Worksheet#4b

Aeron Jesse Edombingo

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```
vector0 <- abs(c(0, 0, 0, 0, 0))
forloop <- for (x in vector0) {
print(rep(x, 5))
}
```

```
## [1] 0 0 0 0 0
## [1] 0 0 0 0 0
## [1] 0 0 0 0 0
## [1] 0 0 0 0 0
## [1] 0 0 0 0 0
```

```
vectorA <- c(1, 2, 3, 4, 5)
matrixA <- matrix(0, nrow = 5, ncol = 5)
for (i in 1:5) {
  for (j in 1:5) {
    matrixA[i, j] <- abs(vectorA[i] - vectorA[j])

  }
}

matrixA
```

```
##      [,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
```

```
for (x in 1:5) {
    for (y in 1:x) {
        cat("*")
    }
cat("\n")
}
```

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

```
shoesize <- read.table(file = '/cloud/project/RWorksheet_EDOMBINGO#4b/shoesize.csv', header = TRUE, sep

head(shoesize)
```

```
##   Shoe.size Height Gender Shoe.size.1 Height.1 Gender.1
## 1       6.5   66.0      F        13.0       77        M
## 2       9.0   68.0      F        11.5       72        M
## 3       8.5   64.5      F         8.5       59        F
## 4       8.5   65.0      F         5.0       62        F
## 5      10.5   70.0      M        10.0       72        M
## 6       7.0   64.0      F         6.5       66        F
```

```
mSubset <- subset(shoesize, Gender == "M")
fSubset <- subset(shoesize, Gender == "F")

