Organizing the report

REPORTING WITH R MARKDOWN

Amy Peterson
Head of Core Curriculum at DataCamp

datacamp

Lists and tables

- Region
    - East Asia and the Pacific
    - Europe and Central Asia
    - Latin America and the Caribbean
    - Middle East and North Africa
    - South Asia
    - Sub-Saharan Africa

Lists and tables

- Region
    - East Asia and the Pacific
    - Europe and Central Asia
    - Latin America and the Caribbean
    - Middle East and North Africa
    - South Asia
    - Sub-Saharan Africa

Region

1. East Asia and the Pacific
2. Europe and Central Asia
3. Latin America and the Caribbean
4. Middle East and North Africa
5. South Asia
6. Sub-Saharan Africa

Region	Dollars in Millions
East Asia and the Pacific	16465
Europe and Central Asia	17659
Latin America and the Caribbean	22828
Middle East and North Africa	9755
South Asia	11459
Sub-Saharan Africa	16892

Bulleted lists

```
### Investment Annual Summary
The `investment_annual_summary` dataset provides a summary of the dollars in millions provided to each of the following regions for each fiscal year, from 2012 to 2018:

- Region
  - East Asia and the Pacific
  - Europe and Central Asia
  - Latin America and the Caribbean
  - Middle East and North Africa
  - South Asia
  - Sub-Saharan Africa
```

Investment Annual Summary

The `investment_annual_summary` dataset provides a summary of the dollars in millions provided to each region for each fiscal year, from 2012 to 2018.

- Region
  - East Asia and the Pacific
  - Europe and Central Asia
  - Latin America and the Caribbean
  - Middle East and North Africa
  - South Asia
  - Sub-Saharan Africa

Numbered lists

```
### Investment Annual Summary
The `investment_annual_summary` dataset provides a summary of the dollars in millions provided to each of the following regions for each fiscal year, from 2012 to 2018:

Region
1. East Asia and the Pacific
2. Europe and Central Asia
3. Latin America and the Caribbean
4. Middle East and North Africa
5. South Asia
6. Sub-Saharan Africa
```

Investment Annual Summary

The `investment_annual_summary` dataset provides a summary of the dollars in millions provided to each region for each fiscal year, from 2012 to 2018.

Region

1. East Asia and the Pacific
2. Europe and Central Asia
3. Latin America and the Caribbean
4. Middle East and North Africa
5. South Asia
6. Sub-Saharan Africa

Adding tables with kable()

````
44  ```{r tables}
45  kable(indonesia_investment_projects_2012_summary)
46  ```
````

```
kable(indonesia_investment_projects_2012_summary)
```

project_name	status	total_investment
FHP Indonesia I	Active	25
LMS Toll Project	Hold	NA
CIMB Niaga Sr.	Completed	75
BTPN Loan II	Active	250
Medco Power 2011	Completed	25
Wintermar Group	Active	60

Modifying table column names

````
44  ```{r tables}
45  kable(indonesia_investment_projects_2012_summary,
46        col.names = c("Project Name", "Status", "Total Investment"))
47  ```
````

```
kable(indonesia_investment_projects_2012_summary, col.names = c("Project Name",
"Status", "Total Investment"))
```

Project Name	Status	Total Investment
FHP Indonesia I	Active	25
LMS Toll Project	Hold	NA
CIMB Niaga Sr.	Completed	75
BTPN Loan II	Active	250
Medco Power 2011	Completed	25
Wintermar Group	Active	60

Table alignment

```
kable(indonesia_investment_projects_2012_summary, col.names = c("Project Name",
"Status", "Total Investment"))
```

Project Name	Status	Total Investment
FHP Indonesia I	Active	25
LMS Toll Project	Hold	NA
CIMB Niaga Sr.	Completed	75
BTPN Loan II	Active	250
Medco Power 2011	Completed	25
Wintermar Group	Active	60

Modifying table alignment

````
44  ```{r tables}
45  kable(indonesia_investment_projects_2012_summary,
46        col.names = c("Project Name", "Status", "Total Investment"),
47        align = "ccc")
48  ```
````

```
kable(indonesia_investment_projects_2012_summary, col.names = c("Project Name",
"Status", "Total Investment"), align = "ccc")
```

