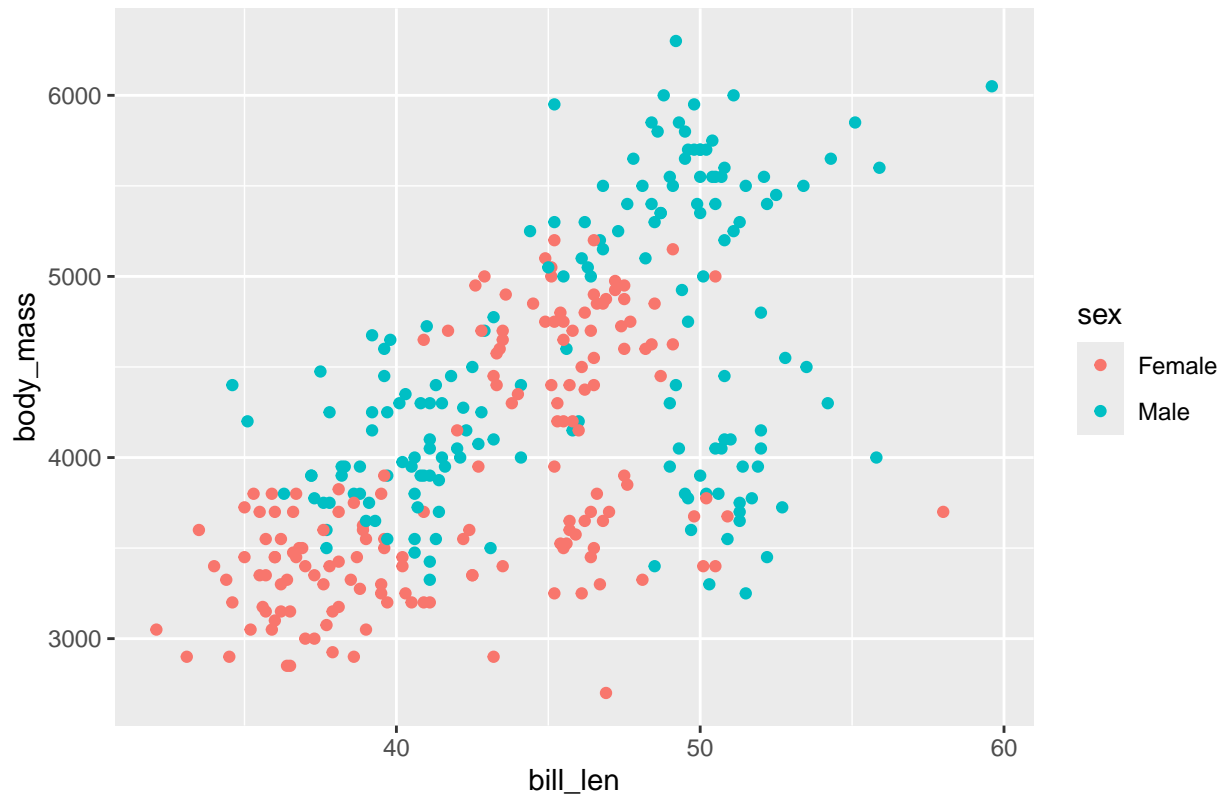# Assignment 5

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Dataset

The `penguins` dataset (available through the `palmerpenguins` package and can be loaded after installing and loading the package) contains real-world data collected from three penguin species are Adélie, Chinstrap, and Gentoo living in the Palmer Archipelago of Antarctica. The measurements were taken between 2007 and 2009 consists many variables about the penguins such as `species`, `island`, `bill_length_mm`, and so on.

Drawing a plot for association

1. Draw a single plot showing association between the bill lengths and body mass of the penguins according to the their sex (60 pts).

```r
# Load necessary libraries
penguinscleaned <- na.omit(penguins)
ggplot(penguinscleaned , aes(x = bill_len , y = body_mass,  colour = factor(sex))) +
  geom_point() +
  labs(title = "Visualization of the association bill lenght and body mass",
      colour = "sex") +
  scale_colour_discrete(labels = c("Female", "Male"))
```

Visualization of the association bill lenght and body mass

2. Interpret the plot (40 pts).

This data contains real-world data collected from three penguin species are Adélie, Chinstrap, and Gentoo living in the Palmer Archipelago of Antarctica. We filtered the data according to their bill lengths and body mass of the penguins according to their genders.Plot uses the colors,positioning and scatter plot.