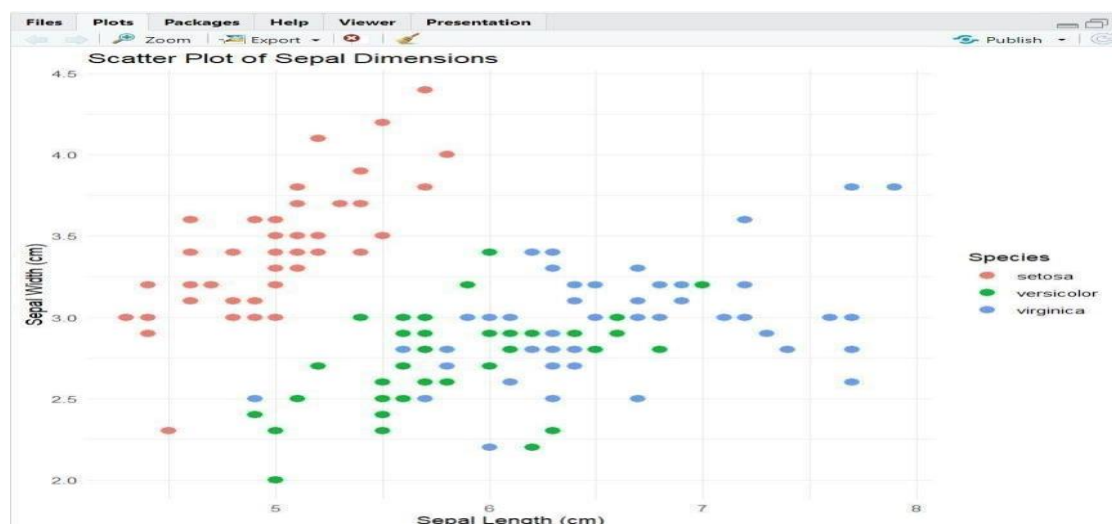# VISUALIZE DATA USING ANY PLOTTING FRAMEWORK

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
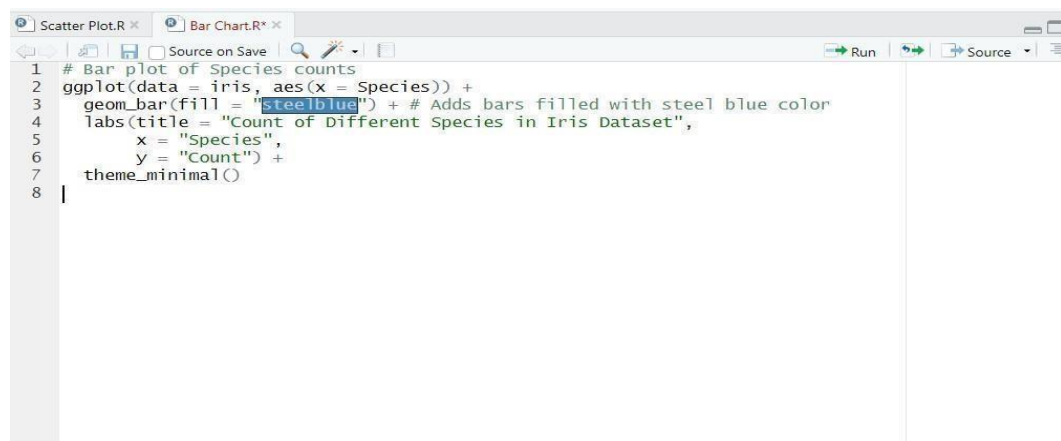
OUTPUT:

