VISUALIZE DATA USING ANY PLOTTING FRAMEWORK
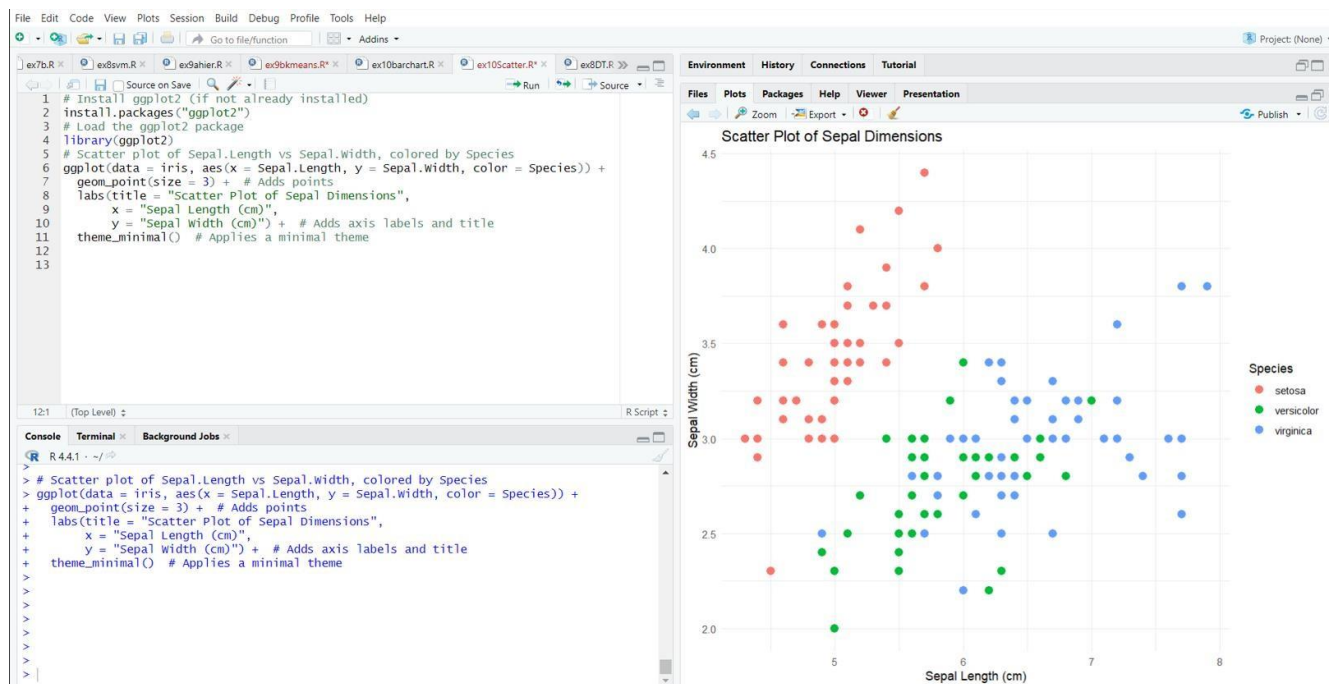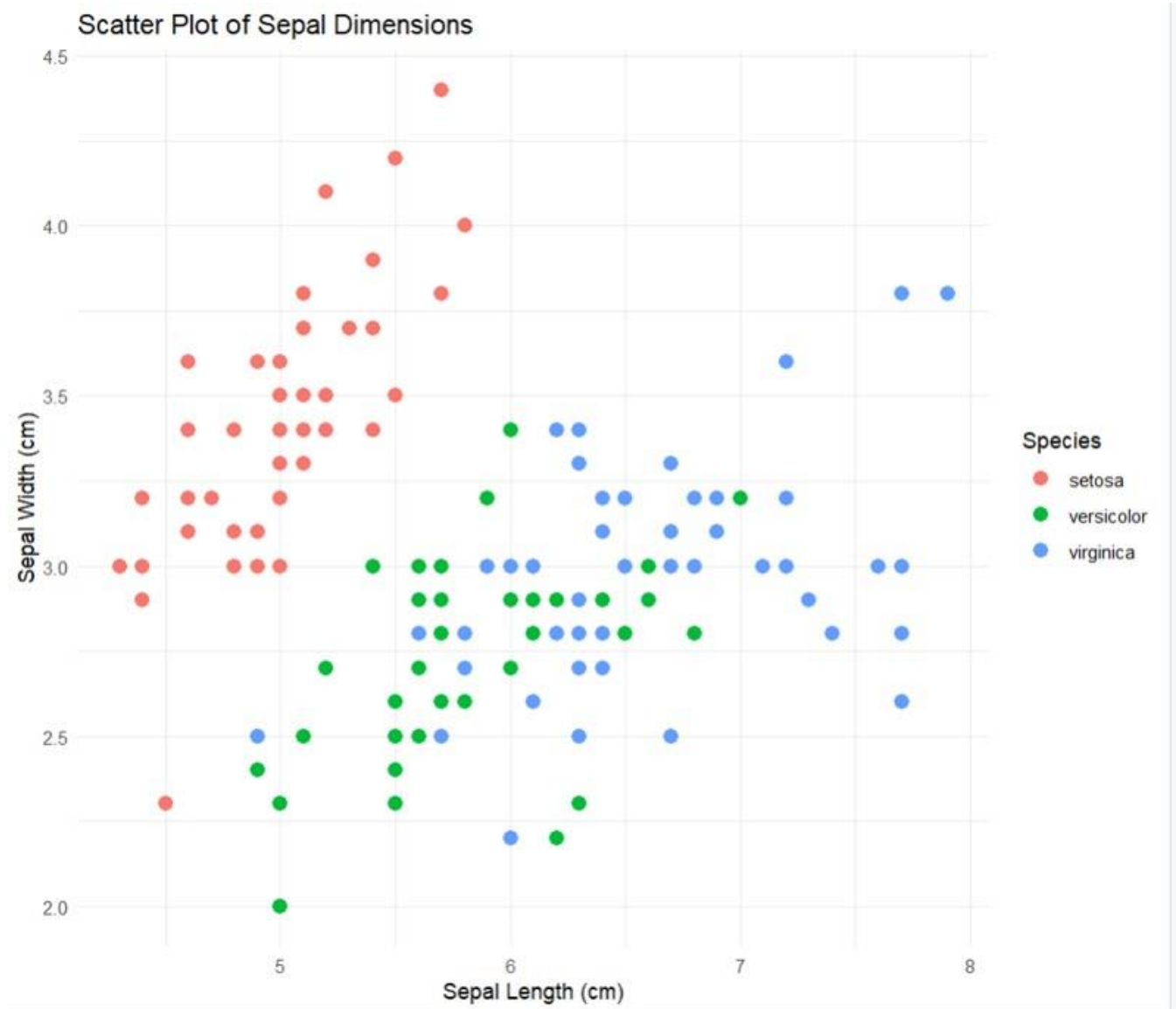
1) SCATTER PLOT

