        9.0   68.0      F
## 3        8.5   64.5      F
## 4        8.5   65.0      F
## 6        7.0   64.0      F
## 7        9.5   70.0      F
## 8        9.0   71.0      F
## 10       7.5   64.0      F
## 12       8.5   67.0      F
## 17       8.5   59.0      F
## 18       5.0   62.0      F
## 20       6.5   66.0      F
## 21       7.5   64.0      F
## 24       8.5   69.0      F
```

```r
#C. Barplot for genders
num_gender <- table(shoe_data$Gender)

barplot(num_gender,
        main = "Number of Males and Females",
        xlab = "Gender",
        ylab = "Count",
        col = c("Pink", "Blue"),
        names.arg = c("Female", "Male"),
        legend = rownames(num_gender))
```

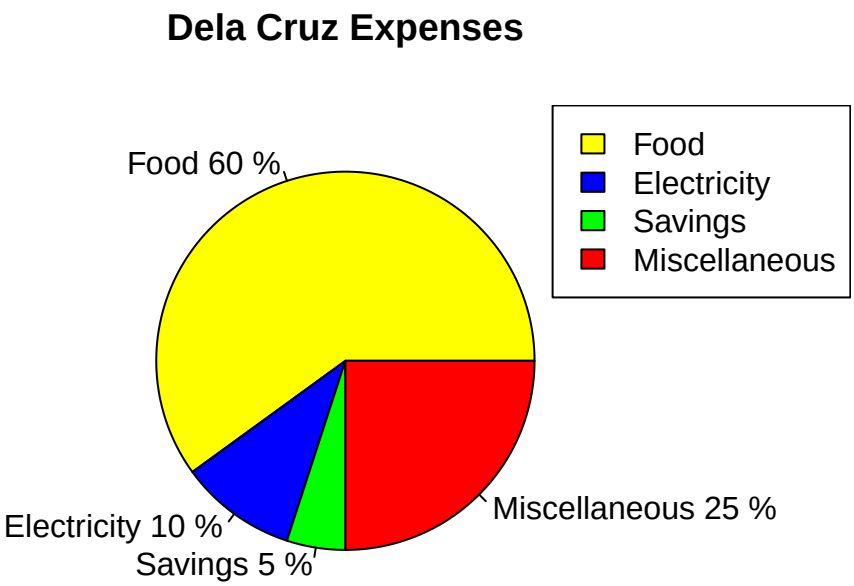


5. Monthly income pie chart of Dela Cruz Family.

```
category <- c("Food", "Electricity", "Savings", "Miscellaneous")
value <- c(60, 10, 5, 25)
color = c("Yellow", "Blue", "Green", "Red")
percentage <- round(value / sum(value) * 100)
percent_label <- paste(category, percentage, "%")

pie(
  value,
  col = color,
  main = "Dela Cruz Expenses",
  label = percent_label
)

legend("topright", category, fill = color)
```



6. Iris Dataset

```
#A. Check structure of iris dataset
data(iris)
str(iris)
```

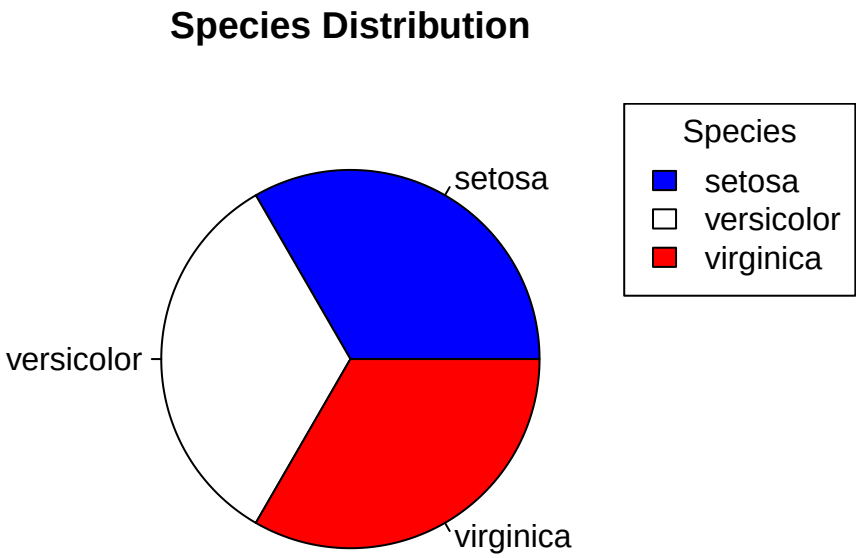
```
## 'data.frame':    150 obs. of  5 variables:
##  $ Sepal.Length: num  5.1 4.9 4.7 4.6 5 5.4 4.6 5 4.4 4.9 ...
##  $ Sepal.Width : num  3.5 3 3.2 3.1 3.6 3.9 3.4 3.4 2.9 3.1 ...
##  $ Petal.Length: num  1.4 1.4 1.3 1.5 1.4 1.7 1.4 1.5 1.4 1.5 ...
##  $ Petal.Width : num  0.2 0.2 0.2 0.2 0.2 0.4 0.3 0.2 0.2 0.1 ...
##  $ Species     : Factor w/ 3 levels "setosa","versicolor",..: 1 1 1 1 1 1 1 1 1 1 ...
```