length(mSubset)
```

```
## [1] 6
```

```
length(fSubset)
```

```
## [1] 6
```

```
nrow(mSubset)
```

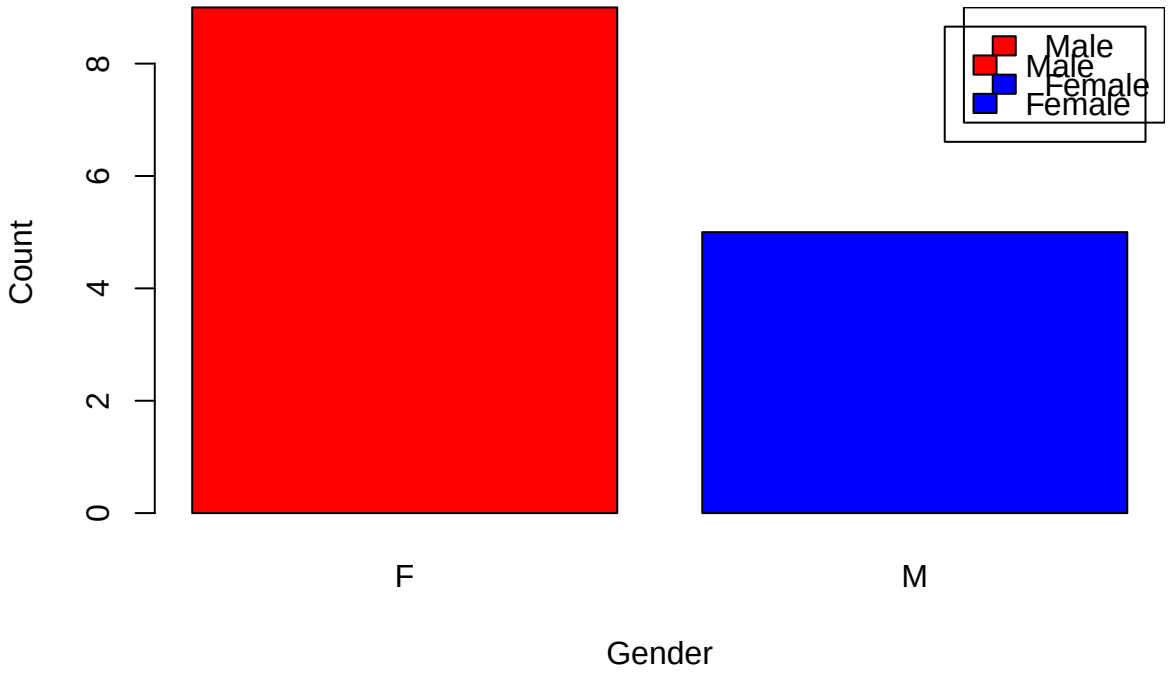
```
## [1] 5
```

```
nrow(fSubset)
```

```
## [1] 9
```

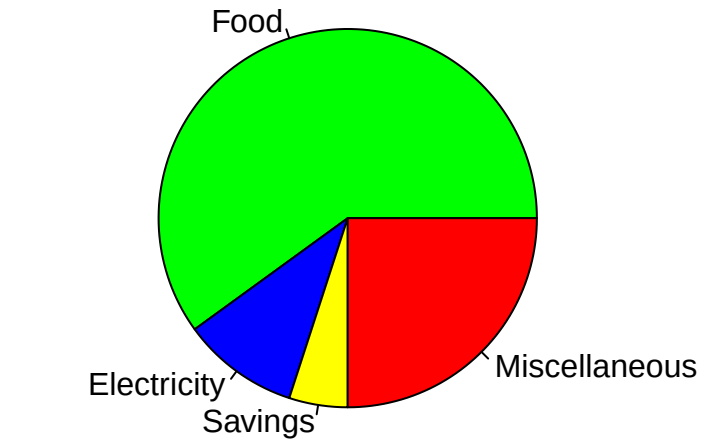
```
GraphMF<- table(shoesize$Gender)
barplot(GraphMF,
        main = "Number of Males and Females",
        xlab = "Gender",
        ylab = "Count",
        col = c("red", "blue"),
        legend.text = c("Male", "Female"),
        beside = TRUE
)

legend("topright", legend = c("Male", "Female"), fill = c("red", "blue"))
```




```
expenses <- c(60, 10, 5, 25)
labels <- c("Food", "Electricity", "Savings", "Miscellaneous")

pie(expenses, labels = labels, col = c("green","blue","yellow","red"),
    main = "Monthly Expenses of Dela Cruz Family")
```



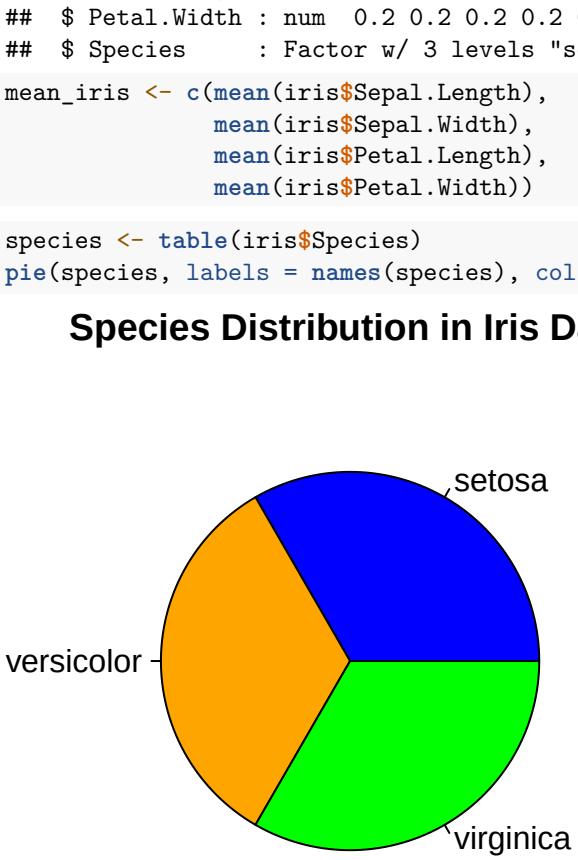

```
data(iris)
str(iris)
```

```
## '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 ...
```

```
mean_iris <- c(mean(iris$Sepal.Length),
               mean(iris$Sepal.Width),
               mean(iris$Petal.Length),
               mean(iris$Petal.Width))
```

```
species <- table(iris$Species)
pie(species, labels = names(species), col = c("blue","orange","green"), main = "Species Distribution in
```




