Exp. No : 10
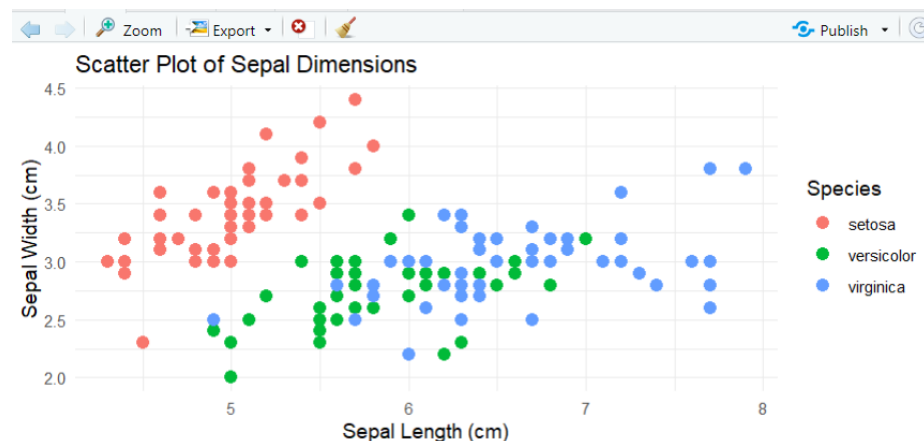
VISUALIZE DATA USING ANY PLOTTING FRAMEWORK

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)",

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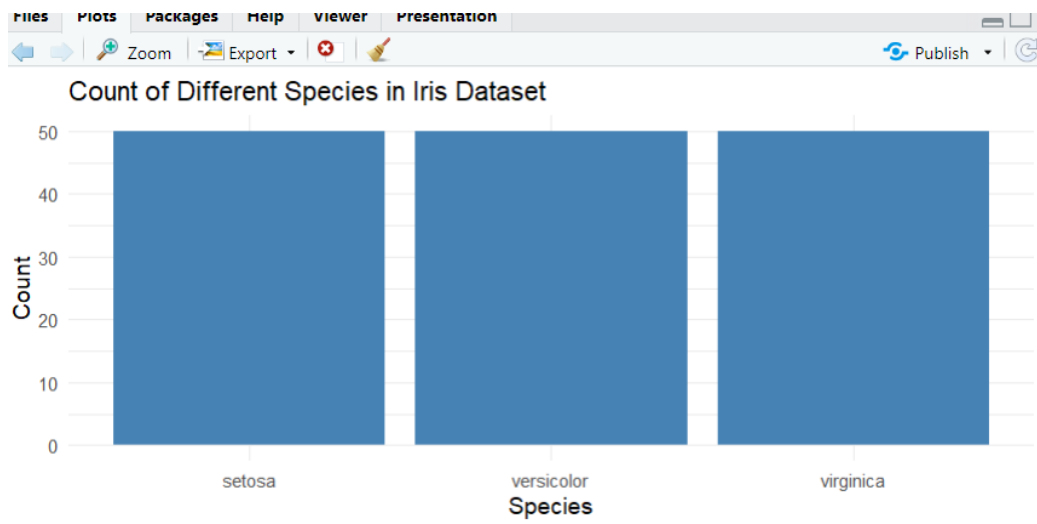
theme_minimal() # Applies a minimal theme

Output :

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()
```

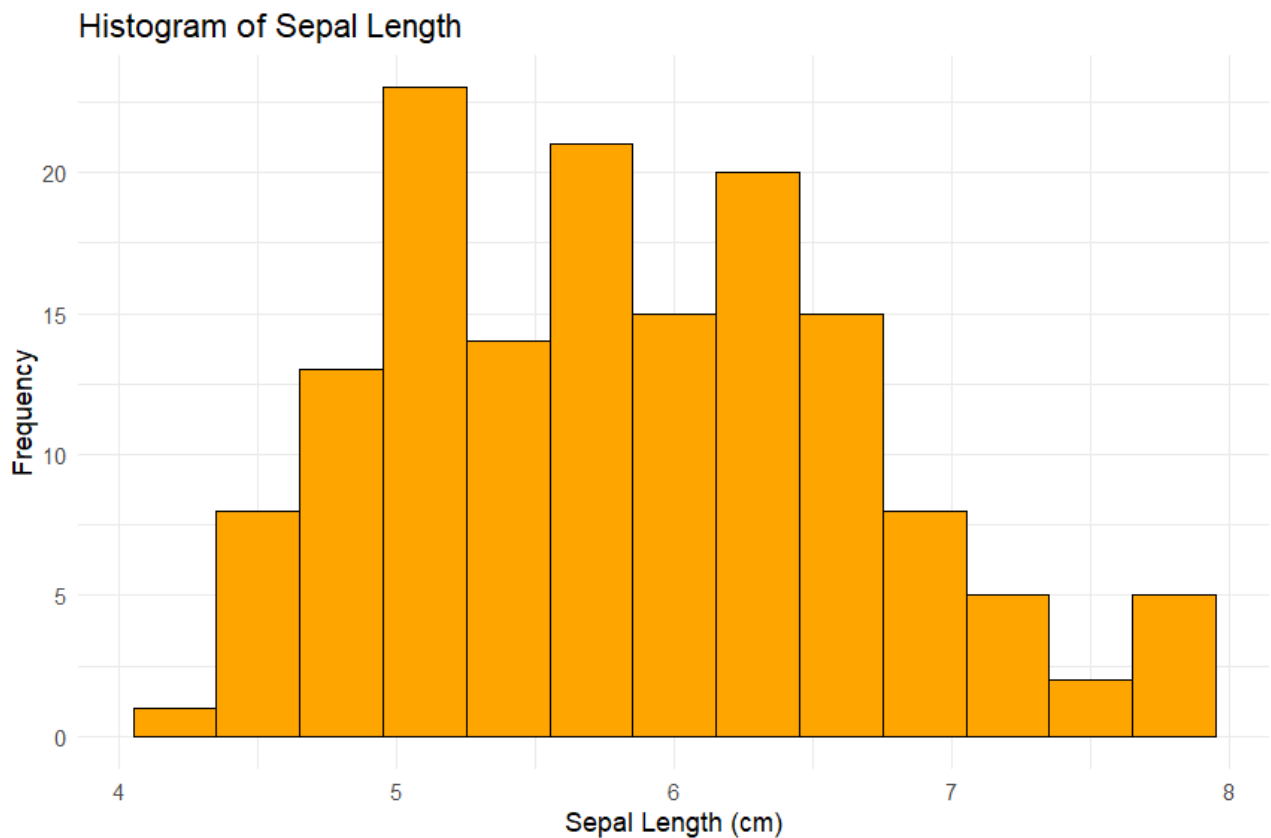**Output :**

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()

Output :

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()

Output :

Box Plot of Sepal Length by Species