**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()
```
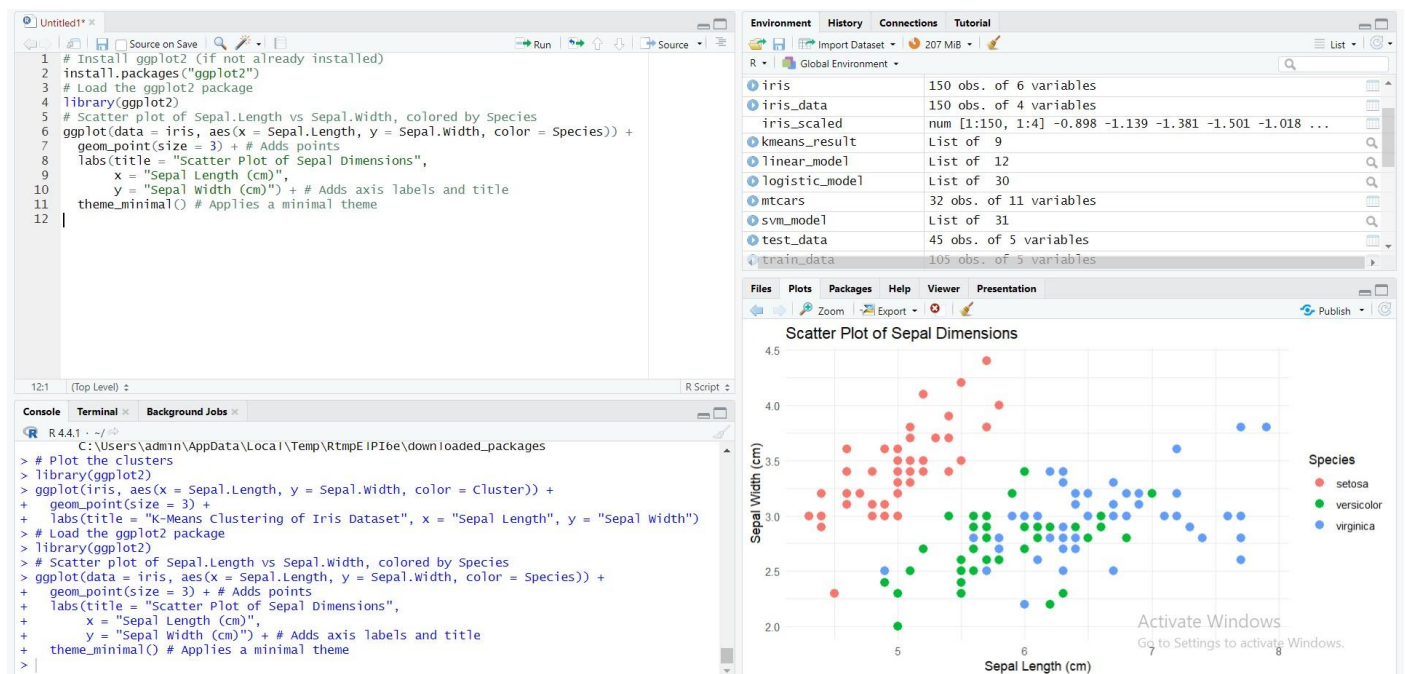
**BOX PLOT**

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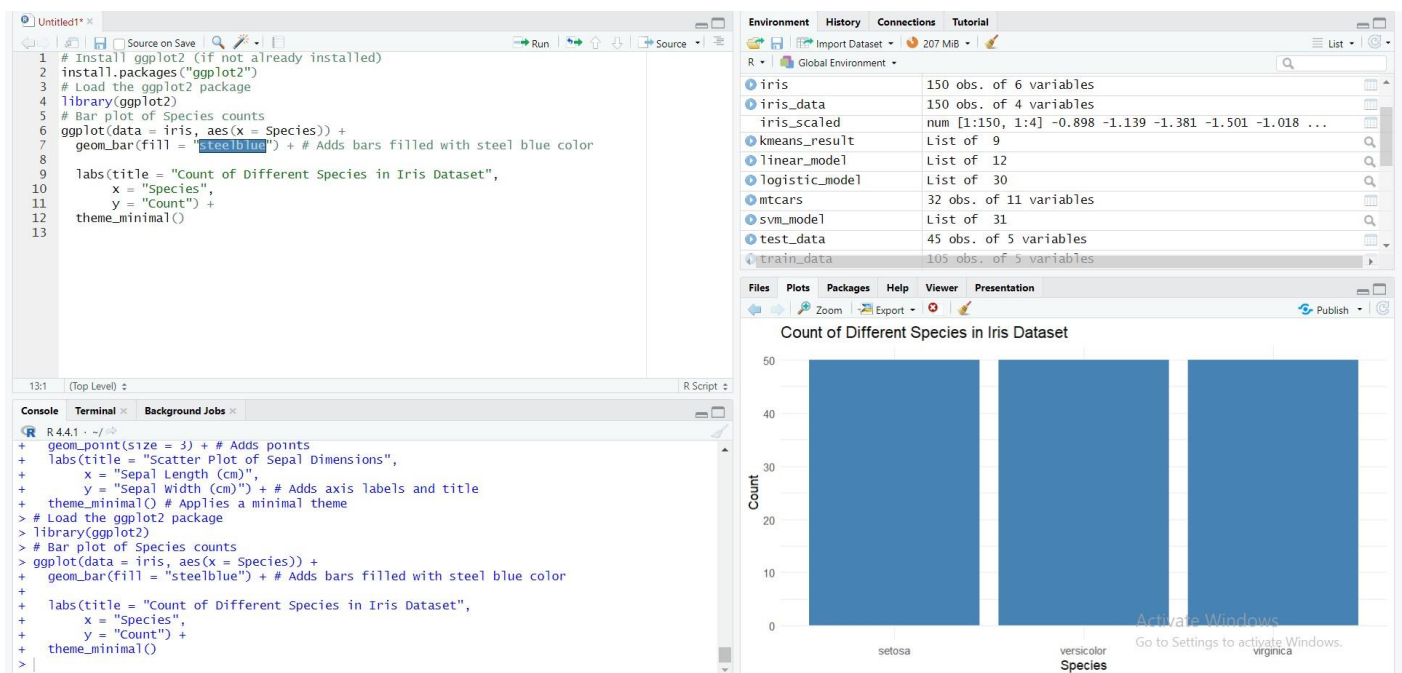
```
install.packages("ggplot2")  #
Load the ggplot2 package
library(ggplot2)
# Box plot of Sepal Length for each Species
ggplot(data = iris, aes(x = Species, y = Sepal.Length, fill = Species)) +  geom_boxplot()