```
#Output displays a data frame that contains the length and width of Sepal and Petal
```

```
#B. Object to store the mean of sepal length, sepal width, petal length, and petal width
data_means <- c(
  Sepal.Length = mean(iris$Sepal.Length),
  Sepal.Width = mean(iris$Sepal.Width),
  Petal.Length = mean(iris$Petal.Length),
  Petal.Width = mean(iris$Petal.Width)
)
data_means
```

```
## Sepal.Length  Sepal.Width Petal.Length  Petal.Width
##     5.843333     3.057333     3.758000     1.199333
```

```r
#C. Pie chart for Species distribution
iris_species <- table(iris$Species)
species_color <- c("Blue", "White", "Red")
pie(
  iris_species,
  main = "Species Distribution",
  col = species_color
)
legend("topright", names(iris_species), fill = species_color, title = "Species")
```




```r
#D. Subset of the species setosa, versicolor, and virginica.
setosa <- subset(iris, Species == "setosa")
versicolor <- subset(iris, Species == "versicolor")
virginica <- subset(iris, Species == "virginica")
tail(setosa)
```

```
##    Sepal.Length Sepal.Width Petal.Length Petal.Width Species
## 45          5.1         3.8          1.9         0.4  setosa
## 46          4.8         3.0          1.4         0.3  setosa
## 47          5.1         3.8          1.6         0.2  setosa
## 48          4.6         3.2          1.4         0.2  setosa
## 49          5.3         3.7          1.5         0.2  setosa
## 50          5.0         3.3          1.4         0.2  setosa
```

```r
tail(versicolor)
```

```
##     Sepal.Length Sepal.Width Petal.Length Petal.Width    Species
## 95           5.6         2.7          4.2         1.3 versicolor
## 96           5.7         3.0          4.2         1.2 versicolor
## 97           5.7         2.9          4.2         1.3 versicolor
## 98           6.2         2.9          4.3         1.3 versicolor
## 99           5.1         2.5          3.0         1.1 versicolor
## 100          5.7         2.8          4.1         1.3 versicolor
```

```r
tail(virginica)
```

```
##     Sepal.Length Sepal.Width Petal.Length Petal.Width   Species
## 145          6.7         3.3          5.7         2.5 virginica
## 146          6.7         3.0          5.2         2.3 virginica
## 147          6.3         2.5          5.0         1.9 virginica
## 148          6.5         3.0          5.2         2.0 virginica
## 149          6.2         3.4          5.4         2.3 virginica
## 150          5.9         3.0          5.1         1.8 virginica
```

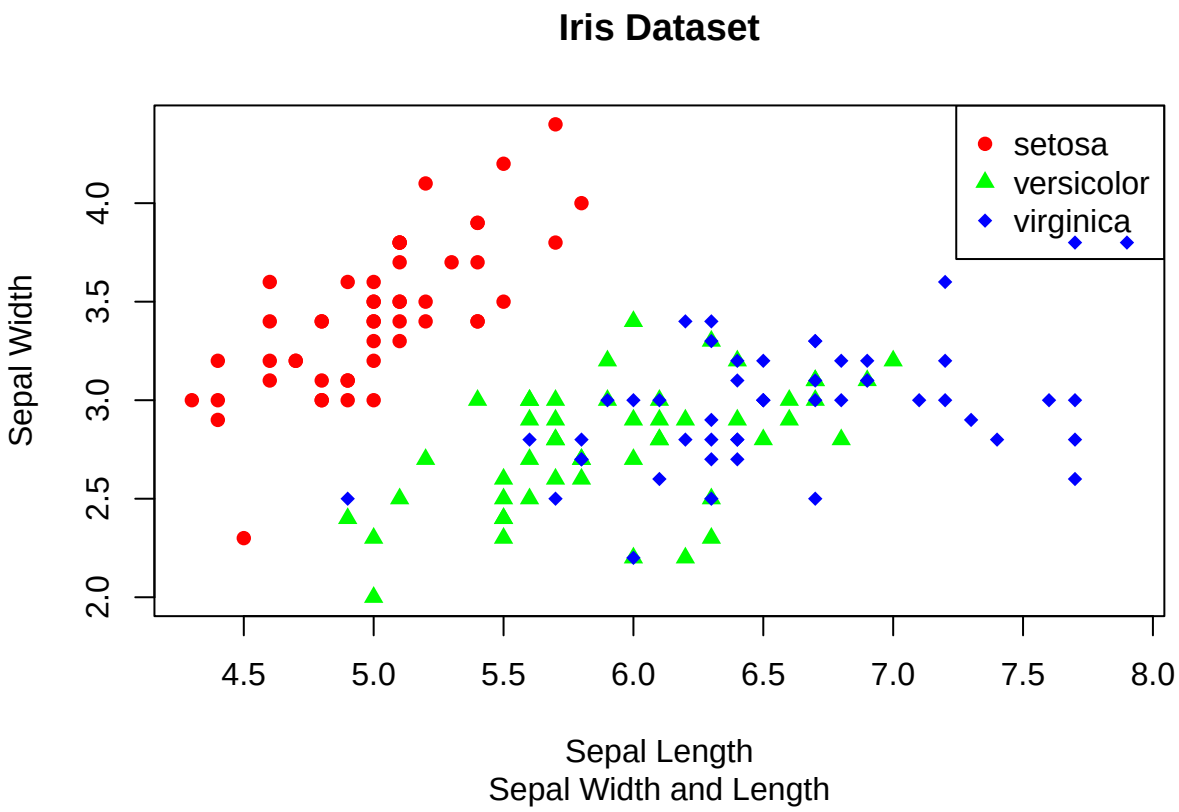
```r
#E. Scatterplot of the sepal.length and sepal.width
data(iris)