Project Name	Status	Total Investment
FHP Indonesia I	Active	25
LMS Toll Project	Hold	NA
CIMB Niaga Sr.	Completed	75
BTPN Loan II	Active	250
Medco Power 2011	Completed	25
Wintermar Group	Active	60

Adding table caption

````
```{r tables}
kable(indonesia_investment_projects_2012_summary,
      col.names = c("Project Name", "Status", "Total Investment"),
      align = "ccc",
      caption = "Table 1.1 The total investment summary for each
project in Indonesia for the 2012 fiscal year.")
```
````

```
kable(indonesia_investment_projects_2012_summary, col.names = c("Project Name",
"Status", "Total Investment"), align = "ccc", caption = "Table 1.1 The total inv
estment summary for each project in Indonesia in the 2012 fiscal year.")
```

Table 1.1 The total investment summary for each project in Indonesia in the 2012 fiscal year.

Project Name	Status	Total Investment
FHP Indonesia I	Active	25
LMS Toll Project	Hold	NA
CIMB Niaga Sr.	Completed	75
BTPN Loan II	Active	250
Medco Power 2011	Completed	25
Wintermar Group	Active	60

Let's practice!

REPORTING WITH R MARKDOWN

Code chunk options

REPORTING WITH R MARKDOWN

Amy Peterson
Head of Core Curriculum at DataCamp

datacamp

The data code chunk

````
11  ```{r data, include = FALSE}
12  library(readr)
13  library(dplyr)
14  library(ggplot2)
15  library(knitr)
16
17  investment_annual_summary <- read_csv("https://assets.datacamp.com/
    production/repositories/5756/datasets/
    d0251f26117bbcf0ea96ac276555b9003f4f7372/
    investment_annual_summary.csv")
18  investment_region_summary <- read_csv("https://assets.datacamp.com/
    production/repositories/5756/datasets/
    52f5414f6504e0503e86eb1043afa9b3d157fab2/
    investment_region_summary.csv")
19  investment_services_projects <- read_csv("https://
    assets.datacamp.com/production/repositories/5756/datasets/
    bcb2e39ecbe521f4b414a21e35f7b8b5c50aec64/
    investment_services_projects.csv")
20  ```
````

The data code chunk

````
11  ```{r data, include = FALSE}
12  library(readr)
13  library(dplyr)
14  library(ggplot2)
15  library(knitr)
16
17  investment_annual_summary <- read_csv("https://assets.datacamp.com/
    production/repositories/5756/datasets/
    d0251f26117bbcf0ea96ac276555b9003f4f7372/
    investment_annual_summary.csv")
18  investment_region_summary <- read_csv("https://assets.datacamp.com/
    production/repositories/5756/datasets/
    52f5414f6504e0503e86eb1043afa9b3d157fab2/
    investment_region_summary.csv")
19  investment_services_projects <- read_csv("https://
    assets.datacamp.com/production/repositories/5756/datasets/
    bcb2e39ecbe521f4b414a21e35f7b8b5c50aec64/
    investment_services_projects.csv")
20  ```
````

The include option

```
---
title: "Investment Report"
date: "`r format(Sys.time(), '%d %B %Y')`"
output: html_document
---

```{r setup, include = FALSE}
knitr::opts_chunk$set(fig.align = 'center')
```

```{r data, include = FALSE}
library(readr)
library(dplyr)
library(ggplot2)
library(knitr)

investment_annual_summary <- read_csv("https://assets.datacamp.com/production/repositories/5756/datasets/d0251f26117bbcf0ea96ac276555b9003f4f7372/investment_annual_summary.csv")
investment_region_summary <- read_csv("https://assets.datacamp.com/production/repositories/5756/datasets/52f5414f6504e0503e86eb1043afa9b3d157fab2/investment_region_summary.csv")
investment_services_projects <- read_csv("https://assets.datacamp.com/production/repositories/5756/datasets/bcb2e39ecbe521f4b414a21e35f7b8b5c50aec64/investment_services_projects.csv")
```

Datasets
Investment Annual Summary
```

Investment Report

28 April 2020

Datasets

Investment Annual Summary

The echo option

````
```{r investment-annual-summary, out.width = '85%', fig.cap = 'Figure 1.1 The Investment Annual Summary for each region for 2012 to 2018.', echo = FALSE}
ggplot(investment_annual_summary, aes(x = fiscal_year, y = dollars_in_millions, color = region)) +
  geom_line() +
  labs(
    title = "Investment Annual Summary",
    x = "Fiscal Year",
    y = "Dollars in Millions"
  )
```
````

