Exp:10
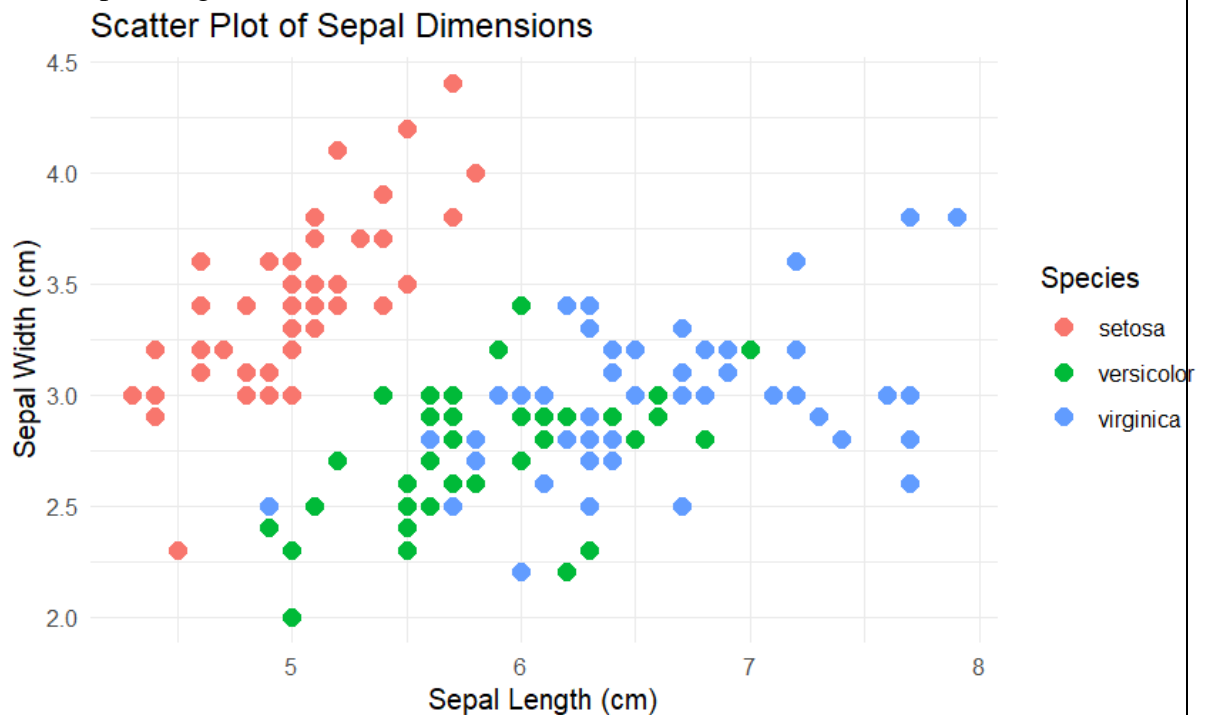
VISUALIZE DATA USING ANY PLOTTING FRAMEWORK

1) SCATTER PLOT

```
# Install ggplot2 (if not already installed)
install.packages("ggplot2")

# Load the ggplot2 package
library(ggplot2)

# Scatter plot of Sepal.Length vs Sepal.Width, colored by Species
ggplot(data = iris, aes(x = Sepal.Length, y = Sepal.Width, color = Species)) +
geom_point(size = 3) +  # Adds points
  labs(title = "Scatter Plot of Sepal Dimensions",
     x = "Sepal Length (cm)",
```


