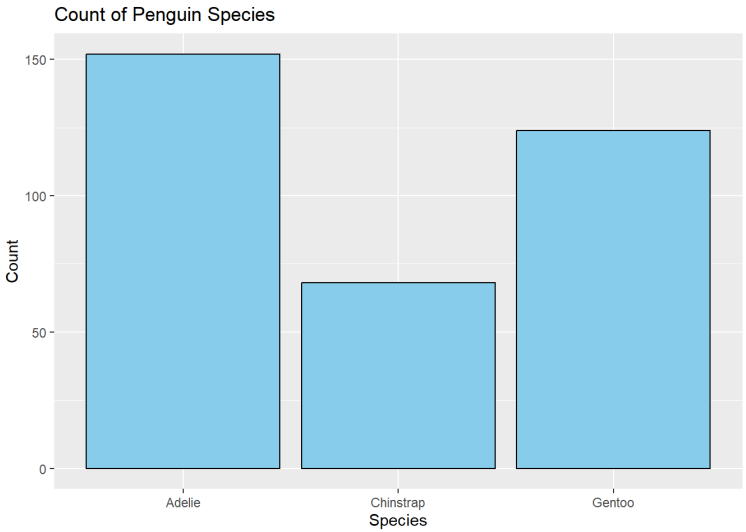
H24106191

```
library(palmerpenguins)
data(package = 'palmerpenguins')
head(penguins)
```

```
head(penguins_raw)
```

```
penguins %>%
 group_by(species) %>%
 summarize(across(where(is.numeric), mean, na.rm = TRUE))
```

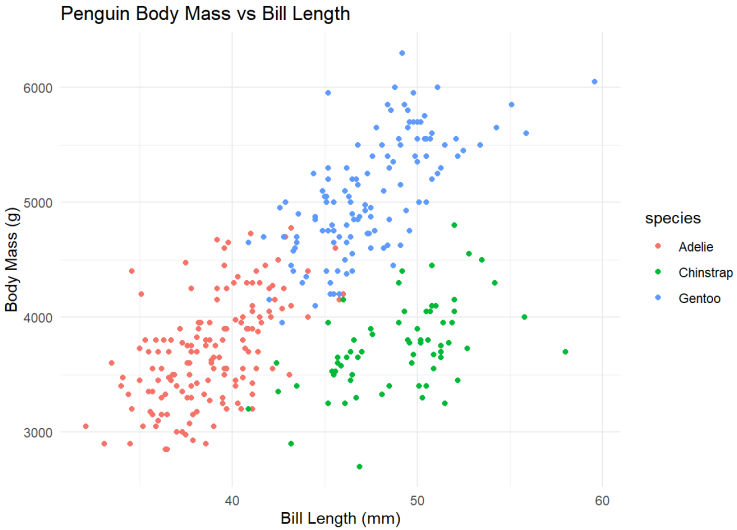
```
library(ggplot2)

ggplot(penguins, aes(x = species)) +
 geom_bar(fill = "skyblue", color = "black") +
 labs(title = "Count of Penguin Species", x = "Species", y = "Count")
```



可以得知物種最多的為Adelie、最少的是Chinstrap

```
ggplot(penguins, aes(x = bill_length_mm, y = body_mass_g, color = species)) +
 geom_point() +
 labs(title = "Penguin Body Mass vs Bill Length", x = "Bill Length (mm)", y = "Body Mass (g)") +
 theme_minimal()
```

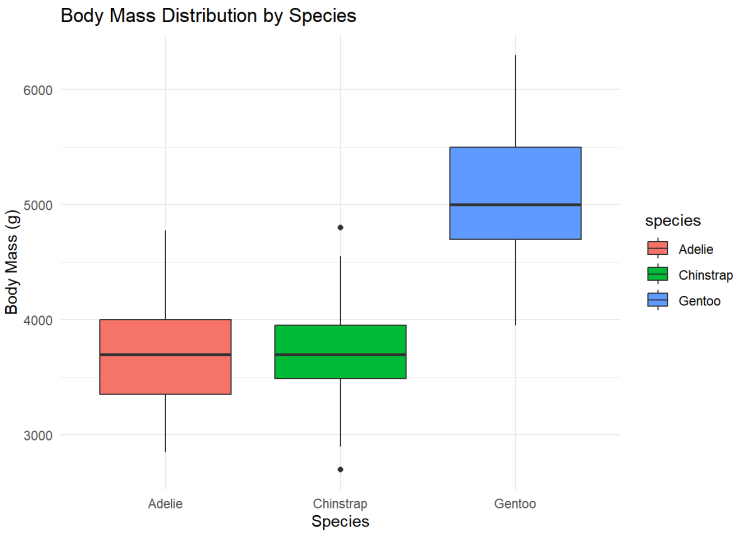
```
## Warning: Removed 2 rows containing missing values (`geom_point()`).
```



由上述分析可知Gentoo的體型分布相對大；Chinstrap的嘴巴長度相對長

```
ggplot(penguins, aes(x = species, y = body_mass_g, fill = species)) +
  geom_boxplot() +
  labs(title = "Body Mass Distribution by Species", x = "Species", y = "Body Mass (g)") +
  theme_minimal()
```

```
## Warning: Removed 2 rows containing non-finite values (`stat_boxplot()`).
```



由上述所有分析可以知道，物種最多的為Adelie、最少的是Chinstrap；Gentoo的體型分布相對大；Chinstrap的嘴巴長度相對長；由上述分析可知Gentoo的組內變異較大；而Chinstrap的組內分布較均勻。