iris$Species <- as.factor(iris$Species)

colors <- c("red", "green", "blue")
pch_symbols <- c(16, 17, 18)

plot(iris$Sepal.Length, iris$Sepal.Width,
     col = colors[iris$Species],
     pch = pch_symbols[iris$Species],
     main = "Iris Dataset",
     sub = "Sepal Width and Length",
     xlab = "Sepal Length",
     ylab = "Sepal Width")

legend("topright", legend = levels(iris$Species),
       col = colors, pch = pch_symbols)
```



F.

- The scatterplot shows the relationship between Sepal.Length and Sepal.Width across three species in the iris dataset: setosa, versicolor, and virginica.
- Setosa (red circles) is distinctly clustered with smaller sepal lengths, making it easily distinguishable from the other species.
- Versicolor (green triangles) and Virginica (blue diamonds) show overlapping ranges in both dimensions, with virginica generally having the longest sepals.

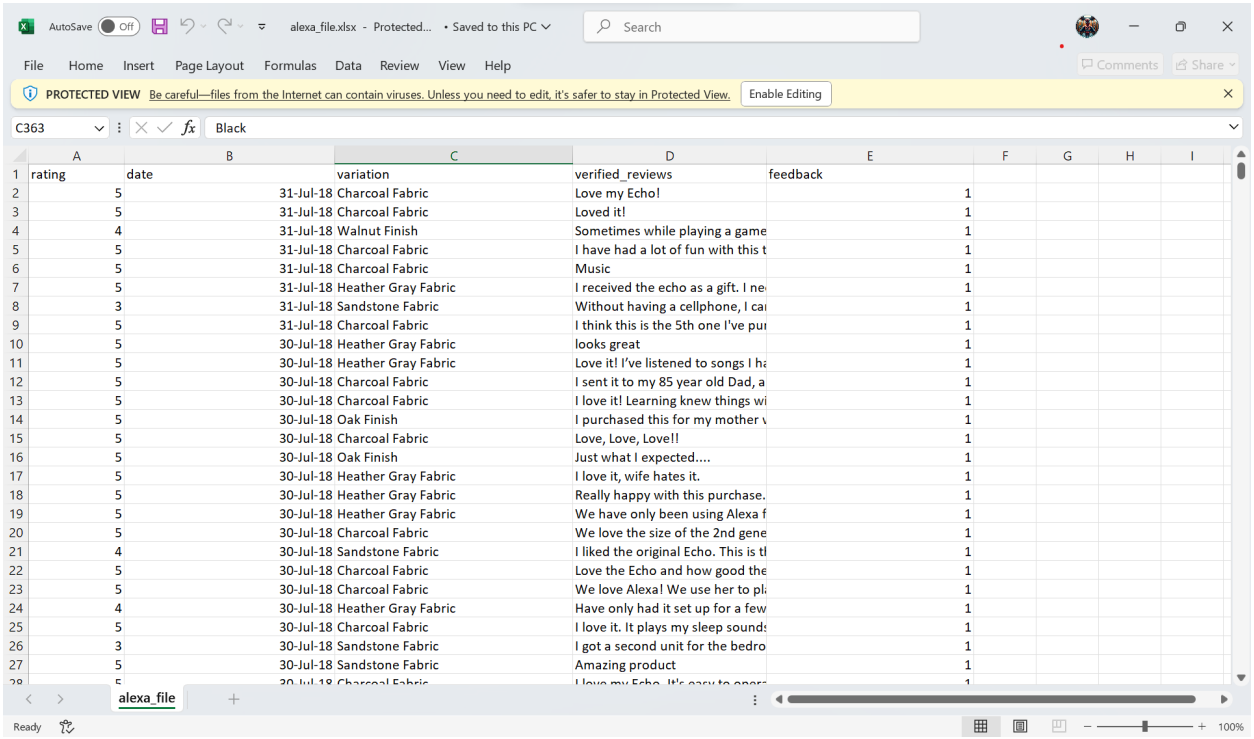
7. Basic Cleaning and Transformation of Objects