Scatter Plot of Sepal Dimensions

```
     y = "Sepal Width (cm)") + # Adds axis labels and title
  theme_minimal()  # Applies a minimal theme
```
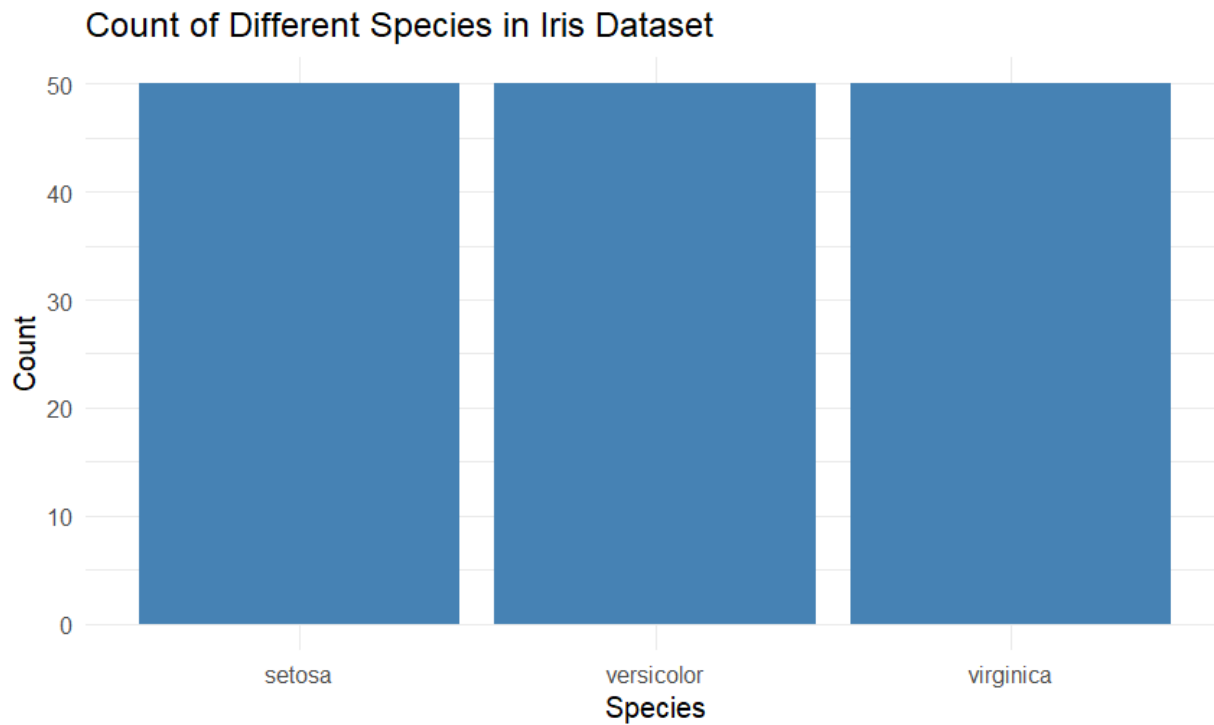
2) BAR CHART

```
# Install ggplot2 (if not already installed)
install.packages("ggplot2")

# Load the ggplot2 package
library(ggplot2)

# Bar plot of Species counts
ggplot(data = iris, aes(x = Species)) +
  geom_bar(fill = "steelblue") + # Adds bars filled with steel blue color
```

```
      labs(title = "Count of Different Species in Iris Dataset",
          x = "Species",
          y = "Count") +
      theme_minimal()
```
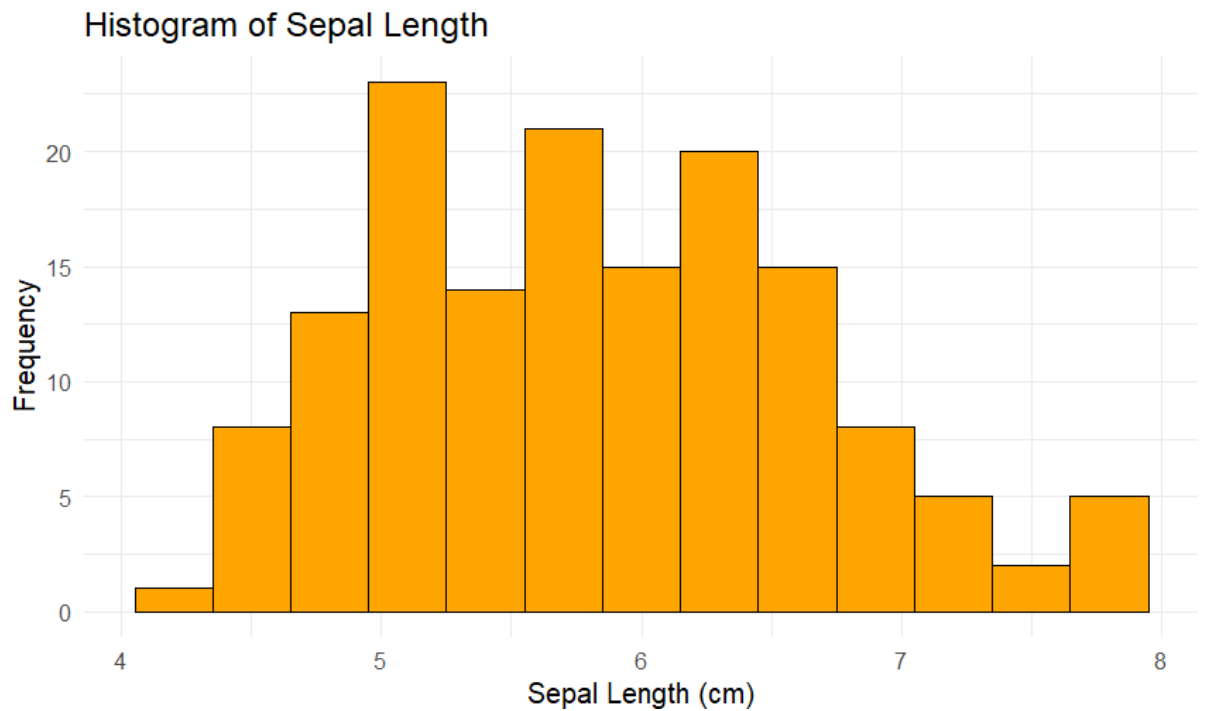
Count of Different Species in Iris Dataset

3) **HISTOGRAM**

```
# Install ggplot2 (if not already installed)
install.packages("ggplot2")

# Load the ggplot2 package
library(ggplot2)

# Histogram of Sepal Length
ggplot(data = iris, aes(x = Sepal.Length)) +
  geom_histogram(binwidth = 0.3, fill = "orange", color = "black") +  # Adds
histogram bars
  labs(title = "Histogram of Sepal Length",
      x = "Sepal Length (cm)",
      y = "Frequency") +
  theme_minimal()
```

Histogram of Sepal Length

4) BOX PLOT

```
# Install ggplot2 (if not already installed)
install.packages("ggplot2")

# Load the ggplot2 package
library(ggplot2)

# Box plot of Sepal Length for each Species
ggplot(data = iris, aes(x = Species, y = Sepal.Length, fill = Species)) +
  geom_boxplot() + # Adds box plot
  labs(title = "Box Plot of Sepal Length by Species",
       x = "Species",
       y = "Sepal Length (cm)") +
  theme_minimal()
```

Box Plot of Sepal Length by Species