EX.NO: 10 **REGISTER NO: 210701284**

DATE:

VISUALIZE DATA USING ANY PLOTTING FRAMEWORK AIM:

To visualize data using any plotting framework

PROGRAM CODE:

SCATTER PLOT:

```
# Install ggplot2 (if not already installed)
install.packages("ggplot2")  #
Load the ggplot2 package
library(ggplot2)
# 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
```

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()
```

HISTOGRAM

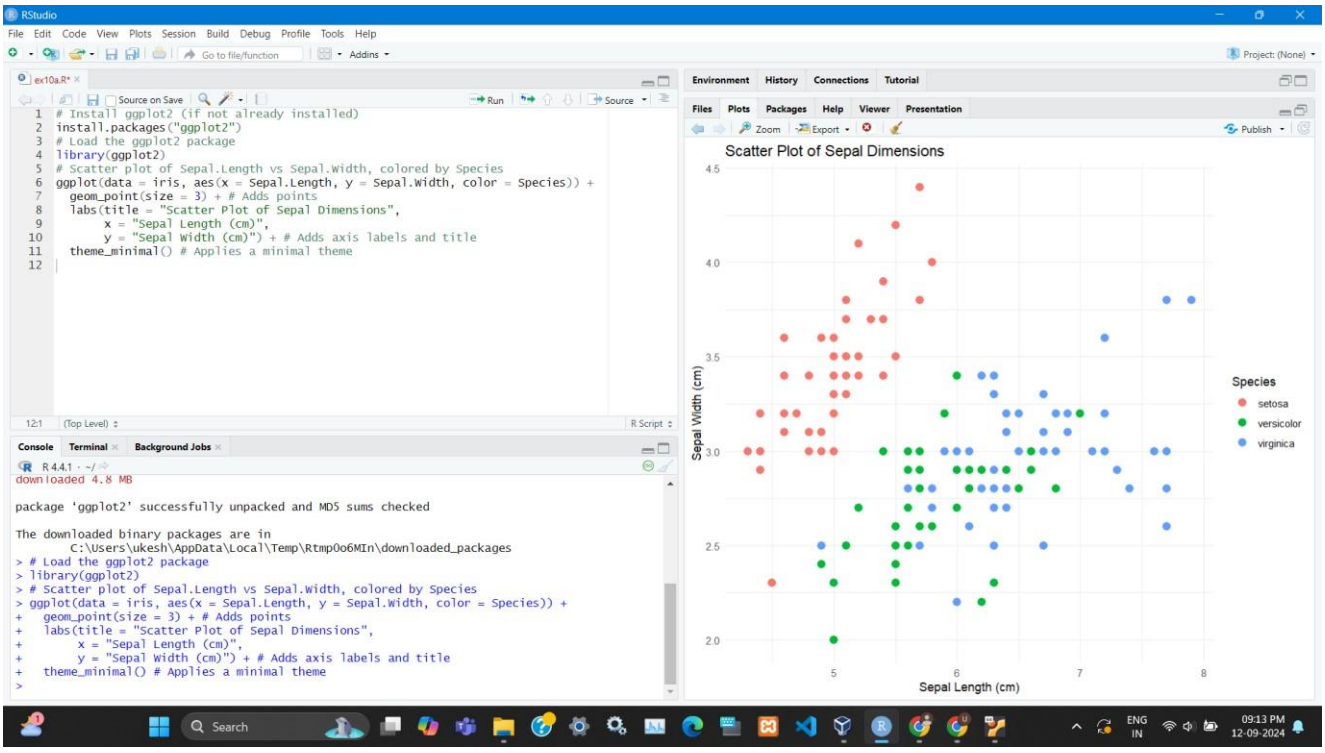
```
 # Install ggplot2 (if not already installed)
install.packages("ggplot2")  #
