Lab 01 - Hello R

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Load packages

```
library(tidyverse)
library(datasauRus)
```

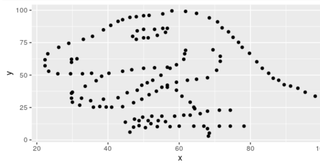
Exercise 1

In the datasaurus_dozen file, there are 1,846 rows in total and 3 columns with variables as x, y and dataset in the data frame.

Exercise 2

First let's plot the data in the dino dataset:

```
dino_data <- datasaurus_dozen %>%
  filter(dataset == "dino")

ggplot(data = dino_data, mapping = aes(x = x, y = y)) +
  geom_point()
```



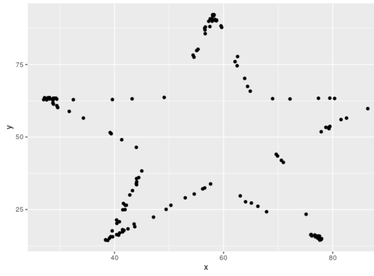
And next calculate the correlation between `x` and `y` in this dataset:

```
dino_data %>%
  summarize(r = cor(x, y))

## # A tibble: 1 x 1
##         r
##     <dbl>
## 1 -0.0645
```

Exercise 3

First let's plot the data in the star dataset:

```
dino_data <- datasaurus_dozen %>%
  filter(dataset == "star")

ggplot(data = dino_data, mapping = aes(x = x, y = y)) +
  geom_point()
```



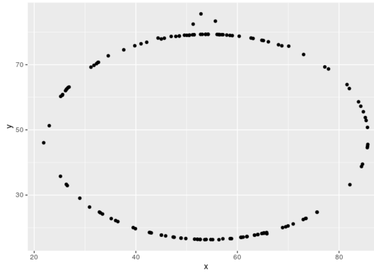
Calculating the correlation between `x` and `y` in this dataset:

```
dino_data %>%
  summarize(r = cor(x, y))

## # A tibble: 1 x 1
##         r
##     <dbl>
## 1 -0.0630
```

Exercise 4

First let's plot the data in the circle dataset:

```
dino_data <- datasaurus_dozen %>%
  filter(dataset == "circle")

ggplot(data = dino_data, mapping = aes(x = x, y = y)) +
  geom_point()
```



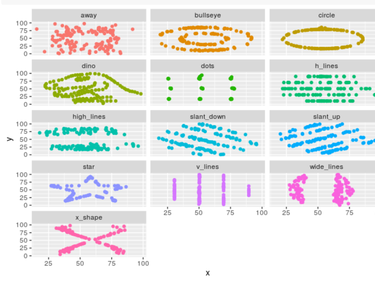
Calculating the correlation between `x` and `y` in this dataset:

```
dino_data %>%
  summarize(r = cor(x, y))

## # A tibble: 1 x 1
##         r
##     <dbl>
## 1 -0.0683
```

Exercise 5

Plotting all datasets at once by making use of facetting:

```
ggplot(datasaurus_dozen, aes(x = x, y = y, color = dataset))+
  geom_point()+
  facet_wrap(~ dataset, ncol = 3) +
  theme(legend.position = "none")
```



Generating all the summary correlation coefficients:

```
datasaurus_dozen %>%
  group_by(dataset) %>%
  summarize(r = cor(x, y)) %>%
  print(13)

## `summarise()` ungrouping output (override with `.groups` argument)

## # A tibble: 13 x 2
##    dataset         r
##    <chr>       <dbl>
##  1 away       -0.0641
##  2 bullseye   -0.0686
##  3 circle     -0.0683
##  4 dino       -0.0645
##  5 dots       -0.0603
##  6 h_lines    -0.0617
##  7 high_lines -0.0685
##  8 slant_down -0.0690
##  9 slant_up   -0.0686
## 10 star       -0.0630
## 11 v_lines    -0.0694
## 12 wide_lines -0.0666
## 13 x_shape    -0.0656
```