

# RWorkSheet#4B

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```
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
```

```
n <- 5 # The number of rows
```

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

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

```
input_number <- as.numeric(readline("Enter a number to start the Fibonacci sequence: "))
```

```
## Enter a number to start the Fibonacci sequence:
```

```
assume_number <- 0
a <- 0
b <- 1
```

```
repeat {
  if (a > 500) {
    break
  }
}
```

```

if (a >= assume_number) {
  cat(a, " ")
}

temp <- a + b
a <- b
b <- temp
}

```

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

```
cat("\n")
```

```

table <- read.table(file = 'shoesize.csv', header = TRUE, sep = ',')
table

```

```

##      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
## 7          9.5   70.0      F
## 8          9.0   71.0      F
## 9         13.0   72.0      M
## 10         7.5   64.0      F
## 11         10.5  74.5      M
## 12          8.5   67.0      F
## 13         12.0   71.0      M
## 14         10.5   71.0      M
## 15         13.0   77.0      M
## 16         11.5   72.0      M
## 17          8.5   59.0      F
## 18          5.0   62.0      F
## 19         10.0   72.0      M
## 20          6.5   66.0      F
## 21          7.5   64.0      F
## 22          8.5   67.0      M
## 23         10.5   73.0      M
## 24          8.5   69.0      F
## 25         10.5   72.0      M
## 26         11.0   70.0      M
## 27          9.0   69.0      M
## 28         13.0   79.0      M

```

```
head(table, n = 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
male_subset <- subset(table, Gender == "M")
female_subset <- subset(table, Gender == "F")
male_count <- nrow(male_subset)
female_count <- nrow(female_subset)
cat("Number of Male observations:", male_count, "\n")

## Number of Male observations: 14
cat("Number of Female observations:", female_count, "\n")

## Number of Female observations: 14
#Number of Male observations: 14
#Number of Female observations: 14

data <- data.frame(
  Respondents = 1:10,
  Sex = c("Male", "Female", "Female", "Male", "Male", "Female", "Female", "Male", "Female", "Male"),
  Fathers_Occupation = c(1, 2, 3, 3, 1, 2, 2, 3, 1, 3),
  Person_at_Home = c(5, 7, 3, 8, 6, 4, 4, 2, 11, 6),
  Siblings_at_school = c(2, 3, 0, 5, 2, 3, 1, 2, 6, 2),
  Types_of_houses = c("Wood", "Concrete", "Concrete", "Wood", "Semi-Concrete", "Semi-Concrete", "Wood",
)

gender_counts <- table(data$Sex)

bar_colors <- c("black", "gray")

barplot(gender_counts, main="Number of Males and Females", xlab="Sex", ylab="Count", col=bar_colors,
  legend.text=c("Male", "Female"), beside=TRUE)
legend("topright", legend=c("Male", "Female"), fill=bar_colors)
```

## Number of Males and Females

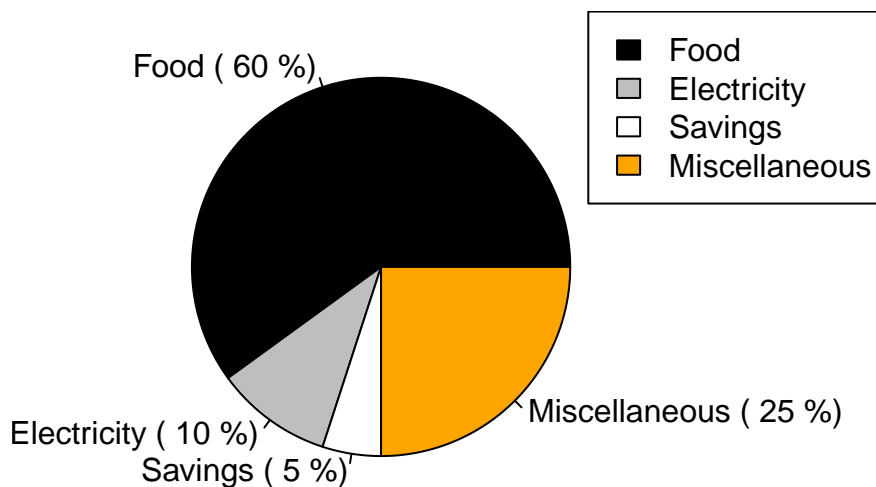


```
expenses <- c(Food = 60, Electricity = 10, Savings = 5, Miscellaneous = 25)

pie(expenses, labels = paste(names(expenses), "(", round((expenses/sum(expenses))*100), "%)"),
    col = c("black", "gray", "white", "orange"),
    main = "Monthly Expenses of Dela Cruz Family")

legend("topright", legend = names(expenses), fill = c("black", "gray", "white", "orange"))
```

## Monthly Expenses of Dela Cruz Family



```
data(iris)
str(iris)

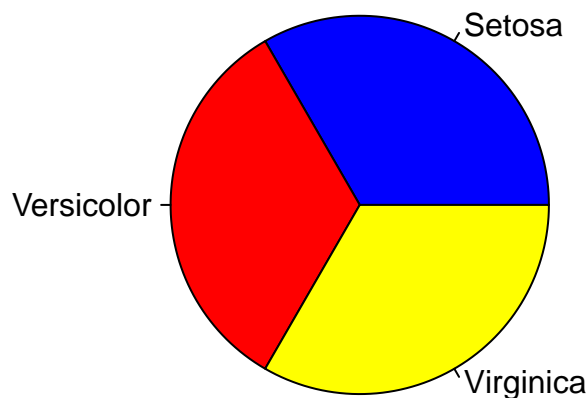
## 'data.frame': 150 obs. of 5 variables:
```

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

