EX.NO:10 **210701506**

VISUALIZE DATA USING ANY PLOTTING FRAMEWORK

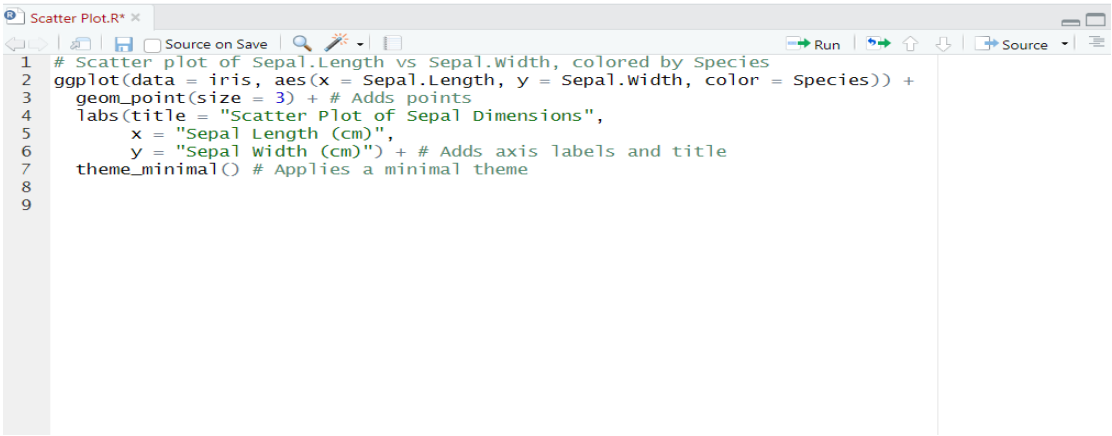
AIM:

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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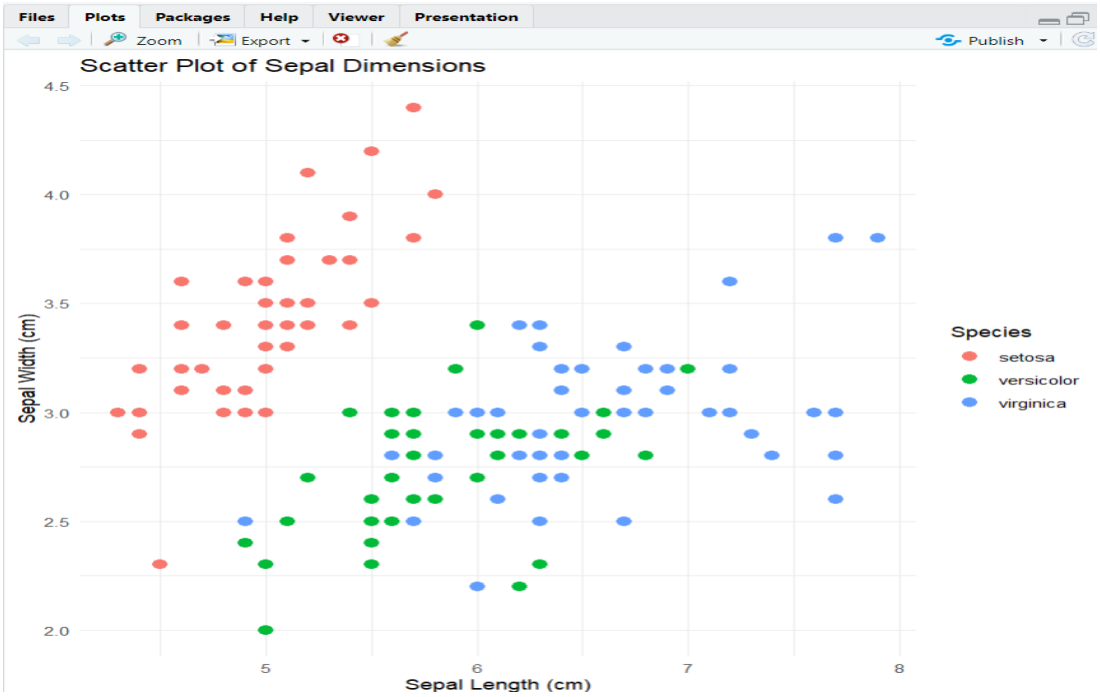


