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- GitBash: <https://gitforwindows.org/>
- R: <https://cran.r-project.org/index.html>
- RStudio: <https://posit.co/download/rstudio-desktop/#download>
- Quarto: <https://quarto.org/docs/download/>

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D2 Coding □□: <https://github.com/naver164.5/d2codingfont>

R □□

164

179

170

168

163

172

154

167

155

161

175

154

R: <https://cran.r-project.org/index.html>

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```
height <- c(179, 170, 168, 163, 172)
```

```
mean(height)
```

```
min(height)
```

```
max(height)
```

```
cat("-----\n")
```

```
cat("min:", min(height), "\n")
```

```
cat("mean:", mean(height))
```

```
cat("max:", max(height))
```

```
cat("-----\n")
```

```
cat("min:", min(height))
```

```
cat("min:", min(height))
```

```
cat("min:", min(height))
```

```
# min height
```

```
## min height 5, min 5
```

```
gender_v <- c(rep("M", 5), rep("F", 5))
```

```
## min height 5, min 5
```

```
height <- rnorm(10, 170, 10)
```

```
weight <- rnorm(10, 60, 10)
```

```
## min height 5, min 5
```

```
demo_df <- data.frame(
```

```
  "gender" = gender_v,
```

```
  "height" = height,
```

```
  "weight" = weight
```

```
)
```

```
demo_df
```

```
install.packages("tidyverse")
```

```
library(tidyverse)
```

```
demo_df %>%  
  select(col1, col2) %>%  
  # filter(col1 > 60)  
  filter(col1 == "A",  
         col2 > 55)
```

```
demo_df %>%  
  mutate(BMI = col1 / (col2/100)**2) %>%  
  arrange(desc(BMI))
```

```
demo_df %>%  
  group_by(col1) %>%  
  summarise(mean_col2 = mean(col2),  
            max_col2 = max(col2),  
            n_col2 = n())
```

RTools

<https://cran.r-project.org/bin/windows/Rtools/>

GGPLOT

```
gapminder %>%  
  mutate(GDP = pop * gdpPercap / 10^8) %>%  
  arrange(desc(GDP))
```

```
gapminder_g <- gapminder %>%  
  filter(year == max(year)) %>%  
  ggplot(aes(x = gdpPercap, y = lifeExp, color = continent,  
            size = pop)) +  
  geom_point() +  
  labs(title = "가파른 1인당 GDP 증가와 기대수명",  
       x = "1인당 GDP",  
       y = "기대수명") +  
  theme_minimal() +  
  facet_wrap(~continent) +  
  theme(legend.position = "none") +  
  scale_x_continuous(labels = scales::comma)
```

```
gapminder_g
```

```
ggsave(filename = "images/gapminder.jpg")
```

```
## ##
```

<https://gist.githubusercontent.com/slopp/ce3b90b9168f2f921784de84fa445651/raw/4ecf3041f0ed4913e7c230758733948bc561f434/penguins.csv>

mermaid

```
```${mermaid}
flowchart LR
 A[] -->| | B[]
 B -->|ggplot| D[]
 B -->|gt| E[]
 B -->|tidymodels| F[fa:fa-car]
````
```

```
## ##
```

```
---
title: "  "
format: html
editor_options:
  chunk_output_type: console
```

```
engine: knitr
```

```
knitr:
  opts_chunk:
    message: false
    warning: false
    collapse: true
    code-overflow: code-overflow
    comment: "#>"
  R.options:
    knitr.graphics.auto_pdf: true
    dev: "ragg_png"
    fig-asp: 0.618 # 1 / phi
```

```
```${mermaid}
flowchart LR
 A[] -->| | B[]
 B -->|ggplot| D[]
 B -->|gt| E[]
 B -->|tidymodels| F[fa:fa-car]
```

```
...
```

```
000
```

```
00 00 0000...
```

```
- 000
```

```
- 00
```

```
- 00
```

```
```{r}
```

```
library(tidyverse)
```

```
penguins_raw <-
```

```
read_csv("https://gist.githubusercontent.com/slopp/ce3b90b9168f2f921784de84fa445651/raw/4ecf3041f0ed4913e7c230758733948bc561f434/penguins.csv")
```

```
...
```

```
# 000 000
```

```
```{r}
```

```
penguins <- penguins_raw %>%
 drop_na()
```

```
penguins %>%
 slice_sample(n = 10)
```

```
...
```

```
EDA
```

```
000 000 00
```

```
```{r}
```

```
penguins %>%  
  ggplot(aes(x = flipper_length_mm, y = body_mass_g,  
             color = species)) +  
  geom_point() +  
  facet_wrap(~island)
```

```
...
```

```
000 000 000 00 000 000000 00 0.
```