+ # Adds box plot
labs(title = "Box Plot of Sepal Length by Species",  x
= "Species",
y =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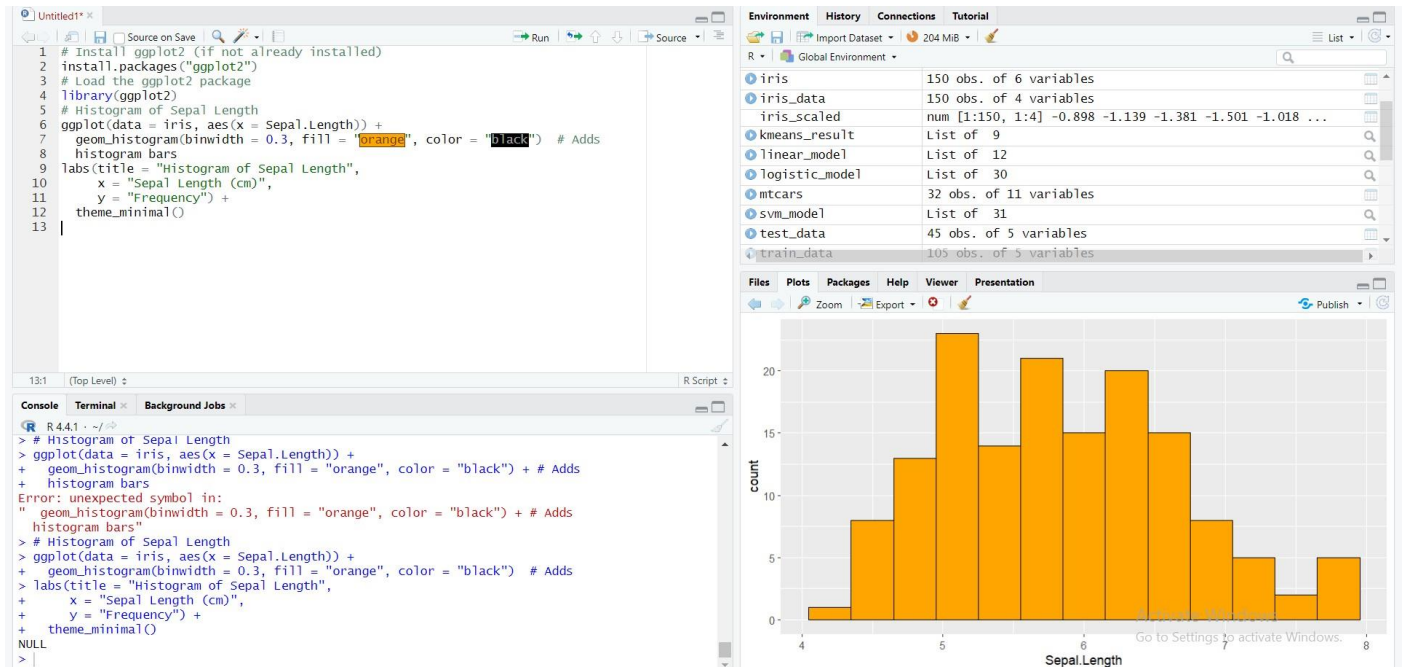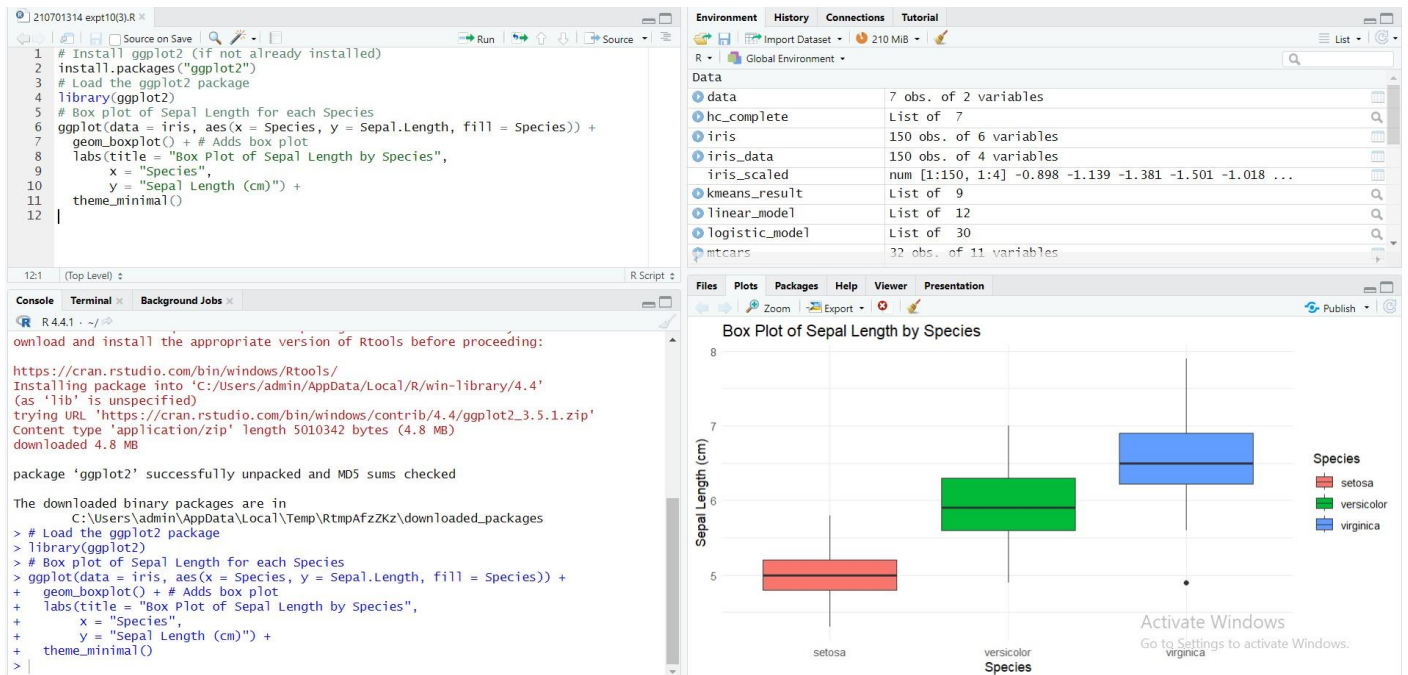
**OUTPUT:**

**SCATTER PLOT:**

## BAR CHART:



## HISTOGRAM

# BOX PLOT



```r
1  # Install ggplot2 (if not already installed)
2  install.packages("ggplot2")
3  # Load the ggplot2 package
4  library(ggplot2)
5  # Box plot of Sepal Length for each Species
6  ggplot(data = iris, aes(x = Species, y = Sepal.Length, fill = Species)) +
7    geom_boxplot() + # Adds box plot
8    labs(title = "Box Plot of Sepal Length by Species",
9         x = "Species",
10        y = "Sepal Length (cm)") +
11   theme_minimal()
12
```

**RESULT:**

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