Load the ggplot2 package
library(ggplot2)
# Histogram of Sepal Length
ggplot(data = iris, aes(x = Sepal.Length)) +
geom_histogram(binwidth = 0.3, fill = "orange", color = "black") + # Adds histogram bars
labs(title = "Histogram of Sepal Length",  x = "Sepal Length (cm)",  y = "Frequency") +
theme_minimal()
```

BOX PLOT

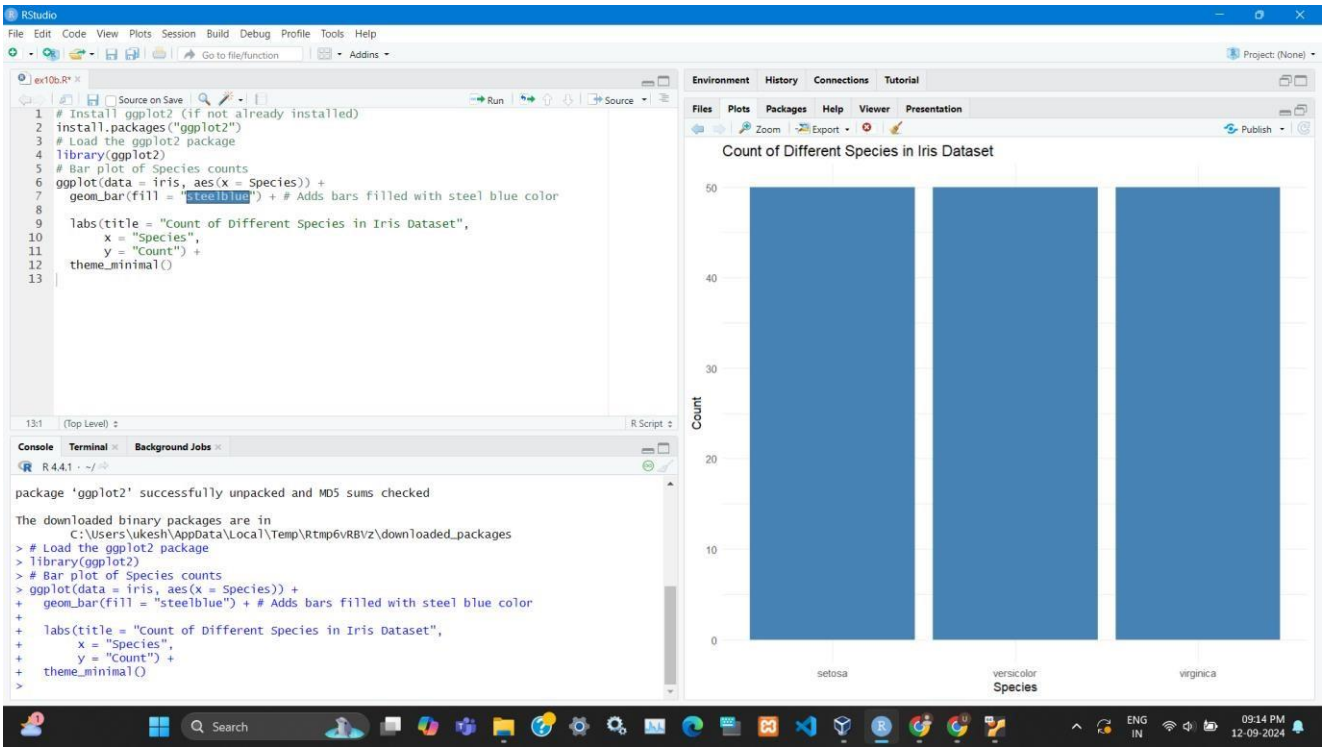
```
 # Install ggplot2 (if not already installed)
install.packages("ggplot2")  #
Load the ggplot2 package