```
pie(table(iris$Species), labels = c("Setosa", "Versicolor", "Virginica"), col = c("blue", "red", "yellow"))
```

## Species Distribution



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

```
head(setosa_data, 6)
```

```
## Sepal.Length Sepal.Width Petal.Length Petal.Width Species
## 1 5.1 3.5 1.4 0.2 setosa
## 2 4.9 3.0 1.4 0.2 setosa
## 3 4.7 3.2 1.3 0.2 setosa
## 4 4.6 3.1 1.5 0.2 setosa
## 5 5.0 3.6 1.4 0.2 setosa
## 6 5.4 3.9 1.7 0.4 setosa
```

```
head(versicolor_data, 6)
```

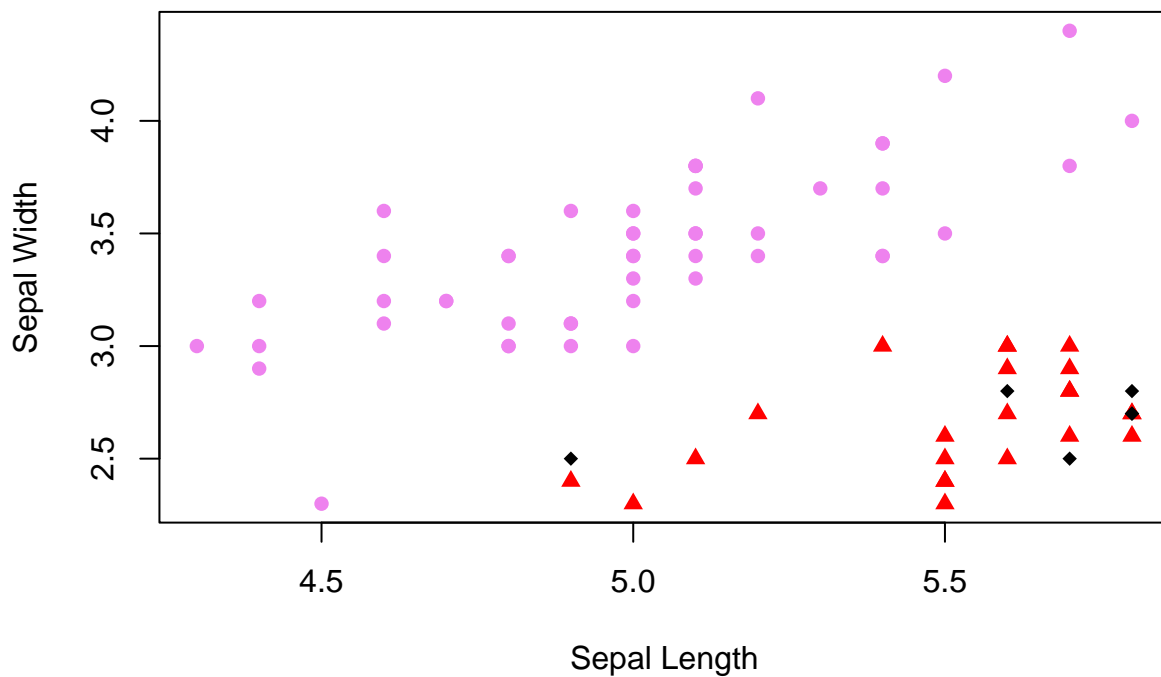
```
## Sepal.Length Sepal.Width Petal.Length Petal.Width Species
## 51 7.0 3.2 4.7 1.4 versicolor
## 52 6.4 3.2 4.5 1.5 versicolor
## 53 6.9 3.1 4.9 1.5 versicolor
## 54 5.5 2.3 4.0 1.3 versicolor
## 55 6.5 2.8 4.6 1.5 versicolor
## 56 5.7 2.8 4.5 1.3 versicolor
```

```
head(virginica_data, 6)
```

```
##      Sepal.Length Sepal.Width Petal.Length Petal.Width  Species
## 101          6.3         3.3         6.0         2.5 virginica
## 102          5.8         2.7         5.1         1.9 virginica
## 103          7.1         3.0         5.9         2.1 virginica
## 104          6.3         2.9         5.6         1.8 virginica
## 105          6.5         3.0         5.8         2.2 virginica
## 106          7.6         3.0         6.6         2.1 virginica
```

```
plot(x = iris$Sepal.Length[iris$Species == "setosa"], y = iris$Sepal.Width[iris$Species == "setosa"], p
points(x = iris$Sepal.Length[iris$Species == "versicolor"], y = iris$Sepal.Width[iris$Species == "versi
points(x = iris$Sepal.Length[iris$Species == "virginica"], y = iris$Sepal.Width[iris$Species == "virgin
```

## Iris Dataset



*#The scatterplot shows that, in comparison to the versicolor and virginica species, the setosa species*

*#Can't Find RWorksheet 4B in Drive anymore thats why i cant finish my 4B*