```
#Imported alexafile
library(readxl)
alexa_file <- read_xlsx("alexa_file.xlsx")
alexa_file
```

```
## # A tibble: 3,150 x 5
##    rating date                variation          verified_reviews      feedback
##     <dbl> <dttm>              <chr>              <chr>                    <dbl>
##  1      5 2018-07-31 00:00:00 Charcoal Fabric    Love my Echo!                1
##  2      5 2018-07-31 00:00:00 Charcoal Fabric    Loved it!                    1
##  3      4 2018-07-31 00:00:00 Walnut Finish      Sometimes while play~        1
##  4      5 2018-07-31 00:00:00 Charcoal Fabric    I have had a lot of ~        1
##  5      5 2018-07-31 00:00:00 Charcoal Fabric    Music                        1
```

```
##  6      5 2018-07-31 00:00:00 Heather Gray Fabric I received the echo ~        1
##  7      3 2018-07-31 00:00:00 Sandstone Fabric    Without having a cel~        1
##  8      5 2018-07-31 00:00:00 Charcoal Fabric     I think this is the ~        1
##  9      5 2018-07-30 00:00:00 Heather Gray Fabric looks great                  1
## 10      5 2018-07-30 00:00:00 Heather Gray Fabric Love it! I've listen~        1
## # i 3,140 more rows
```

```
knitr::include_graphics("Screenshot_alexa.png")
```



	A	B	C	D	E	F	G	H	I
1	rating	date	variation	verified_reviews	feedback				
2	5	31-Jul-18	Charcoal Fabric	Love my Echo!	1				
3	5	31-Jul-18	Charcoal Fabric	Loved it!	1				
4	4	31-Jul-18	Walnut Finish	Sometimes while playing a game	1				
5	5	31-Jul-18	Charcoal Fabric	I have had a lot of fun with this t	1				
6	5	31-Jul-18	Charcoal Fabric	Music	1				
7	5	31-Jul-18	Heather Gray Fabric	I received the echo as a gift. I ne	1				
8	3	31-Jul-18	Sandstone Fabric	Without having a cellphone, I ca	1				
9	5	31-Jul-18	Charcoal Fabric	I think this is the 5th one I've pur	1				
10	5	30-Jul-18	Heather Gray Fabric	looks great	1				
11	5	30-Jul-18	Heather Gray Fabric	Love it! I've listened to songs I ha	1				
12	5	30-Jul-18	Charcoal Fabric	I sent it to my 85 year old Dad, a	1				
13	5	30-Jul-18	Charcoal Fabric	I love it! Learning knew things wi	1				
14	5	30-Jul-18	Oak Finish	I purchased this for my mother v	1				
15	5	30-Jul-18	Charcoal Fabric	Love, Love, Love!!	1				
16	5	30-Jul-18	Oak Finish	Just what I expected....	1				
17	5	30-Jul-18	Heather Gray Fabric	I love it, wife hates it.	1				
18	5	30-Jul-18	Heather Gray Fabric	Really happy with this purchase.	1				
19	5	30-Jul-18	Heather Gray Fabric	We have only been using Alexa f	1				
20	5	30-Jul-18	Charcoal Fabric	We love the size of the 2nd gene	1				
21	4	30-Jul-18	Sandstone Fabric	I liked the original Echo. This is th	1				
22	5	30-Jul-18	Charcoal Fabric	Love the Echo and how good the	1				
23	5	30-Jul-18	Charcoal Fabric	We love Alexa! We use her to pla	1				
24	4	30-Jul-18	Heather Gray Fabric	Have only had it set up for a few	1				
25	5	30-Jul-18	Charcoal Fabric	I love it. It plays my sleep sounds	1				
26	3	30-Jul-18	Sandstone Fabric	I got a second unit for the bedro	1				
27	5	30-Jul-18	Sandstone Fabric	Amazing product	1				