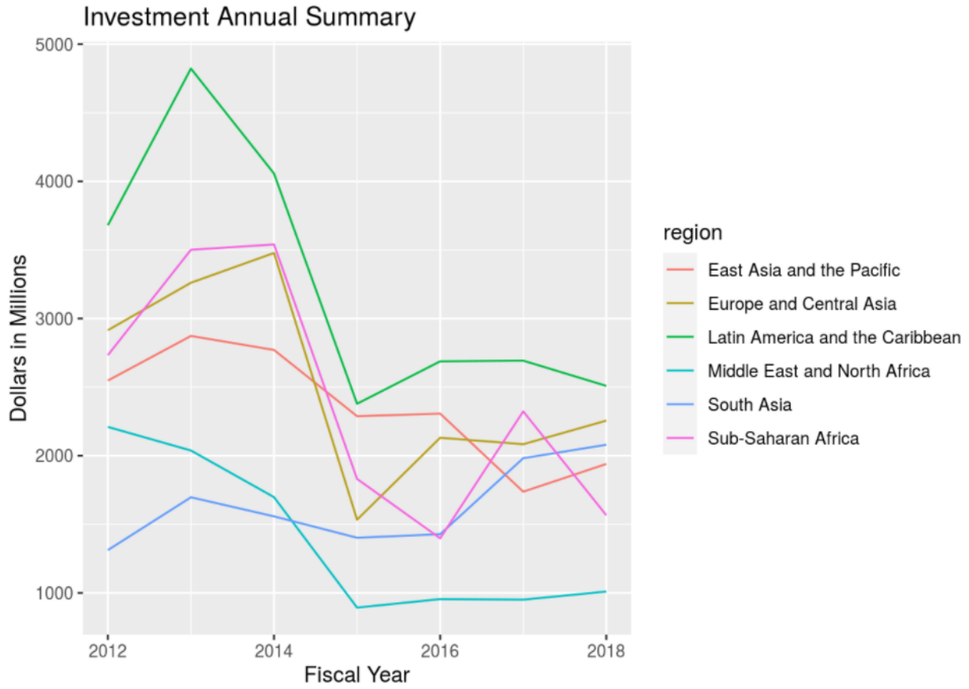


Figure 1.1 The Investment Annual Summary for each region for the 2012 to 2018 fiscal years.

The eval option

```
44  ```{r tables, eval = FALSE}
45  kable(investment_region_summary, col.names = c("Region", "Dollars in
    Millions"), align = "cc", caption = "Table 1.1 The total investment
    summary for each region for the 2012 to 2018 fiscal years.")
46  ```
```

```
kable(investment_region_summary, col.names = c("Region", "Dollars in Millions"),
align = "cc", caption = "Table 1.1 The total investment summary for each region
for the 2012 to 2018 fiscal years.")
```