library(ggplot2)
# Box plot of Sepal Length for each Species
ggplot(data = iris, aes(x = Species, y = Sepal.Length, fill = Species)) +  geom_boxplot()
+ # Adds box plot
labs(title = "Box Plot of Sepal Length by Species",  x
= "Species",
y = "Sepal Length (cm)") +
theme_minimal()
```

OUTPUT:

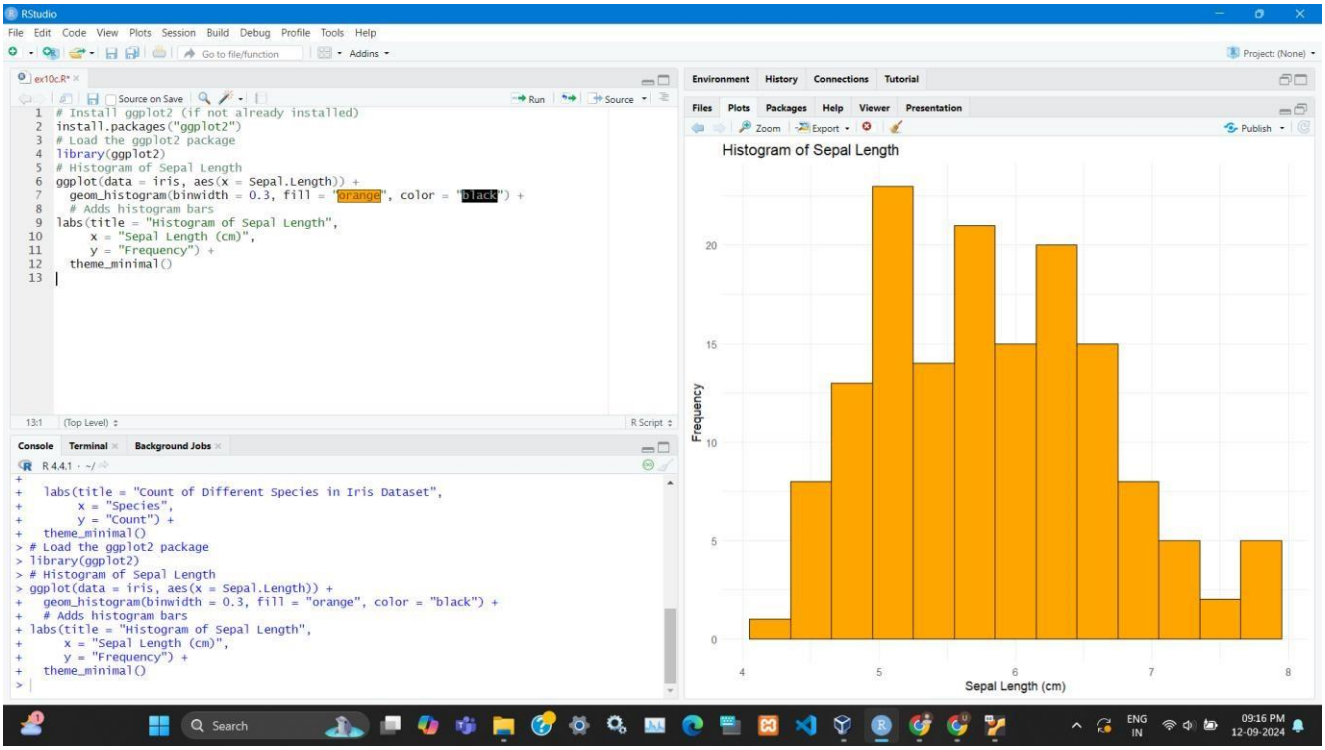
SCATTER PLOT:



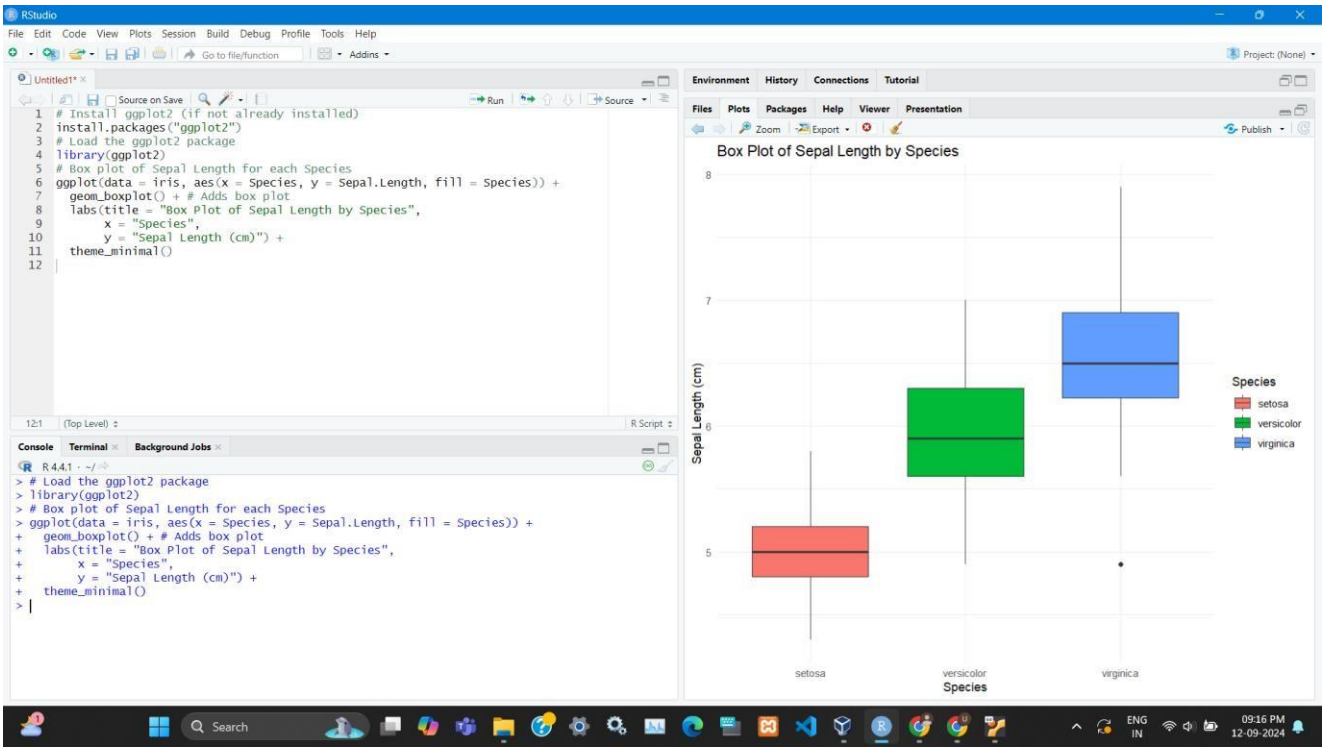
BAR CHART:



HISTOGRAM



BOX PLOT



RESULT:

Thus the visualization of data using any plotting framework done successfully.