EX.NO:10 **210701046**

VISUALIZE DATA USING ANY PLOTTING FRAMEWORK

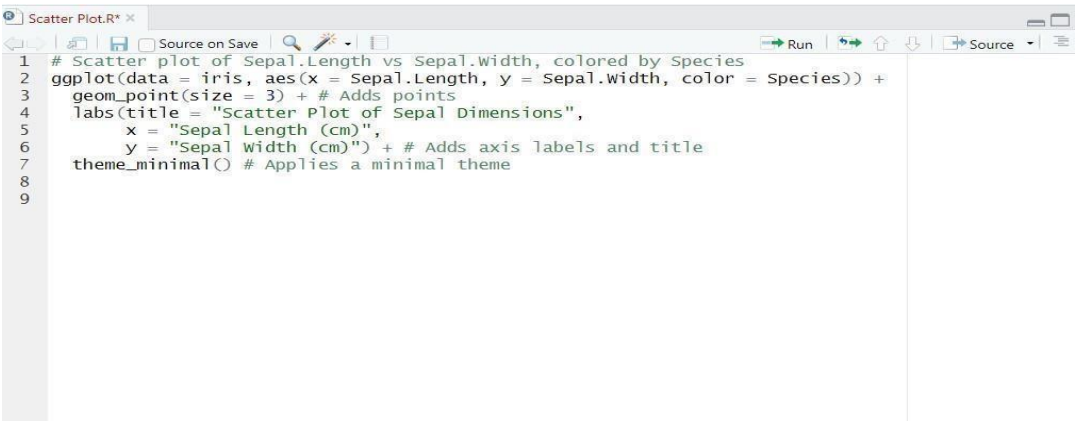
AIM:

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:



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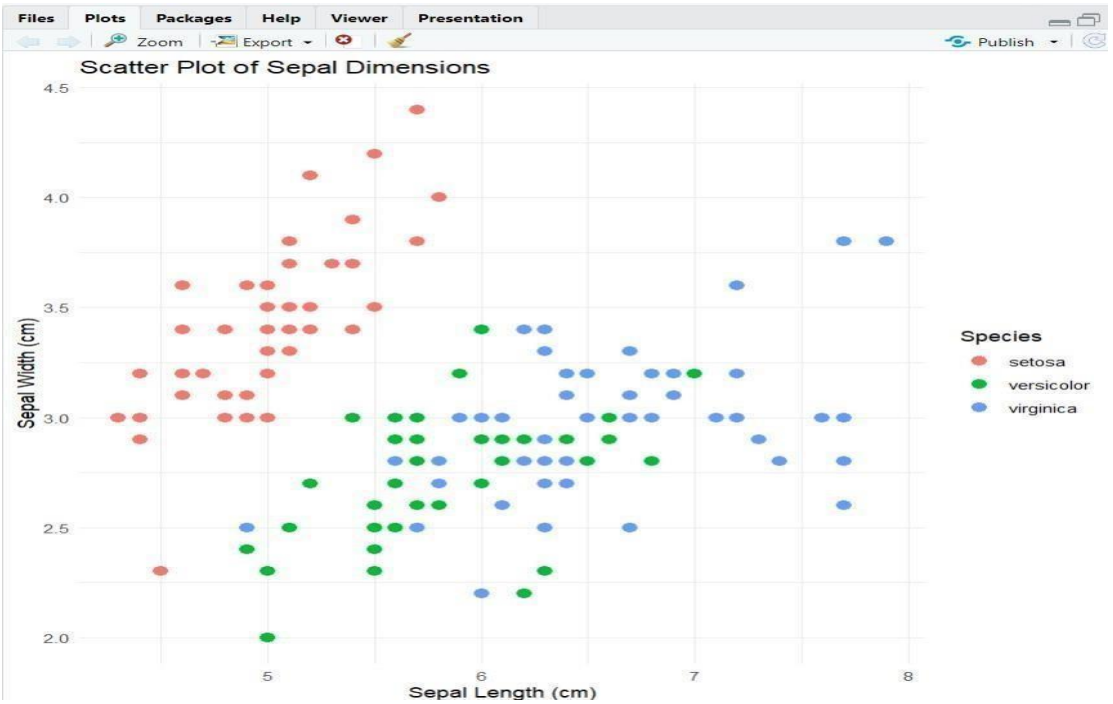