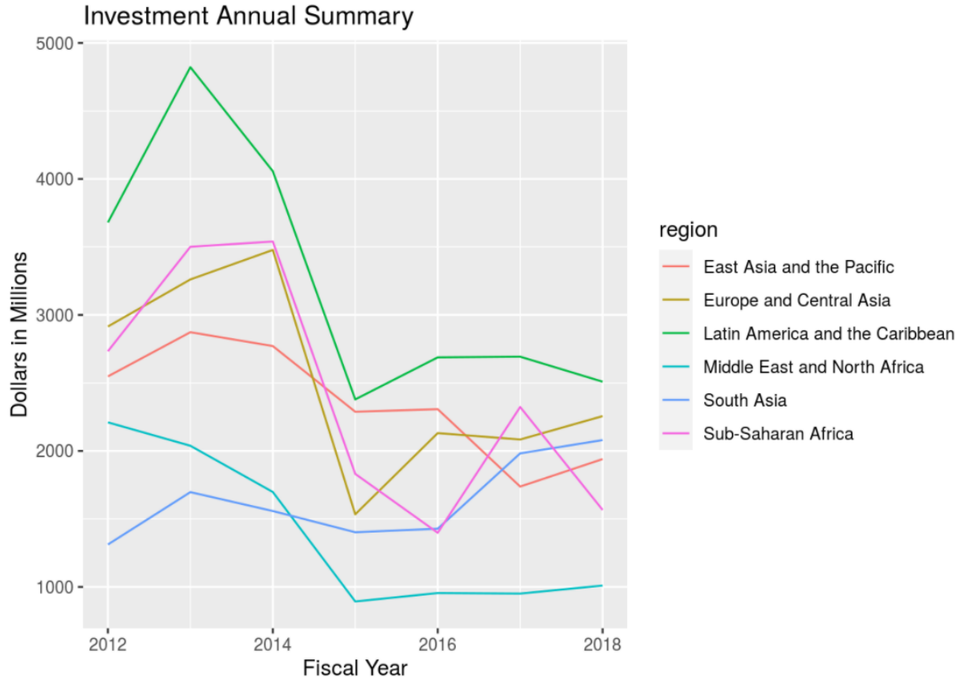


Figure 1.1 The Investment Annual Summary for each region for the 2012 to 2018 fiscal years.

Code option summary

	Code is run	Code appears in report	Results appear in report
`include = FALSE`	Yes	No	No
`echo = FALSE`	Yes	No	Yes
`eval = FALSE`	No	Yes	No

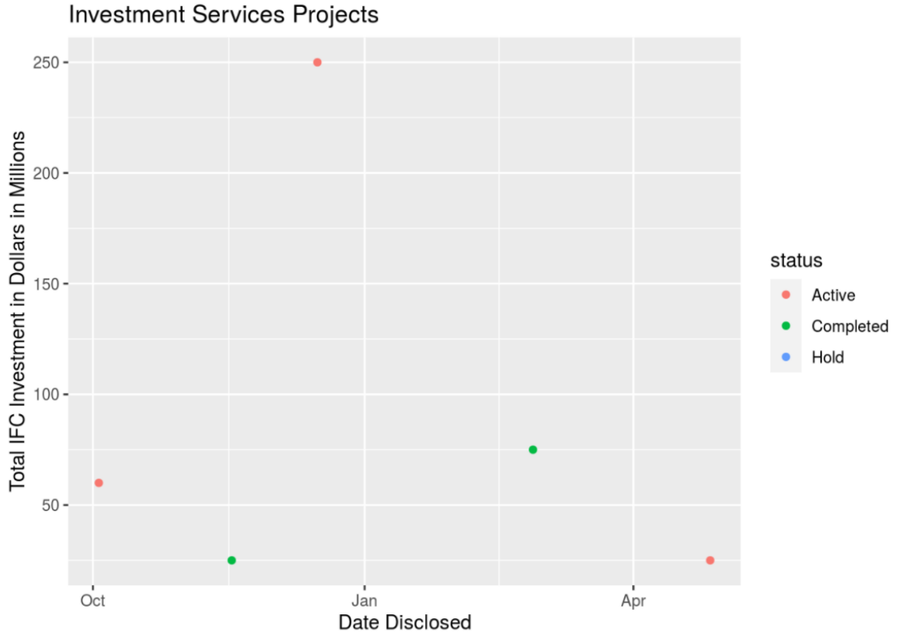
The collapse option

````
```{r indonesia-investment-projects-2012}
indonesia_investment_projects_2018 <- investment_services_projects %>%
  filter(country == "Indonesia",
         date_disclosed >= "2011-07-01",
         date_disclosed <= "2012-06-30")

ggplot(indonesia_investment_projects_2012, aes(x = date_disclosed, y =
total_investment, color = status)) +
  geom_point() +
  labs(
    title = "Investment Services Projects in Indonesia in 2012",
    x = "Date Disclosed",
    y = "Total IFC Investment in Dollars in Millions"
  )
```
````

```
ggplot(indonesia_investment_projects_2012, aes(x = date_disclosed, y = total_
investment, color = status)) +
  geom_point() +
  labs(
    title = "Investment Services Projects",
    x = "Date Disclosed",
    y = "Total IFC Investment in Dollars in Millions"
  )
```

