EX.NO: 10 REGISTER NO: 210701306

**DATE:** 

# VISUALIZE DATA USING ANY PLOTTING FRAMEWORK

#### AIM:

To visualize data using any plotting framework

#### **PROGRAM CODE:**

#### **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
```

# **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()
```

#### **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") +
```

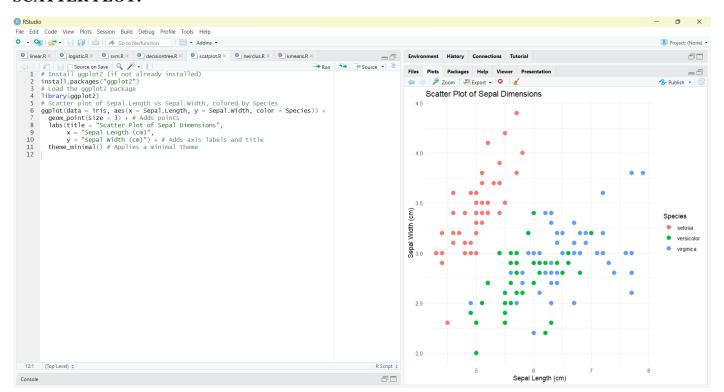
theme\_minimal()

## **BOX PLOT**

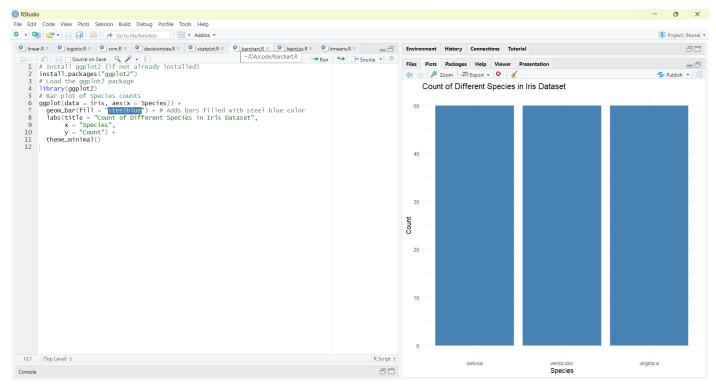
```
# Install ggplot2 (if not already installed)
install.packages("ggplot2")
# Load the ggplot2 package
library(ggplot2)
# Box plot of Sepal Length for each Species
ggplot(data = iris, aes(x = Species, y = Sepal.Length, fill = Species)) +
geom_boxplot() + # Adds box plot
labs(title = "Box Plot of Sepal Length by Species",
x = "Species",
y = "Sepal Length (cm)") +
theme_minimal()
```

## **OUTPUT:**

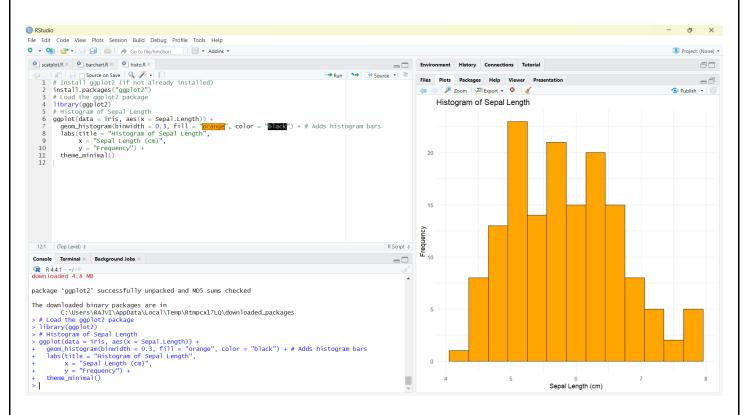
## **SCATTER PLOT:**



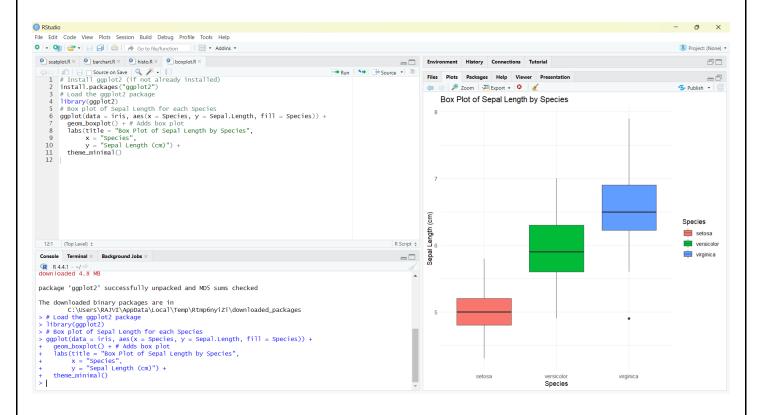
#### **BAR CHART:**



## **HISTOGRAM**



## **BOX PLOT**



## **RESULT:**

Thus the visualization of data using any plotting framework done successfully.