```
#A. Rename the white and black variants using gsub() function.
alexa_file$variation <- gsub("Black  Dot", "BlackDot", alexa_file$variation)
alexa_file$variation <- gsub("Black  Plus", "BlackPlus", alexa_file$variation)
alexa_file$variation <- gsub("Black  Show", "BlackShow", alexa_file$variation)
alexa_file$variation <- gsub("Black  Spot", "BlackSpot", alexa_file$variation)
alexa_file$variation <- gsub("White  Spot", "WhiteSpot", alexa_file$variation)
alexa_file$variation <- gsub("White  Show", "WhiteShow", alexa_file$variation)
alexa_file$variation <- gsub("White  Plus", "WhitePlus", alexa_file$variation)
alexa_file$variation <- gsub("White  Dot", "WhiteDot", alexa_file$variation)

alexa_file$variation[1050:2000]
```

```
##   [1] "Heather Gray Fabric" "BlackSpot"           "WhiteSpot"
##   [4] "BlackSpot"           "BlackSpot"           "BlackSpot"
##   [7] "BlackSpot"           "WhiteSpot"           "BlackSpot"
##  [10] "BlackSpot"           "BlackSpot"           "BlackSpot"
##  [13] "BlackSpot"           "WhiteSpot"           "WhiteSpot"
##  [16] "BlackSpot"           "WhiteSpot"           "WhiteSpot"
##  [19] "WhiteSpot"           "WhiteSpot"           "BlackSpot"
##  [22] "BlackSpot"           "WhiteSpot"           "BlackSpot"
```

```
##  [25] "BlackSpot"          "BlackSpot"          "WhiteSpot"
##  [28] "BlackSpot"          "BlackSpot"          "WhiteSpot"
##  [31] "BlackSpot"          "BlackSpot"          "BlackSpot"
##  [34] "BlackSpot"          "WhiteSpot"          "BlackSpot"
##  [37] "WhiteSpot"          "BlackSpot"          "BlackSpot"
##  [40] "WhiteSpot"          "WhiteSpot"          "BlackSpot"
##  [43] "BlackSpot"          "BlackSpot"          "BlackSpot"
##  [46] "WhiteSpot"          "WhiteSpot"          "BlackSpot"
##  [49] "BlackSpot"          "BlackSpot"          "WhiteSpot"
##  [52] "BlackSpot"          "BlackSpot"          "BlackSpot"
##  [55] "BlackSpot"          "BlackSpot"          "WhiteSpot"
##  [58] "BlackSpot"          "WhiteSpot"          "BlackSpot"
##  [61] "WhiteSpot"          "BlackSpot"          "BlackSpot"
##  [64] "WhiteSpot"          "WhiteSpot"          "WhiteSpot"
##  [67] "BlackSpot"          "BlackSpot"          "BlackSpot"
##  [70] "WhiteSpot"          "WhiteSpot"          "BlackSpot"
##  [73] "BlackSpot"          "BlackSpot"          "WhiteSpot"
##  [76] "BlackSpot"          "BlackSpot"          "BlackSpot"
##  [79] "BlackSpot"          "BlackSpot"          "BlackSpot"
##  [82] "BlackSpot"          "BlackSpot"          "BlackSpot"
##  [85] "BlackSpot"          "BlackSpot"          "BlackSpot"
##  [88] "WhiteSpot"          "WhiteSpot"          "WhiteSpot"
##  [91] "BlackSpot"          "BlackSpot"          "WhiteSpot"
##  [94] "BlackSpot"          "BlackSpot"          "BlackSpot"
##  [97] "BlackSpot"          "WhiteSpot"          "BlackSpot"
## [100] "BlackSpot"          "BlackSpot"          "BlackSpot"
## [103] "WhiteSpot"          "BlackSpot"          "BlackSpot"
## [106] "WhiteSpot"          "BlackSpot"          "WhiteSpot"
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## [112] "BlackSpot"          "BlackSpot"          "BlackSpot"
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## [118] "WhiteSpot"          "BlackSpot"          "BlackSpot"
## [121] "BlackSpot"          "BlackSpot"          "BlackSpot"
## [124] "WhiteSpot"          "BlackSpot"          "WhiteSpot"
## [127] "BlackSpot"          "WhiteSpot"          "BlackSpot"
## [130] "BlackSpot"          "BlackSpot"          "WhiteSpot"
## [133] "WhiteSpot"          "BlackSpot"          "WhiteSpot"
## [136] "BlackSpot"          "BlackSpot"          "BlackSpot"
## [139] "BlackSpot"          "WhiteSpot"          "BlackSpot"
## [142] "WhiteSpot"          "BlackSpot"          "BlackSpot"
## [145] "BlackSpot"          "WhiteSpot"          "BlackSpot"
## [148] "BlackSpot"          "BlackSpot"          "WhiteSpot"
## [151] "WhiteSpot"          "BlackSpot"          "BlackSpot"
## [154] "BlackSpot"          "WhiteSpot"          "WhiteSpot"
## [157] "BlackSpot"          "WhiteSpot"          "BlackSpot"
## [160] "BlackSpot"          "WhiteSpot"          "BlackSpot"
## [163] "BlackSpot"          "WhiteSpot"          "BlackSpot"
## [166] "BlackSpot"          "BlackSpot"          "BlackSpot"
## [169] "BlackSpot"          "BlackSpot"          "WhiteSpot"
## [172] "WhiteSpot"          "BlackSpot"          "WhiteSpot"
## [175] "BlackSpot"          "WhiteSpot"          "BlackSpot"
## [178] "BlackSpot"          "BlackSpot"          "WhiteSpot"
## [181] "BlackSpot"          "BlackSpot"          "WhiteSpot"
## [184] "BlackSpot"          "BlackSpot"          "BlackSpot"
```

