# MKTG_Assignment_4

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**Part 1**

# Step 1

```
MobilMax <- read.csv("MobilMax Case Data-1.csv")
head(MobilMax)
```
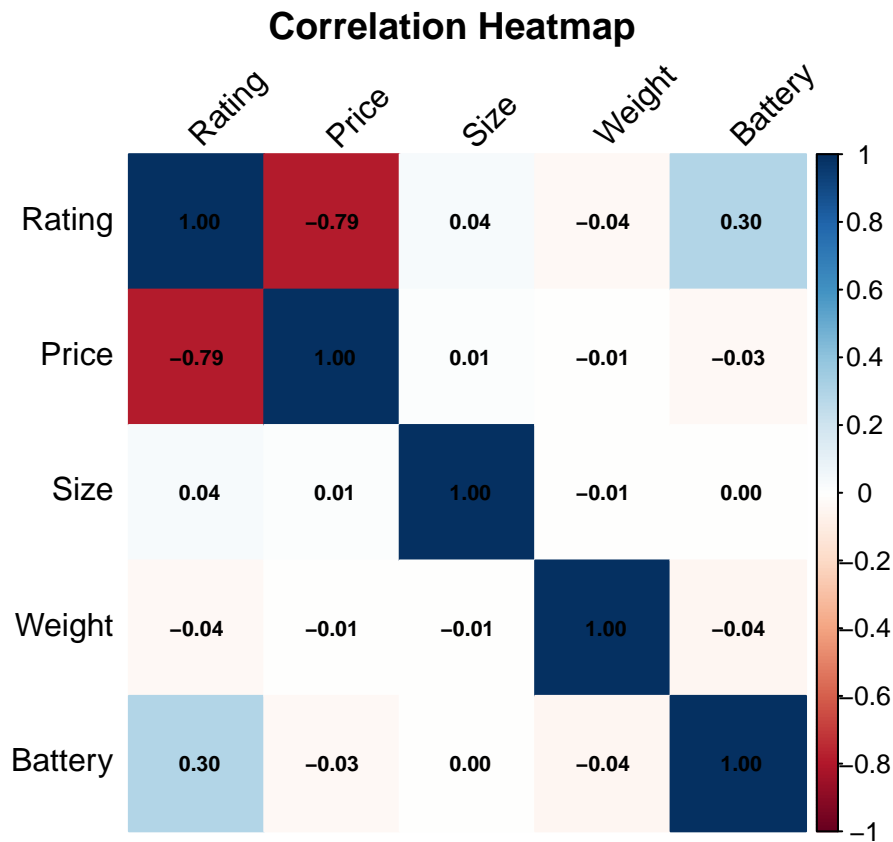
```
##     Rating Price Size Weight Battery Material
## 1 4.637272     5    7    1.5       8  Silicon
## 2 3.917012    12    8    1.0      10    Metal
## 3 4.427328     8   10    1.5       6  Silicon
## 4 2.806379    12    9    2.0       8  Ceramic
## 5 5.256741     5    8    2.0      10  Silicon
## 6 2.475075    12    9    2.0       4  Ceramic
```

# Step 2

```
##
## Ceramic   Metal Plastic Silicon
##     397     360     372     371
```

```
##               Min      Max     Mean
## Rating   2.358852  5.352971 3.973640
## Price    5.000000 12.000000 8.706000
## Size     7.000000 10.000000 8.515333
## Weight   0.500000  2.000000 1.257333
## Battery  4.000000 10.000000 7.012000
```

# Step 3

**Correlation Heatmap**

| | Rating | Price | Size | Weight | Battery |
|---|---|---|---|---|---|
| **Rating** | 1.00 | −0.79 | 0.04 | −0.04 | 0.30 |
| **Price** | −0.79 | 1.00 | 0.01 | −0.01 | −0.03 |
| **Size** | 0.04 | 0.01 | 1.00 | −0.01 | 0.00 |
| **Weight** | −0.04 | −0.01 | −0.01 | 1.00 | −0.04 |
| **Battery** | 0.30 | −0.03 | 0.00 | −0.04 | 1.00 |

# Step 4

```
## 
## Call:
## lm(formula = Rating ~ Price + Size + Weight + Battery + Material,
##     data = MobilMax)
## 
## Residuals:
##      Min       1Q   Median       3Q      Max
## -0.12896 -0.03837 -0.00111  0.03766  0.15410
## 
## Coefficients:
##              Estimate Std. Error  t value Pr(>|t|)
## (Intercept)  4.717420   0.007055  668.706   <2e-16 ***
## Price       -0.185192   0.000537 -344.880   <2e-16 ***
## Size8        0.037637   0.003965    9.493   <2e-16 ***
## Size9        0.043227   0.003935   10.986   <2e-16 ***
## Size10       0.098612   0.003975   24.808   <2e-16 ***
## Weight1      0.075714   0.003949   19.171   <2e-16 ***
## Weight1.5   -0.137548   0.003961  -34.727   <2e-16 ***
## Weight2      0.035227   0.003926    8.972   <2e-16 ***
## Battery6     0.382961   0.003930   97.434   <2e-16 ***
## Battery8     0.277156   0.003990   69.469   <2e-16 ***
## Battery10    0.581673   0.003939  147.686   <2e-16 ***
```

```
## MaterialMetal    0.663985    0.003923  169.238   <2e-16 ***
## MaterialPlastic  0.649181    0.003891  166.858   <2e-16 ***
## MaterialSilicon  0.789295    0.003883  203.286   <2e-16 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.05373 on 1486 degrees of freedom
## Multiple R-squared:  0.9928, Adjusted R-squared:  0.9928
## F-statistic: 1.584e+04 on 13 and 1486 DF,  p-value: < 2.2e-16
```

# Step 5

```
##     (Intercept)            Price           Size8           Size9          Size10
##      4.71741993      -0.18519233      0.03763707      0.04322668      0.09861227
##         Weight1         Weight1.5         Weight2         Battery6        Battery8
##      0.07571395      -0.13754841      0.03522710      0.38296071      0.27715649
##        Battery10    MaterialMetal MaterialPlastic MaterialSilicon
##      0.58167350       0.66398486      0.64918146      0.78929485


## (Intercept)
##   -919.7599
```

**Part 2**