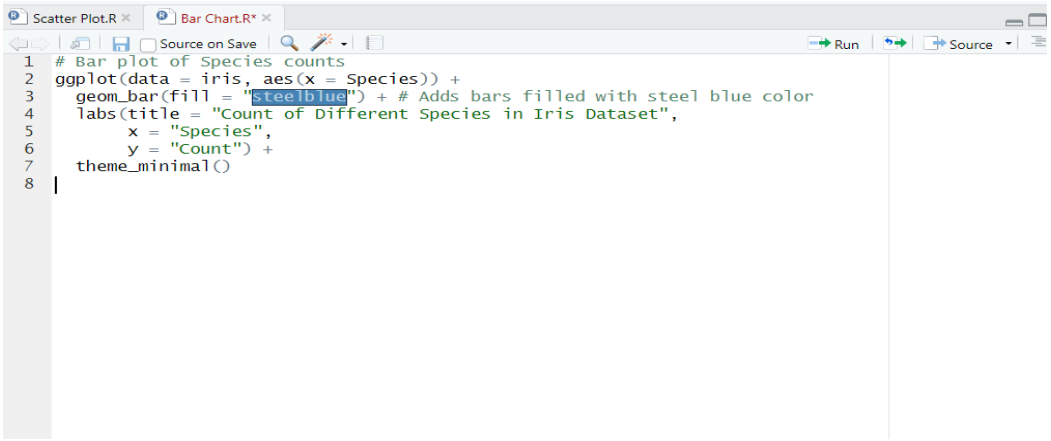
2) BAR CHART

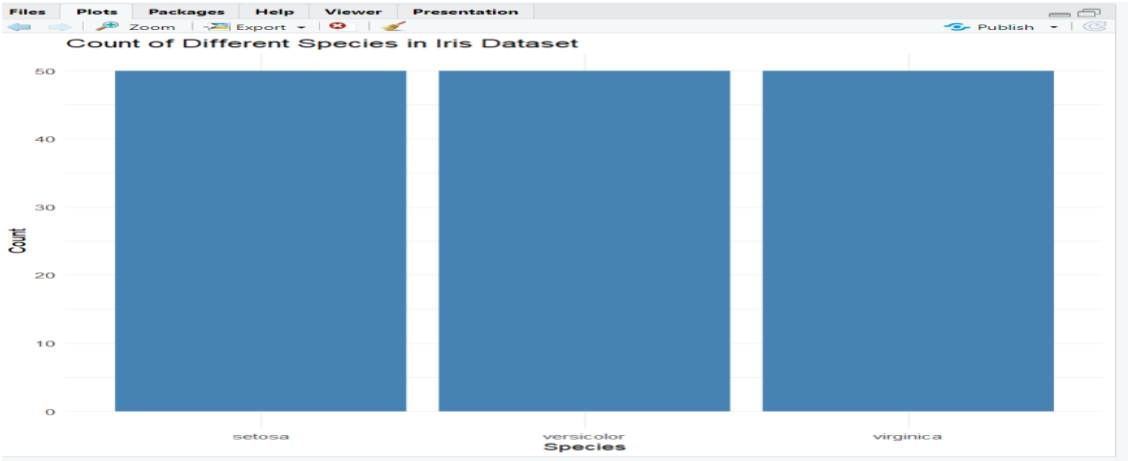
```
# Install ggplot2 (if not already installed)
install.packages("ggplot2")

# 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:





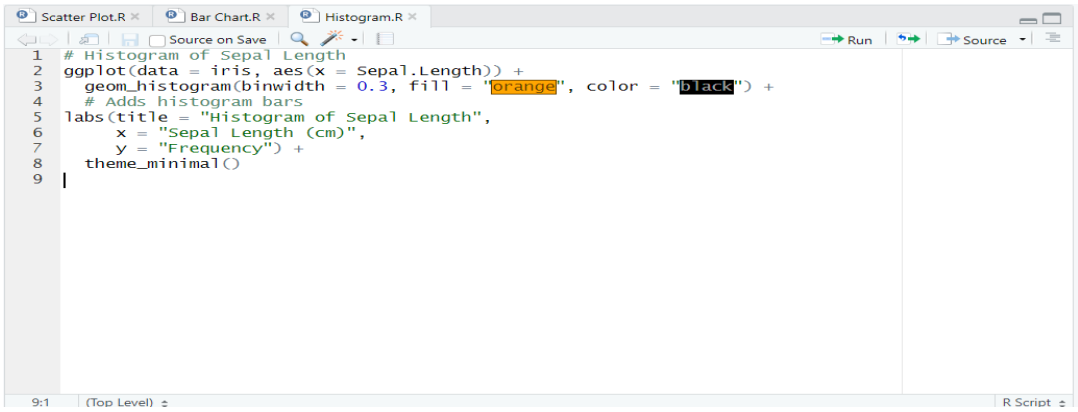
3) HISTOGRAM

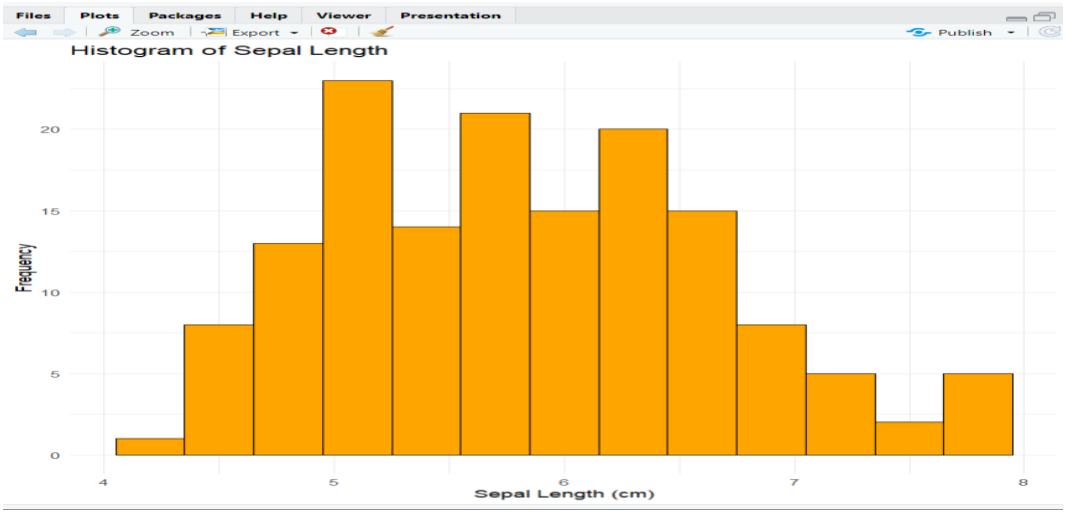
```