```
## [187] "BlackSpot"          "BlackSpot"          "BlackSpot"
## [190] "BlackSpot"          "WhiteSpot"          "WhiteSpot"
## [193] "BlackSpot"          "WhiteSpot"          "WhiteSpot"
## [196] "WhiteSpot"          "BlackSpot"          "BlackSpot"
## [199] "BlackSpot"          "BlackSpot"          "WhiteSpot"
## [202] "BlackSpot"          "WhiteSpot"          "WhiteSpot"
## [205] "WhiteSpot"          "BlackSpot"          "BlackSpot"
## [208] "BlackSpot"          "BlackSpot"          "BlackSpot"
## [211] "BlackSpot"          "BlackSpot"          "WhiteSpot"
## [214] "WhiteSpot"          "BlackSpot"          "WhiteSpot"
## [217] "WhiteSpot"          "WhiteSpot"          "BlackSpot"
## [220] "BlackSpot"          "BlackSpot"          "WhiteSpot"
## [223] "WhiteSpot"          "BlackSpot"          "WhiteSpot"
## [226] "WhiteSpot"          "WhiteSpot"          "WhiteSpot"
## [229] "BlackSpot"          "WhiteSpot"          "BlackSpot"
## [232] "BlackSpot"          "BlackSpot"          "BlackSpot"
## [235] "WhiteSpot"          "WhiteSpot"          "WhiteSpot"
## [238] "BlackSpot"          "BlackSpot"          "BlackSpot"
## [241] "WhiteSpot"          "WhiteSpot"          "BlackSpot"
## [244] "WhiteSpot"          "BlackSpot"          "BlackSpot"
## [247] "WhiteSpot"          "BlackSpot"          "WhiteSpot"
## [250] "BlackSpot"          "WhiteSpot"          "BlackSpot"
## [253] "BlackSpot"          "BlackSpot"          "BlackSpot"
## [256] "BlackSpot"          "BlackSpot"          "BlackSpot"
## [259] "BlackSpot"          "BlackSpot"          "BlackSpot"
## [262] "BlackSpot"          "WhiteSpot"          "BlackSpot"
## [265] "BlackSpot"          "BlackSpot"          "BlackSpot"
## [268] "WhiteSpot"          "BlackSpot"          "BlackSpot"
## [271] "WhiteSpot"          "BlackSpot"          "BlackSpot"
## [274] "BlackSpot"          "BlackSpot"          "BlackSpot"
## [277] "BlackSpot"          "BlackSpot"          "BlackSpot"
## [280] "BlackSpot"          "WhiteSpot"          "BlackSpot"
## [283] "BlackSpot"          "WhiteSpot"          "BlackSpot"
## [286] "BlackSpot"          "WhiteSpot"          "BlackSpot"
## [289] "BlackSpot"          "WhiteSpot"          "BlackSpot"
## [292] "BlackSpot"          "BlackSpot"          "BlackSpot"
## [295] "BlackSpot"          "BlackSpot"          "BlackSpot"
## [298] "BlackSpot"          "WhiteSpot"          "BlackSpot"
## [301] "BlackSpot"          "BlackSpot"          "WhiteSpot"
## [304] "BlackSpot"          "BlackSpot"          "BlackSpot"
## [307] "BlackSpot"          "BlackSpot"          "BlackSpot"
## [310] "WhiteSpot"          "WhiteSpot"          "BlackSpot"
## [313] "BlackSpot"          "BlackSpot"          "BlackSpot"
## [316] "BlackSpot"          "BlackSpot"          "BlackSpot"
## [319] "WhiteSpot"          "BlackSpot"          "BlackSpot"
## [322] "WhiteSpot"          "WhiteSpot"          "BlackSpot"
## [325] "BlackSpot"          "BlackSpot"          "BlackSpot"
## [328] "WhiteSpot"          "BlackSpot"          "BlackSpot"
## [331] "BlackSpot"          "WhiteSpot"          "WhiteSpot"
## [334] "BlackSpot"          "BlackSpot"          "BlackSpot"
## [337] "BlackSpot"          "BlackSpot"          "BlackSpot"
## [340] "BlackSpot"          "BlackSpot"          "BlackSpot"
## [343] "WhiteSpot"          "BlackSpot"          "BlackSpot"
## [346] "BlackSpot"          "WhiteSpot"          "BlackSpot"
```