2) BAR CHART

```
# 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:

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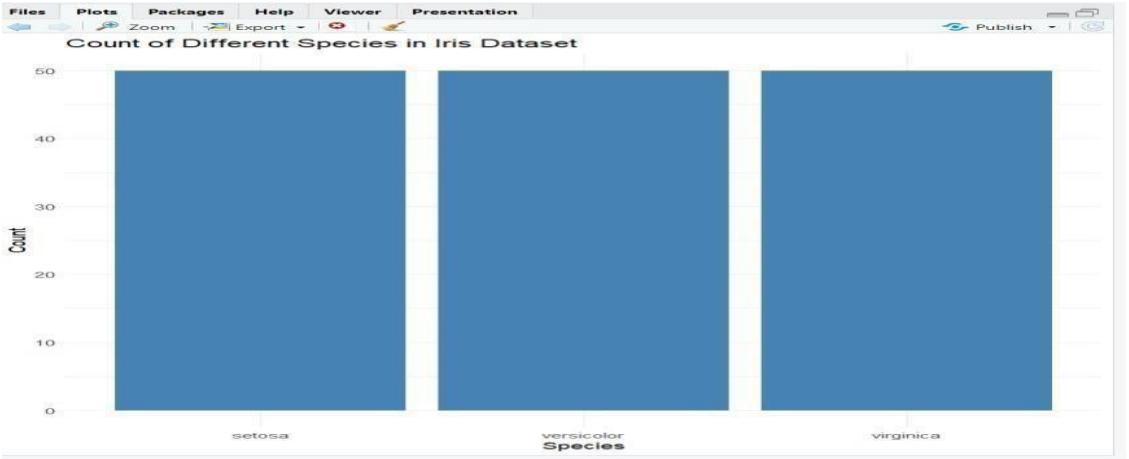
Scatter Plot.R | Bar Chart.R*

Source on Save | Run | Source

```
# 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()
```



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()
```

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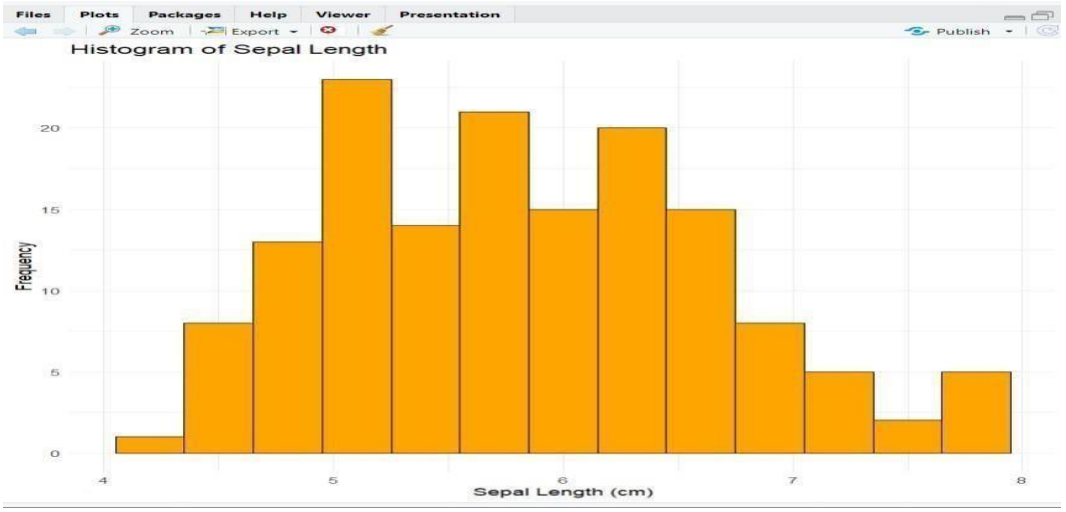
OUTPUT:



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()

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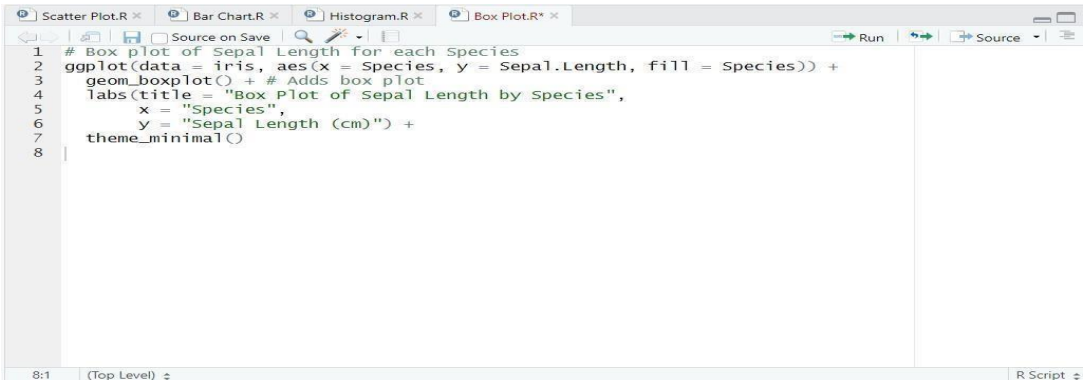
OUTPUT:



RESULT:

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