# Install ggplot2 (if not already installed)
install.packages("ggplot2")

# 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:





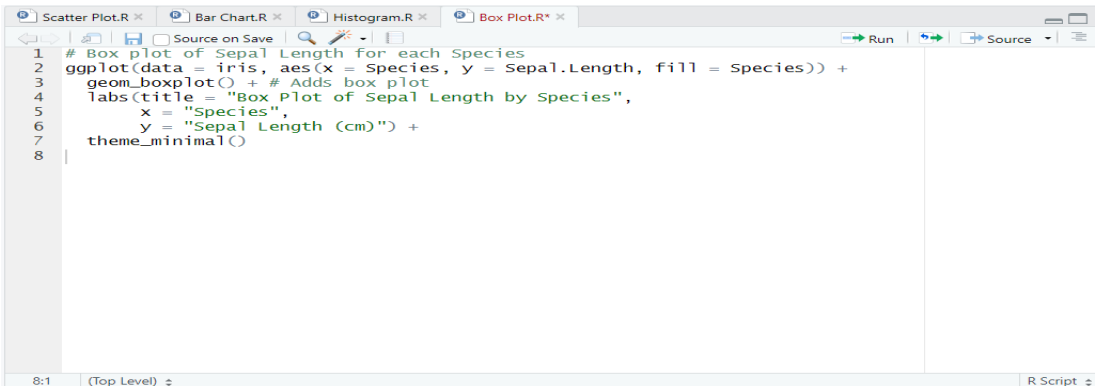
4)BOX PLOT

```
# 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:



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RESULT:

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