```
setosa <- iris[iris$Species=="setosa",]
versicolor <- iris[iris$Species=="versicolor",]
virginica <- iris[iris$Species=="virginica",]

tail(setosa, n=6)
```

```
##    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
```

```
tail(versicolor, n=6)
```

```
##     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
```

```
tail(virginica, n=6)
```

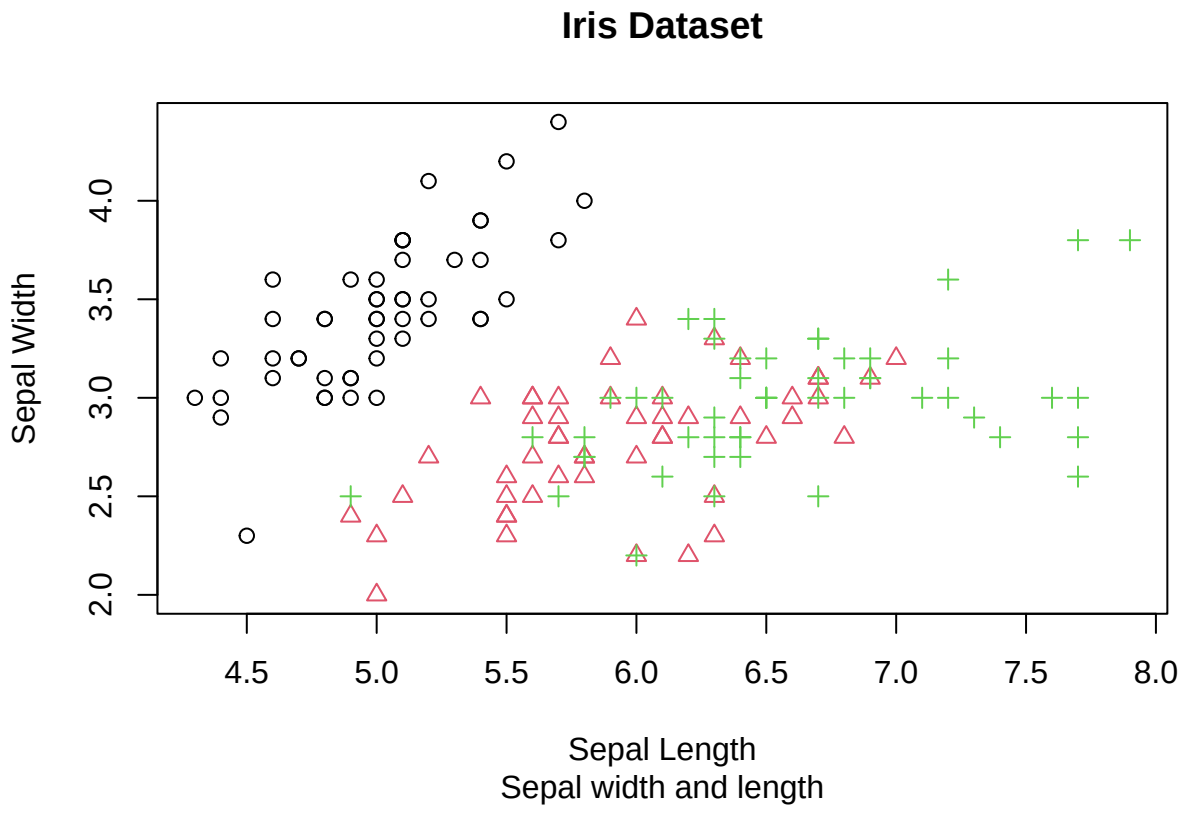
```
##     Sepal.Length Sepal.Width Petal.Length Petal.Width   Species
```

```
## 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
data(iris)

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

plot(iris$Sepal.Length, iris$Sepal.Width,
     pch = as.integer(iris$Species),
     col = iris$Species,
     main = "Iris Dataset",
     sub = "Sepal width and length",
     xlab = "Sepal Length",
     ylab = "Sepal Width")
```




```r
#The similarities between the sepal width and length ranges from 5.5 to 7.0.
```

```r
library(readxl)

file_path <- '/cloud/project/RWorksheet_EDOMBINGO#4b/alexa_file.xlsx'
alexa_file <- read_excel(file_path)
head(alexa_file)
```

```
## # A tibble: 6 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 playi~      1
## 4      5 2018-07-31 00:00:00 Charcoal Fabric     I have had a lot of f~      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 a~      1
```