```
## [349] "WhiteSpot"          "BlackSpot"          "BlackSpot"
## [352] "BlackShow"          "BlackShow"          "BlackShow"
## [355] "BlackShow"          "WhiteShow"          "WhiteShow"
## [358] "BlackShow"          "WhiteShow"          "BlackShow"
## [361] "BlackShow"          "BlackShow"          "BlackShow"
## [364] "BlackShow"          "WhiteShow"          "BlackShow"
## [367] "BlackShow"          "BlackShow"          "BlackShow"
## [370] "BlackShow"          "BlackShow"          "WhiteShow"
## [373] "BlackShow"          "BlackShow"          "BlackShow"
## [376] "BlackShow"          "WhiteShow"          "BlackShow"
## [379] "BlackShow"          "BlackShow"          "BlackShow"
## [382] "WhiteShow"          "BlackShow"          "BlackShow"
## [385] "BlackShow"          "BlackShow"          "BlackShow"
## [388] "BlackShow"          "BlackShow"          "BlackShow"
## [391] "BlackShow"          "WhiteShow"          "WhiteShow"
## [394] "BlackShow"          "WhiteShow"          "WhiteShow"
## [397] "BlackShow"          "BlackShow"          "WhiteShow"
## [400] "WhiteShow"          "BlackShow"          "BlackShow"
## [403] "BlackShow"          "BlackShow"          "BlackShow"
## [406] "WhiteShow"          "BlackShow"          "BlackShow"
## [409] "BlackShow"          "BlackShow"          "BlackShow"
## [412] "BlackShow"          "BlackShow"          "WhiteShow"
## [415] "WhiteShow"          "BlackShow"          "BlackShow"
## [418] "BlackShow"          "BlackShow"          "BlackShow"
## [421] "BlackShow"          "BlackShow"          "BlackShow"
## [424] "BlackShow"          "WhiteShow"          "WhiteShow"
## [427] "BlackShow"          "BlackShow"          "WhiteShow"
## [430] "BlackShow"          "BlackShow"          "BlackShow"
## [433] "BlackShow"          "BlackShow"          "BlackShow"
## [436] "BlackShow"          "WhiteShow"          "BlackShow"
## [439] "WhiteShow"          "BlackShow"          "BlackShow"
## [442] "BlackShow"          "BlackShow"          "BlackShow"
## [445] "BlackShow"          "BlackShow"          "BlackShow"
## [448] "BlackShow"          "WhiteShow"          "BlackShow"
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```
#B. Get the total number of variation
library(dplyr)
```

```
##
## Attaching package: 'dplyr'