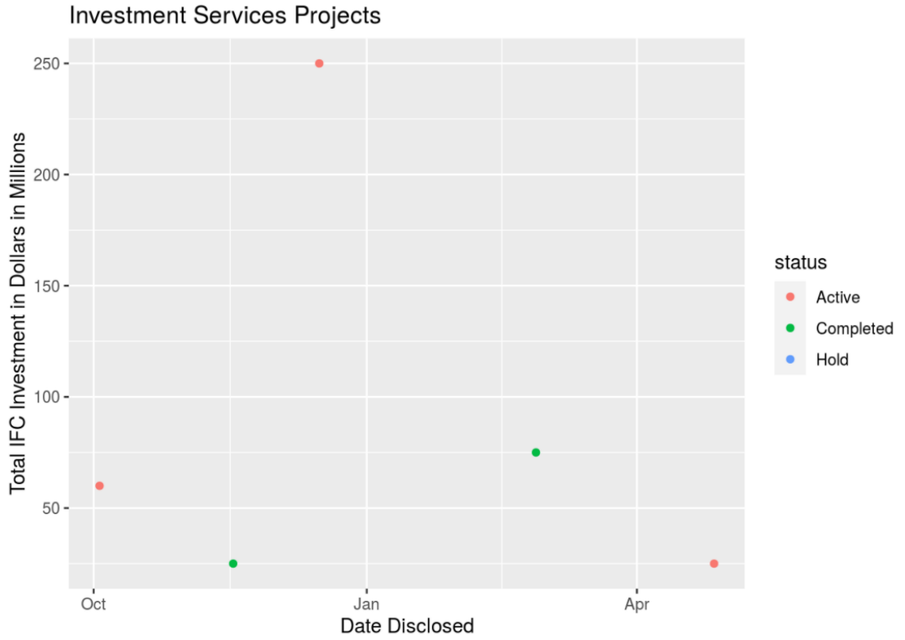
```
## Warning: Removed 1 rows containing missing values (geom_point).
```



The collapse option

```
67  ```{r indonesia-investment-projects-2012, collapse = TRUE}
68  indonesia_investment_projects_2018 <- investment_services_projects %>%
69    filter(country == "Indonesia",
70           date_disclosed >= "2011-07-01",
71           date_disclosed <= "2012-06-30")
72
73  ggplot(indonesia_investment_projects_2012, aes(x = date_disclosed, y =
    total_investment, color = status)) +
74    geom_point() +
75    labs(
76      title = "Investment Services Projects in Indonesia in 2012",
77      x = "Date Disclosed",
78      y = "Total IFC Investment in Dollars in Millions"
79    )
80  ```
```

```
ggplot(indonesia_investment_projects_2012, aes(x = date_disclosed, y = total_
investment, color = status)) +
  geom_point() +
  labs(
    title = "Investment Services Projects",
    x = "Date Disclosed",
    y = "Total IFC Investment in Dollars in Millions"
  )
## Warning: Removed 1 rows containing missing values (geom_point).
```



Let's practice!

REPORTING WITH R MARKDOWN

Warnings, messages, and errors

REPORTING WITH R MARKDOWN

Amy Peterson
Head of Core Curriculum at DataCamp

datacamp

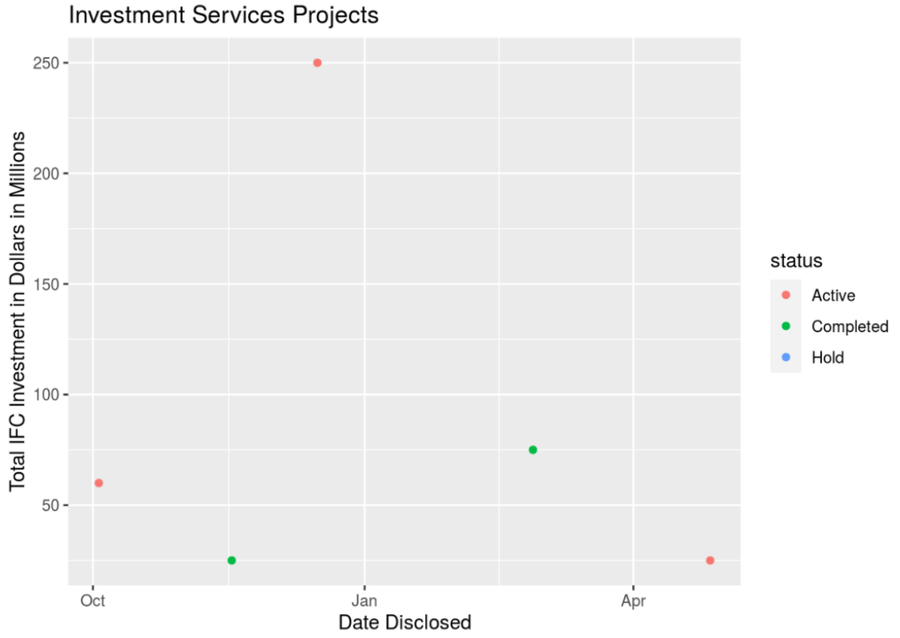
Warnings

````
```{r indonesia-investment-projects-2012}
indonesia_investment_projects_2018 <- investment_services_projects %>%
  filter(country == "Indonesia",
         date_disclosed >= "2011-07-01",
         date_disclosed <= "2012-06-30")

