

```
shoe_size <- c(6.5, 9.0, 8.5, 8.5, 10.5, 7.0, 9.5, 9.0, 13.0, 7.5, 10.5, 8.5, 12.0, 10.5)
height <- c(66.0, 68.0, 64.5, 65.0, 70.0, 64.0, 70.0, 71.0, 72.0, 64.0, 74.0, 67.0, 71.0, 71.0)
gender <- c("F", "F", "F", "F", "M", "F", "F", "F", "M", "F", "M", "F", "M", "M")
```

```
df <- data.frame(ShoeSize = shoe_size, Height = height, Gender = gender)
```

```
#b
```

```
males <- subset(df, Gender == "M")
females <- subset(df, Gender == "F")
print(males)
```

```
##      ShoeSize Height Gender
## 5         10.5      70      M
## 9         13.0      72      M
## 11        10.5      74      M
## 13        12.0      71      M
## 14        10.5      71      M
```

```
print(females)
```

```
##      ShoeSize 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
```

```
#c
```

```
mean_shoe_size <- mean(df$ShoeSize)
mean_height <- mean(df$Height)
cat("Mean Shoe Size", mean_shoe_size, "\n")
```

```
## Mean Shoe Size 9.321429
```

```
cat("Mean shoe Size", mean_height, "\n")
```

```
## Mean shoe Size 68.39286
```

```
#d
```

```
correlation <- cor(df$ShoeSize, df$Height)
cat("Correlation between Shoe Size and Height", correlation, "\n")
```

```
## Correlation between Shoe Size and Height 0.8018502
```

```
#2
```

```
months_vector <- c("March", "April", "January", "November", "January", "September", "October", "September")
factor_months_vector <- factor(months_vector)
print(factor_months_vector)
```

```
## [1] March      April      January    November   January    September  October
## [8] September  November   August     january    November   November   February
## [15] May        August     July       December   August     September  November
## [22] February   April
## 12 Levels: April August December February January january July March ... September
```

#3

```
summary(months_vector)
```

```
##      Length      Class      Mode  
##      23 character character
```

```
summary(factor_months_vector)
```

```
##      April      August  December  February  January  juaanuary      July      March  
##          2          3          1          2          2          1          1          1  
##          May  November  October  September  
##          1          5          1          3
```

#4

```
direction <- c("East", "West", "North")
```

```
frequency <- c(1, 4, 3)
```

```
new_order_data <- factor(direction, levels = c("East", "West", "North"))
```

```
print(new_order_data)
```

```
## [1] East West North  
## Levels: East West North
```

#5

```
write.csv("import_march.csv", row.names = FALSE)
```

```
## "x"
```

```
## "import_march.csv"
```

```
data <- read.table("import_march.csv", header = TRUE, sep = ",")
```

```
data
```

```
##      Sudents Strategy.1 Strategy.2 Strategy.3  
## 1      Male          8          10          8  
## 2              4          8          6  
## 3              0          6          4  
## 4      Female         14          4         15  
## 5              10          2         12  
## 6              6          0          9
```