Week 10 10.4 Note

Extra R Commands:

- `Include = FALSE`:
  - Evaluate all the code inside a code chunk but **hide the output** they generate.
  - Used at the *heading* of a code chunk.
  - Example:

```
# Create a code chunk:
```{r, include = FALSE}
library(tidyverse)
library(readxl)
# With this code added, the loading message of the package "tidyverse" will
be omitted.
```

- `read_excel()`:
  - Allow R to load the data from **an .xls** or **.xlsx file** (in the Excel form, not just .csv)
  - Need to download and load the **package "readxl"**
  - Example:

```
# Install the "readxl" package:
install.packages(readxl)

# Load the package:
library(readxl)

# Use the read_excel() function:
read_excel(data/urchins.xlsx)
```

- `cache = TRUE`:
  - **Cache the R objects created in a chunk** so that it doesn't need to be computed next time when using.
  - Usually used **when the chunk produces a lot of things** that take a lot of time to compute (for instance, huge dataset)
  - Used at the *heading* of the a code chunk.
  - Example:

```
# Create a large dataset:
```{r, cache = TRUE}
urchins <- read.excel(urchins.xlsx)
# Add this command can help R to memorize it so no need to compute again,
which takes time.
```

- `as.factor()`:
  - **Reclassify a variable as a factor** in an existing data frame.
  - Example:

```
# Consider the variable "temp" in the data frame "urchins" as a factor:
urchins$temp <- as.factor(urchins$temp)
```

- `facet_wrap(~ group_vaiable)`:
  - Create the **histogram for each group** in a variable.
  - Used in `ggplot` histogram.
  - Example:

```
library(ggplot)
# Histogram of each group in vairable "consumed":
ggplot(urchins, aes(consumed)) + geom_histogram() + facet_wrap(~ temp)
```