## The following objects are masked from 'package:stats':
##
##     filter, lag

## The following objects are masked from 'package:base':
##
##     intersect, setdiff, setequal, union
```

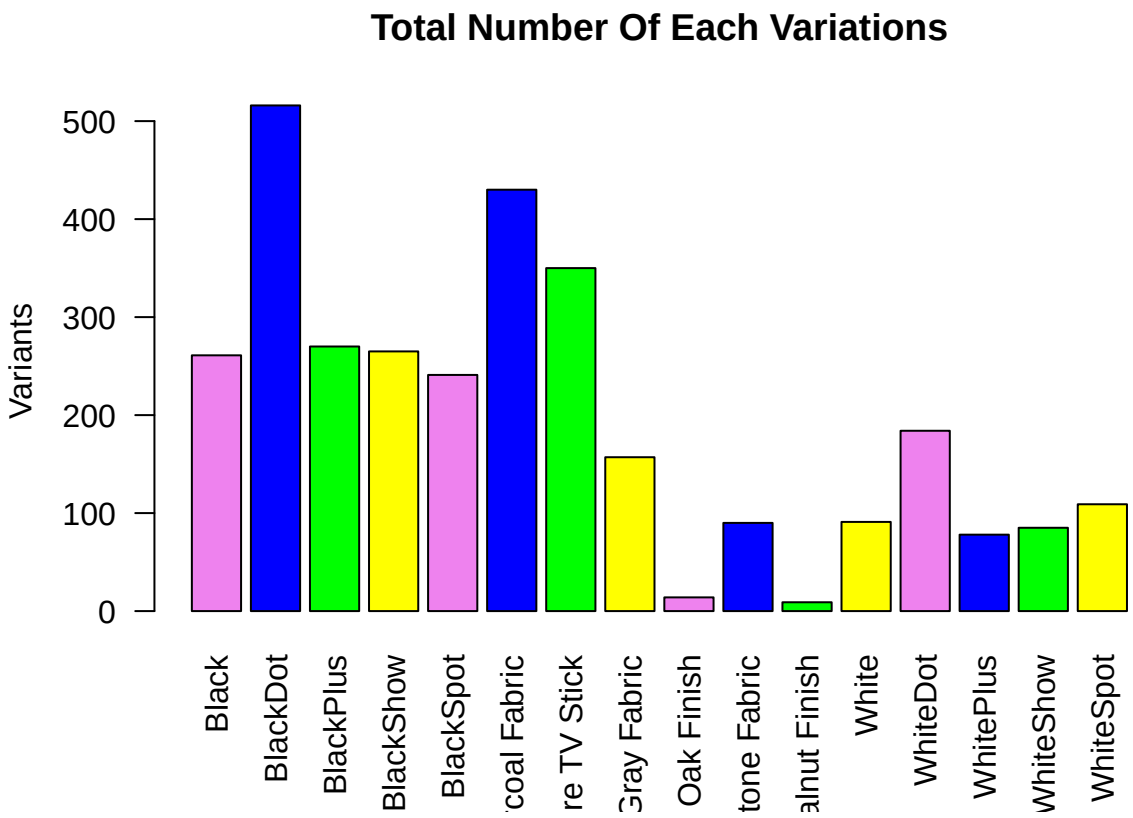
```r
alexa_var <- alexa_file %>%
  count(alexa_file$variation)
  alexa_var
```

```
## # A tibble: 16 x 2
##    `alexa_file$variation`           n
##    <chr>                        <int>
##  1 Black                          261
##  2 BlackDot                       516
##  3 BlackPlus                      270
##  4 BlackShow                      265
##  5 BlackSpot                      241
##  6 Charcoal Fabric                430
##  7 Configuration: Fire TV Stick   350
##  8 Heather Gray Fabric            157
##  9 Oak Finish                      14
## 10 Sandstone Fabric                90
## 11 Walnut Finish                    9
## 12 White                           91
## 13 WhiteDot                       184
## 14 WhitePlus                       78
## 15 WhiteShow                       85
## 16 WhiteSpot                      109
```

```r
save(alexa_var, file = "variations.RData")
```

```r
#C. Create a barplot from variations.RData
load("variations.RData")

barplot(
  alexa_var$n,
  col = c("violet", "blue", "green", "yellow"),
  main = "Total Number Of Each Variations",
  ylab = "Variants",
  names.arg = alexa_var$`alexa_file$variation`,
  las = 2
)
```




```r
#D. Create a barplot of black and white variations
load("variations.RData")

par(mfrow = c(1, 2))

black_var <- alexa_var %>%
  filter(`alexa_file$variation` %in% c("Black", "BlackDot", "BlackPlus", "BlackShow", "BlackSpot"))

barplot(
  height = black_var$n,
  names.arg = black_var$`alexa_file$variation`,
  col = c("purple", "red", "orange", "yellow", "lightgreen"),
  main = "Black Variants",
  xlab = "Total Numbers",
  ylab = "Variations",
  las = 2
)

white_var <- alexa_var %>%
  filter(`alexa_file$variation` %in% c("White", "WhiteDot", "WhitePlus", "WhiteShow", "WhiteSpot"))

barplot(
  height = white_var$n,
  names.arg = white_var$`alexa_file$variation`,
  col = c("purple", "red", "orange", "yellow", "lightgreen"),
  main = "White Variants",
```

```
  xlab = "Total Numbers",
  ylab = "Variations",
  las = 2
)
```