ggplot(indonesia_investment_projects_2012, aes(x = date_disclosed, y =
total_investment, color = status)) +
  geom_point() +
  labs(
    title = "Investment Services Projects in Indonesia in 2012",
    x = "Date Disclosed",
    y = "Total IFC Investment in Dollars in Millions"
  )
```
````

```
ggplot(indonesia_investment_projects_2012, aes(x = date_disclosed, y = total_
investment, color = status)) +
  geom_point() +
  labs(
    title = "Investment Services Projects",
    x = "Date Disclosed",
    y = "Total IFC Investment in Dollars in Millions"
  )
```

```
## Warning: Removed 1 rows containing missing values (geom_point).
```

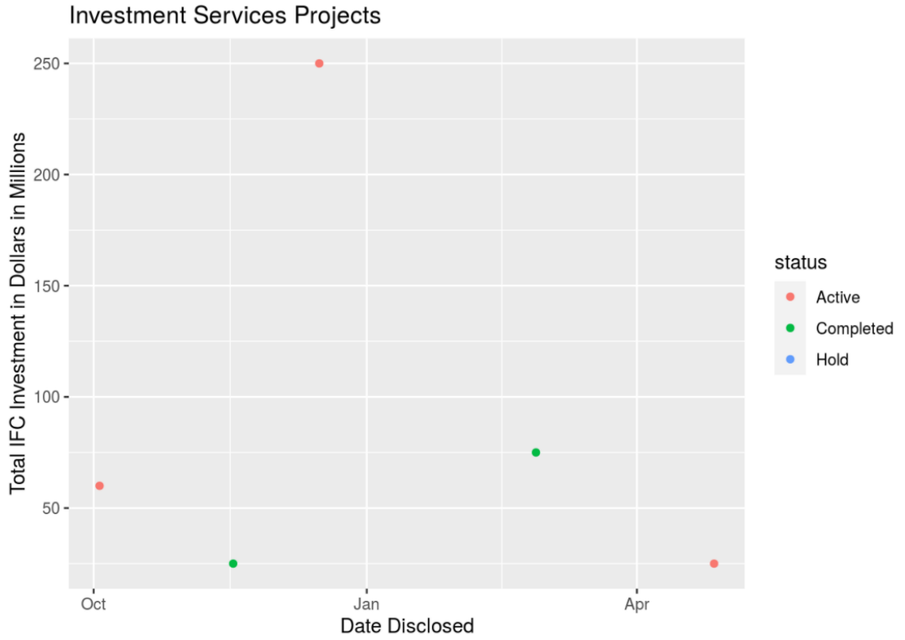


Warnings

````
```{r indonesia-investment-projects-2012, collapse = TRUE}
indonesia_investment_projects_2018 <- investment_services_projects %>%
  filter(country == "Indonesia",
         date_disclosed >= "2011-07-01",
         date_disclosed <= "2012-06-30")

ggplot(indonesia_investment_projects_2012, aes(x = date_disclosed, y =
total_investment, color = status)) +
  geom_point() +
  labs(
    title = "Investment Services Projects in Indonesia in 2012",
    x = "Date Disclosed",
    y = "Total IFC Investment in Dollars in Millions"
  )
```
````

