EX.NO:10 **210701502**

VISUALIZE DATA USING ANY PLOTTING FRAMEWORK

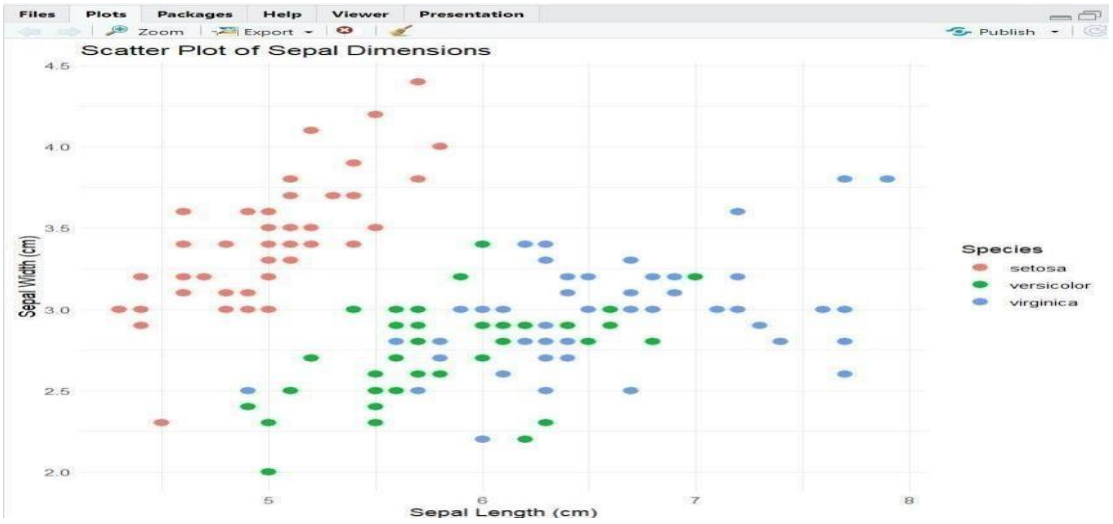
AIM:

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:**

```
# 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
```



ggplot2 (if not already installed)

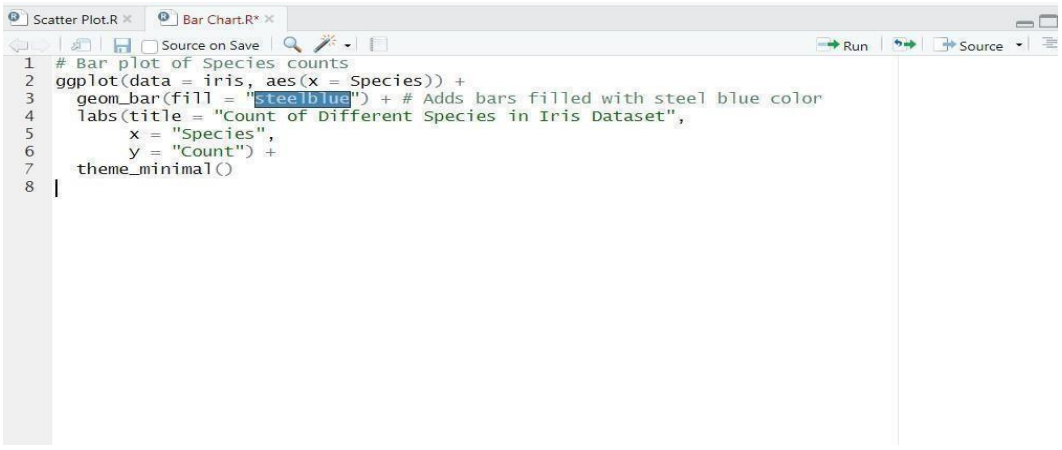
install.packages("ggplot2")

2) BAR CHART

Install

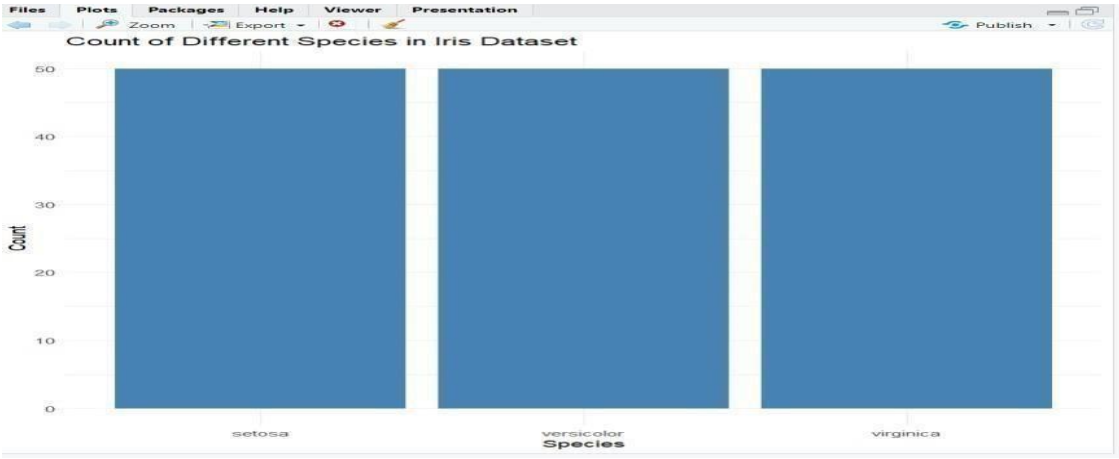
Load the ggplot2 package library(ggplot2)

