Classwork

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Let's Learn R Markdown

- R markdown is a simple formatting syntax for authoring HTML, PDF, and MS Word documents
- Simple syntax:
  – # for headers and sub headers (##)
  – ** or _ for **bolds** and *italics*
  – - or 1. for lists
  – > for block quotes

Let's Learn by Exercise

- **Create a R Markdown File**
  – Go to Drop-down Menu "File"
  – From "New File" select "R markdown. . ."
  – Write YAML (file name, your name, work date)
- **Install a Pre-Made Data**
  – The "UsingR" package contains various pre-made datasets useful for simple analyses

```
options(repos = "https://cran.r-project.org")
install.packages("UsingR")
```

```
## package 'UsingR' successfully unpacked and MD5 sums checked
##
## The downloaded binary packages are in
##  C:\Users\User\AppData\Local\Temp\RtmpgZxqr0\downloaded_packages
```

  – The library() function loads the package so we can use its datasets.

```
library(UsingR)
```

  – The 'mandms' is a dataset containing info on the distribution of M&M by colors and price

```
data("mandms", package = "UsingR")
```

- **Let's Discover Our Dataset**

```
force(mandms)
```

```
##                   blue   brown   green  orange     red  yellow
## milk chocolate 10.0000 30.0000 10.0000 10.0000 20.0000 20.0000
## Peanut         20.0000 20.0000 10.0000 10.0000 20.0000 20.0000
## Peanut Butter  20.0000 20.0000 20.0000  0.0000 20.0000 20.0000
## Almond         16.6667 16.6667 16.6667 16.6667 16.6667 16.6667
## kid minis      16.6667 16.6667 16.6667 16.6667 16.6667 16.6667
```

```
View(mandms)
summary(mandms)
```

```
##       blue           brown           green           orange
##  Min.   :10.00   Min.   :16.67   Min.   :10.00   Min.   : 0.00
##  1st Qu.:16.67   1st Qu.:16.67   1st Qu.:10.00   1st Qu.:10.00
##  Median :16.67   Median :20.00   Median :16.67   Median :10.00
##  Mean   :16.67   Mean   :20.67   Mean   :14.67   Mean   :10.67
##  3rd Qu.:20.00   3rd Qu.:20.00   3rd Qu.:16.67   3rd Qu.:16.67
##  Max.   :20.00   Max.   :30.00   Max.   :20.00   Max.   :16.67
##       red            yellow
##  Min.   :16.67   Min.   :16.67
##  1st Qu.:16.67   1st Qu.:16.67
##  Median :20.00   Median :20.00
##  Mean   :18.67   Mean   :18.67
##  3rd Qu.:20.00   3rd Qu.:20.00
##  Max.   :20.00   Max.   :20.00
```

– How many observations do we have?

```
length(mandms)
```

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

– How many variables do we have?

```
nrow(mandms)
```

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

– How much all the M&Ms in total cost?

```
length(treering)
```

```
## [1] 7980
```

– How about min price?

```
min(mandms)
```

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

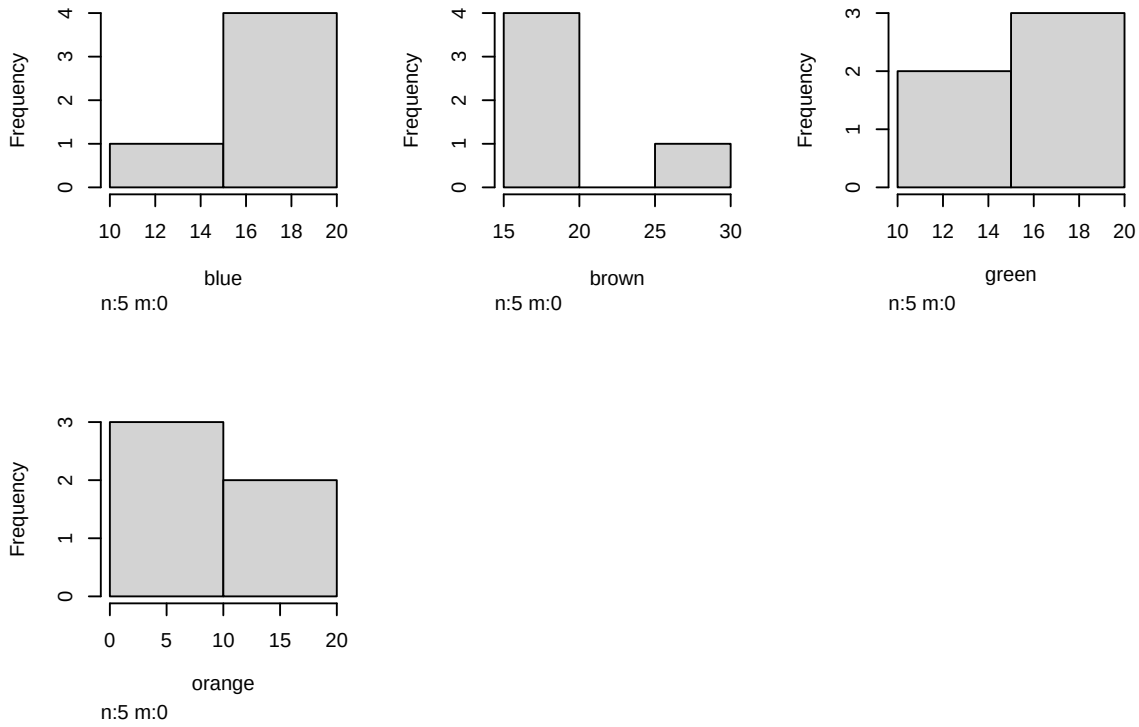
– How about max price?

```
max(mandms)
```

```
## [1] 30
```

- **Let's Visualize Our Dataset - the Histogram**

```
hist(mandms)
```



- **Let's Save Our Dataset**
  - To save Rmd files as PDF, "tinytext" package of R should be installed for one time

    {install.packages("tinytex")}
    tinytex::install_tinytex()

  - After tinytext install, we "Knit" our file from above (look for the knitting object above)