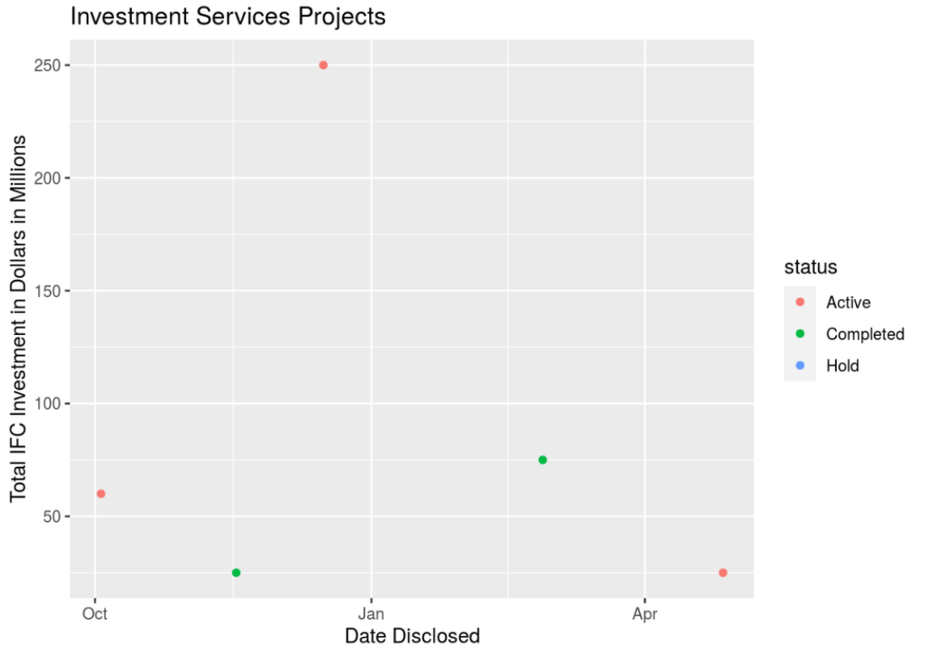
```
ggplot(indonesia_investment_projects_2012, aes(x = date_disclosed, y = total_
investment, color = status)) +
  geom_point() +
  labs(
    title = "Investment Services Projects",
    x = "Date Disclosed",
    y = "Total IFC Investment in Dollars in Millions"
  )
## Warning: Removed 1 rows containing missing values (geom_point).
```



Warnings

```
53  ```{r indonesia-investment-projects-2012, warning = FALSE}
54  indonesia_investment_projects_2012 <- investment_services_projects %>%
55    filter(country == "Brazil",
56           date_disclosed >= "2011-07-01",
57           date_disclosed <= "2012-06-30")
58
59  ggplot(indonesia_investment_projects_2012, aes(x = date_disclosed, y =
    total_investment, color = status)) +
60    geom_point() +
61    labs(
62      title = "Investment Services Projects in Indonesia in 2012",
63      x = "Date Disclosed",
64      y = "Total IFC Investment in Dollars in Millions"
65    )
66  ```
```

```
ggplot(indonesia_investment_projects_2012, aes(x = date_disclosed, y = total_
investment, color = status)) +
  geom_point() +
  labs(
    title = "Investment Services Projects",
    x = "Date Disclosed",
    y = "Total IFC Investment in Dollars in Millions"
  )
```



Messages

```
11  ```{r data, include = FALSE}
12  library(readr)
13  library(dplyr)
14  library(ggplot2)
15  library(knitr)
16
17  investment_annual_summary <- read_csv("https://assets.datacamp.com/
    production/repositories/5756/datasets/
    d0251f26117bbcf0ea96ac276555b9003f4f7372/
    investment_annual_summary.csv")
18  investment_region_summary <- read_csv("https://assets.datacamp.com/
    production/repositories/5756/datasets/
    52f5414f6504e0503e86eb1043afa9b3d157fab2/
    investment_region_summary.csv")
19  investment_services_projects <- read_csv("https://
    assets.datacamp.com/production/repositories/5756/datasets/
    bcb2e39ecbe521f4b414a21e35f7b8b5c50aec64/
    investment_services_projects.csv")
20  ```
```

Messages

```
11  ```{r data}
12  library(readr)
13  library(dplyr)
14  library(ggplot2)
15
16  investment_annual_summary <- read_csv("https://assets.datacamp.com/
    production/repositories/5756/datasets/
    d0251f26117bbcf0ea96ac276555b9003f4f7372/investment_annual_summary.csv")
17  investment_services_projects <- read_csv("https://assets.datacamp.com/
    production/repositories/5756/datasets/
    bcb2e39ecbe521f4b414a21e35f7b8b5c50aec64/
    investment_services_projects.csv")
18  ```
```