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:**



ggplot2 (if not already installed)

install.packages("ggplot2")



3) HISTOGRAM

Install

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

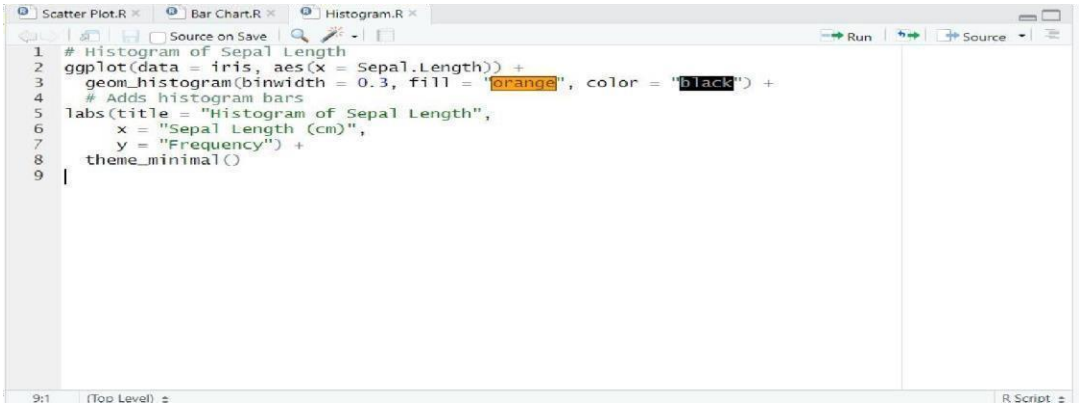
Length", x = "Sepal Length (cm)", y

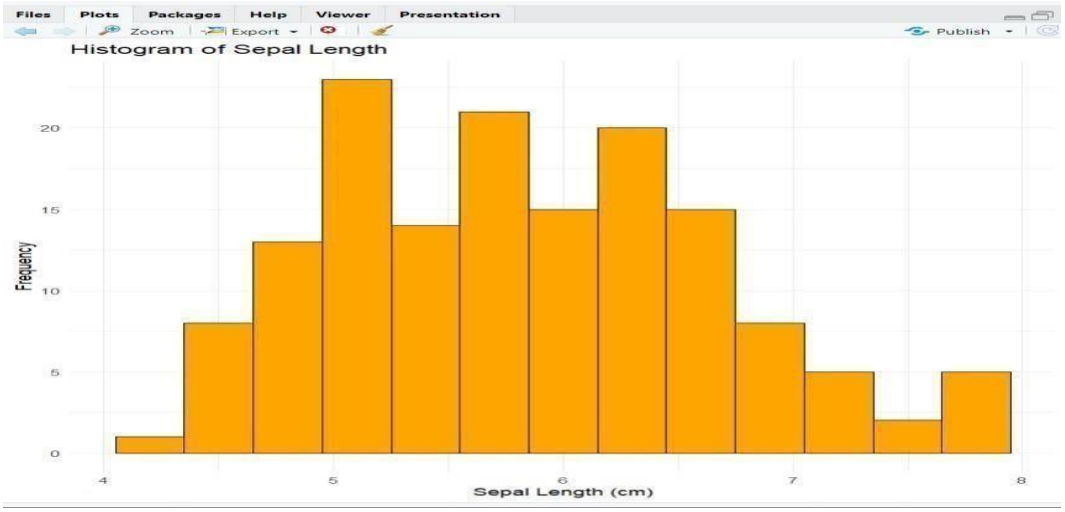
= "Frequency") + theme_minimal()

OUTPUT:

ggplot2 (if not already installed)

install.packages("ggplot2")





4) BOX PLOT

Install

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

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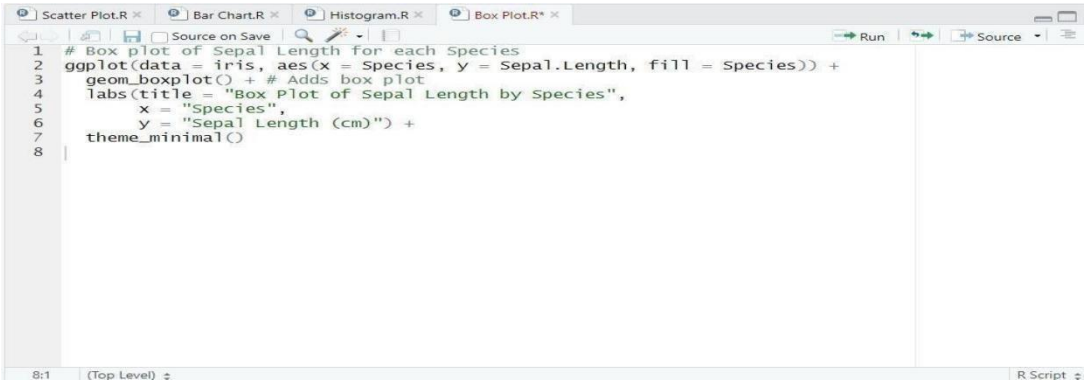
ggplot2 (if not already installed)

install.packages("ggplot2")

Sepal Length by Species", x = "Species", y = "Sepal Length (cm)") + theme_minimal()

OUTPUT:



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RESULT:

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