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
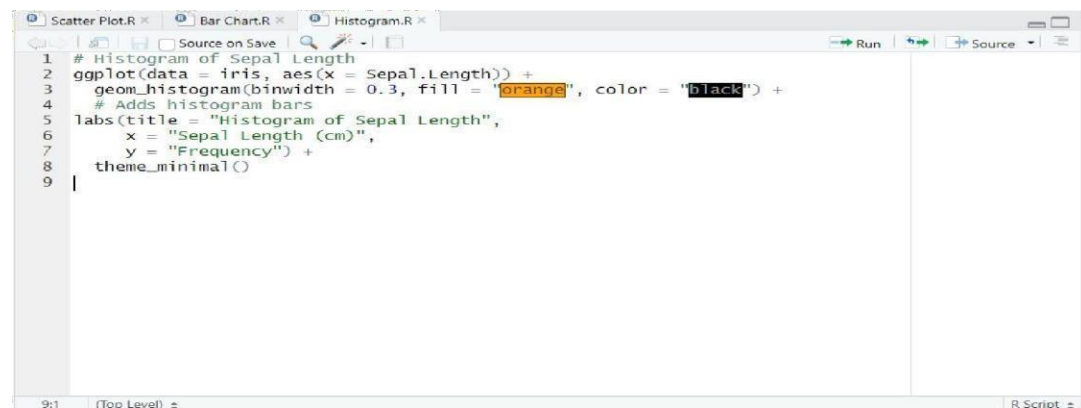Dataset", x = "Species", y = "Count") + theme_minimal()
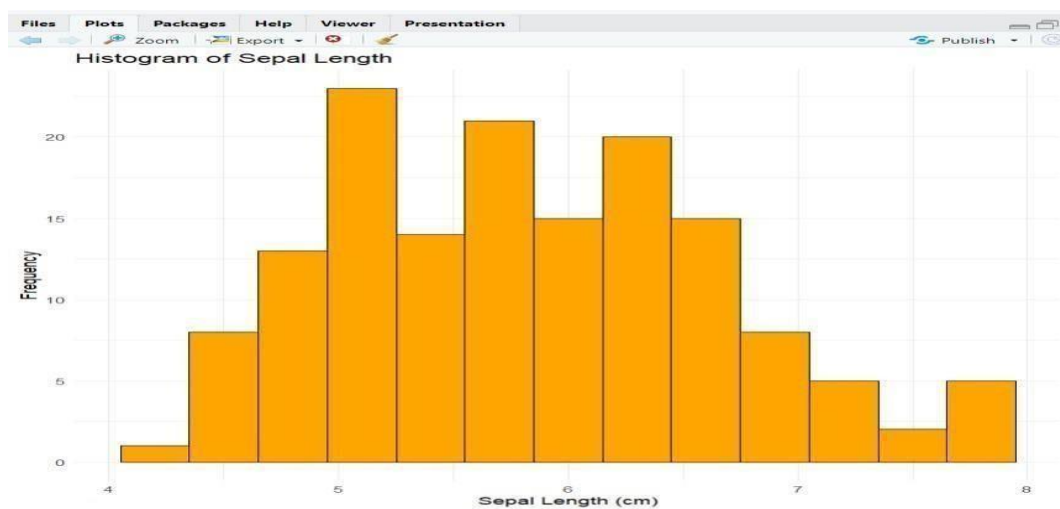
OUTPUT:

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()
```
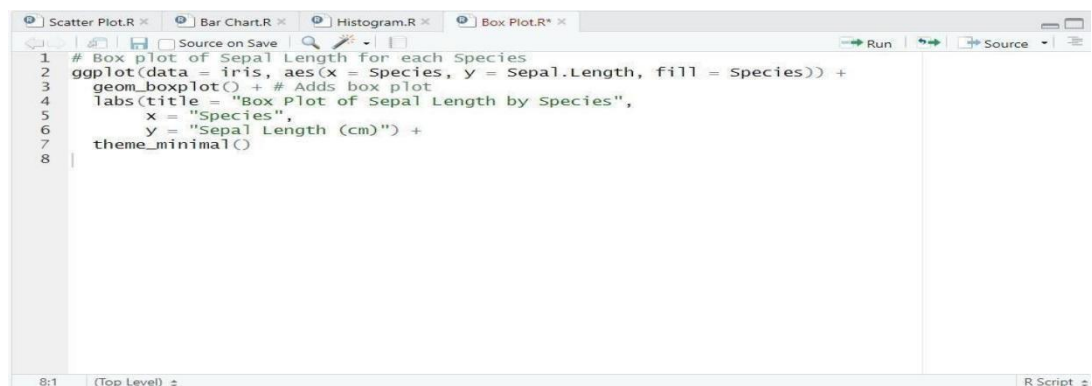**OUTPUT:**

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.