HTML Viewer

Investment Report

28 April 2020

```
library(readr)
library(dplyr)
library(ggplot2)
library(knitr)

investment_annual_summary <- read_csv("https://assets.datacamp.com/product
ion/repositories/5756/datasets/d0251f26117bbcf0ea96ac276555b9003f4f7372/in
vestment_annual_summary.csv")
```

```
## Parsed with column specification:
## cols(
##   fiscal_year = col_double(),
##   region = col_character(),
##   dollars_in_millions = col_double()
## )
```

```
investment_region_summary <- read_csv("https://assets.datacamp.com/product
ion/repositories/5756/datasets/52f5414f6504e0503e86eb1043afa9b3d157fab2/in
vestment_region_summary.csv")
```

```
## Parsed with column specification:
## cols(
```

Messages

````
```{r data, message = FALSE}
library(readr)
library(dplyr)
library(ggplot2)

investment_annual_summary <- read_csv("https://assets.datacamp.com/production/repositories/5756/datasets/d0251f26117bbcf0ea96ac276555b9003f4f7372/investment_annual_summary.csv")
investment_services_projects <- read_csv("https://assets.datacamp.com/production/repositories/5756/datasets/bcb2e39ecbe521f4b414a21e35f7b8b5c50aec64/investment_services_projects.csv")
```
````

HTML Viewer

Investment Report

28 April 2020

```
library(readr)
library(dplyr)
library(ggplot2)
library(knitr)

investment_annual_summary <- read_csv("https://assets.datacamp.com/production/repositories/5756/datasets/d0251f26117bbcf0ea96ac276555b9003f4f7372/investment_annual_summary.csv")
investment_region_summary <- read_csv("https://assets.datacamp.com/production/repositories/5756/datasets/52f5414f6504e0503e86eb1043afa9b3d157fab2/investment_region_summary.csv")
investment_services_projects <- read_csv("https://assets.datacamp.com/production/repositories/5756/datasets/bcb2e39ecbe521f4b414a21e35f7b8b5c50aec64/investment_services_projects.csv")
```

Messages

````
```{r data, message = FALSE}
library(readr)
library(dplyr)
library(ggplot2)

investment_annual_summary <- read_csv("https://assets.datacamp.com/
production/repositories/5756/datasets/
d0251f26117bbcf0ea96ac276555b9003f4f7372/investment_annual_summary.csv")
investment_services_projects <- read_csv("https://assets.datacamp.com/
production/repositories/5756/datasets/
bcb2e39ecbe521f4b414a21e35f7b8b5c50aec64/
investment_services_projects.csv")

indonesia_investment_projects <- investment_services_projects %>%
  filter(country == "Indonesia")
```
````

HTML Viewer

Investment Report

28 April 2020

```
library(readr)
library(dplyr)
library(ggplot2)
library(knitr)

investment_annual_summary <- read_csv("https://assets.datacamp.com/production/repositories/5756/datasets/d0251f26117bbcf0ea96ac276555b9003f4f7372/investment_annual_summary.csv")
investment_region_summary <- read_csv("https://assets.datacamp.com/production/repositories/5756/datasets/52f5414f6504e0503e86eb1043afa9b3d157fab2/investment_region_summary.csv")
investment_services_projects <- read_csv("https://assets.datacamp.com/production/repositories/5756/datasets/bcb2e39ecbe521f4b414a21e35f7b8b5c50aec64/investment_services_projects.csv")

indonesia_investment_projects <- investment_services_projects %>%
  filter(country == "Indonesia")
```

Errors

````
```{r indonesia-investment-projects, error = TRUE}
ggplot(indonesia_investment_projects, aes(x = date_disclosed, y =
total_investment, color = status)) +
  geom_point() +
  labs(
    title = "Investment Services Projects in Indonesia",
    x = "Date Disclosed",
    y = "Total IFC Investment in Dollars in Millions"
  )
```
````

```
ggplot(indonesia_investment_projects, aes(x = date_disclosed, y = total_investment,
color = status)) +
  geom_point() +
  labs(
    title = "Investment Services Projects in Indonesia",
    x = "Date Disclosed",
    y = "Total IFC Investment in Dollars in Millions"
  )
```

```
## Error in ggplot(indonesia_investment_projects, aes(x = date_disclosed, : object
'indonesia_investment_projects' not found
```

Let's practice!

REPORTING WITH R MARKDOWN