VISUALIZE DATA USING ANY PLOTTING FRAMEWORK

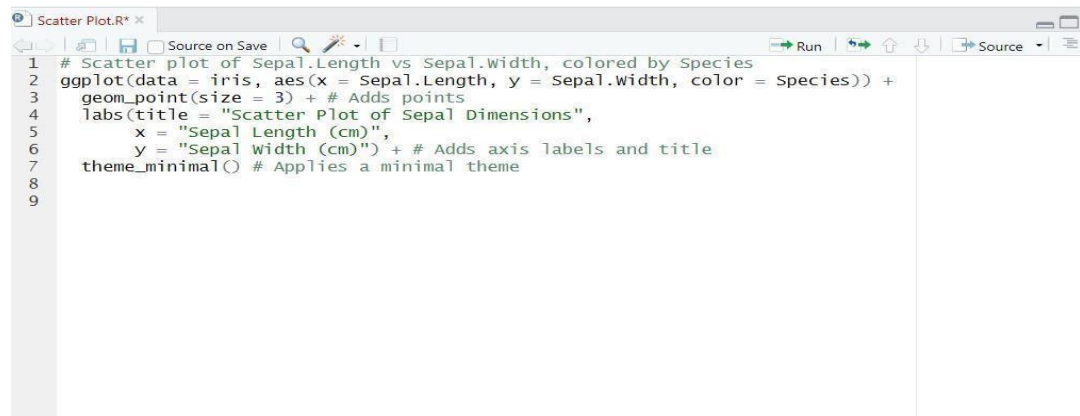**AIM:**

To implement a visualize Data using any plotting framework using R Studio.

1) SCATTER PLOT

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:

```
1  # Scatter plot of Sepal.Length vs Sepal.Width, colored by Species
2  ggplot(data = iris, aes(x = Sepal.Length, y = Sepal.Width, color = Species)) +
3    geom_point(size = 3) + # Adds points
4    labs(title = "Scatter Plot of Sepal Dimensions",
5         x = "Sepal Length (cm)",
6         y = "Sepal Width (cm)") + # Adds axis labels and title
7    theme_minimal() # Applies a minimal theme
8
9
```

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:


```
1  # Bar plot of Species counts
2  ggplot(data = iris, aes(x = Species)) +
3    geom_bar(fill = "steelblue") + # Adds bars filled with steel blue color
4    labs(title = "Count of Different Species in Iris Dataset",
5         x = "Species",
6         y = "Count") +
7    theme_minimal()
8  |
```

3) HISTOGRAM

Install ggplot2 (if not already installed)

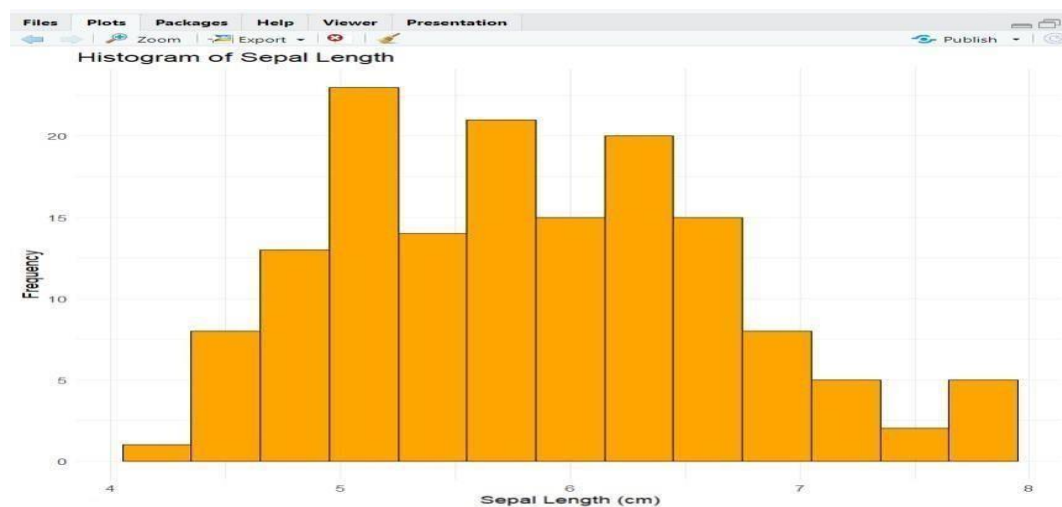install.packages("ggplot2")

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:

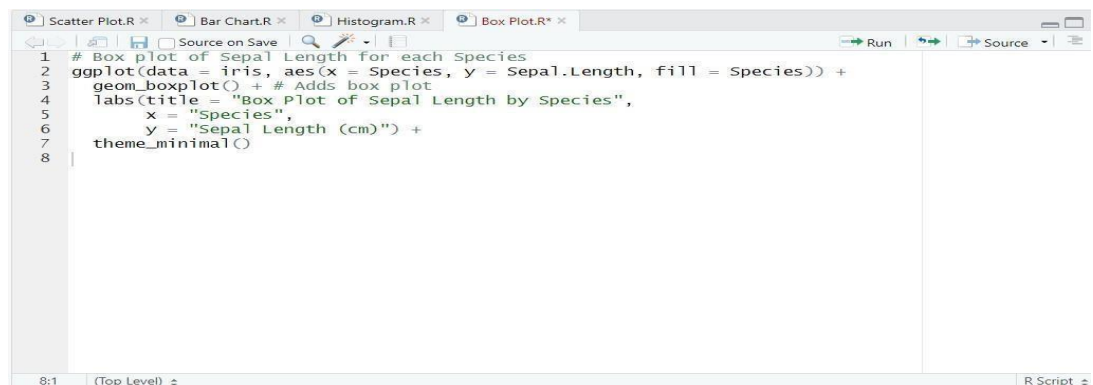**4) BOX PLOT**

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:

RESULT:

Thus, the visualize Data using any plotting framework using R Studio have been successfully executed.