CODE:

```
# 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
```

OUTPUT:

Scatter Plot of Sepal Dimensions
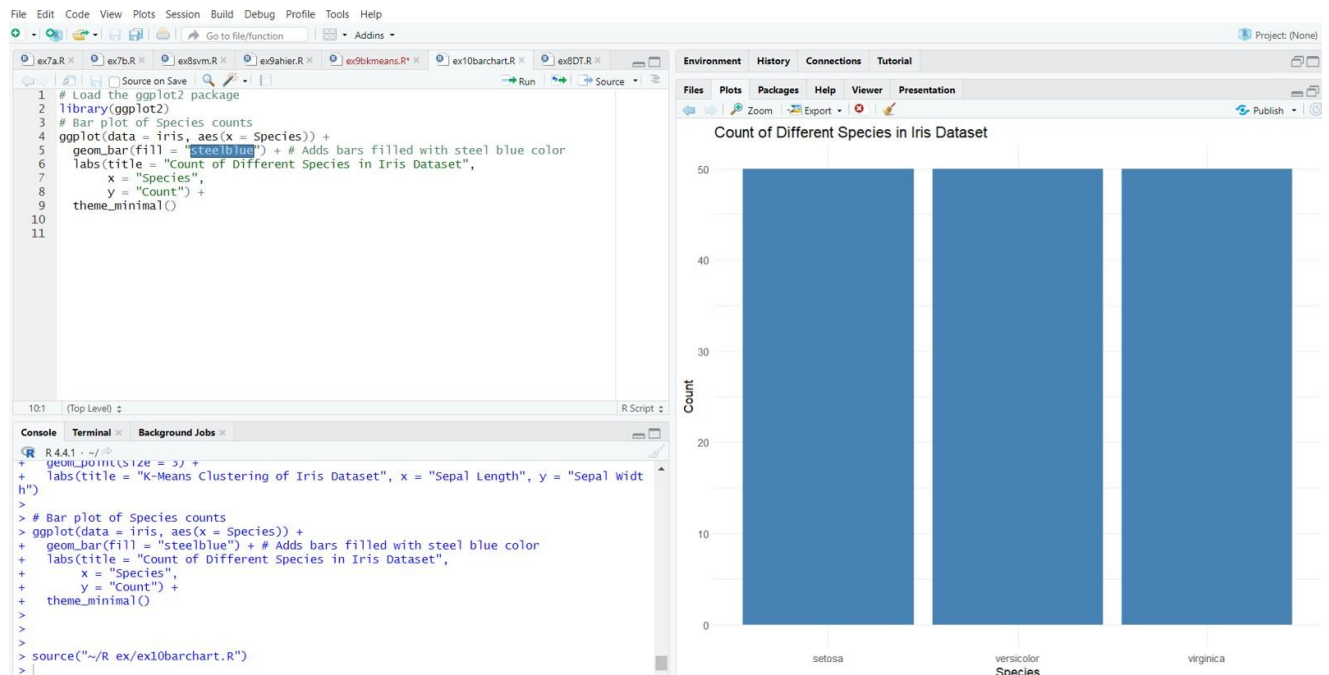

OUTPUT:

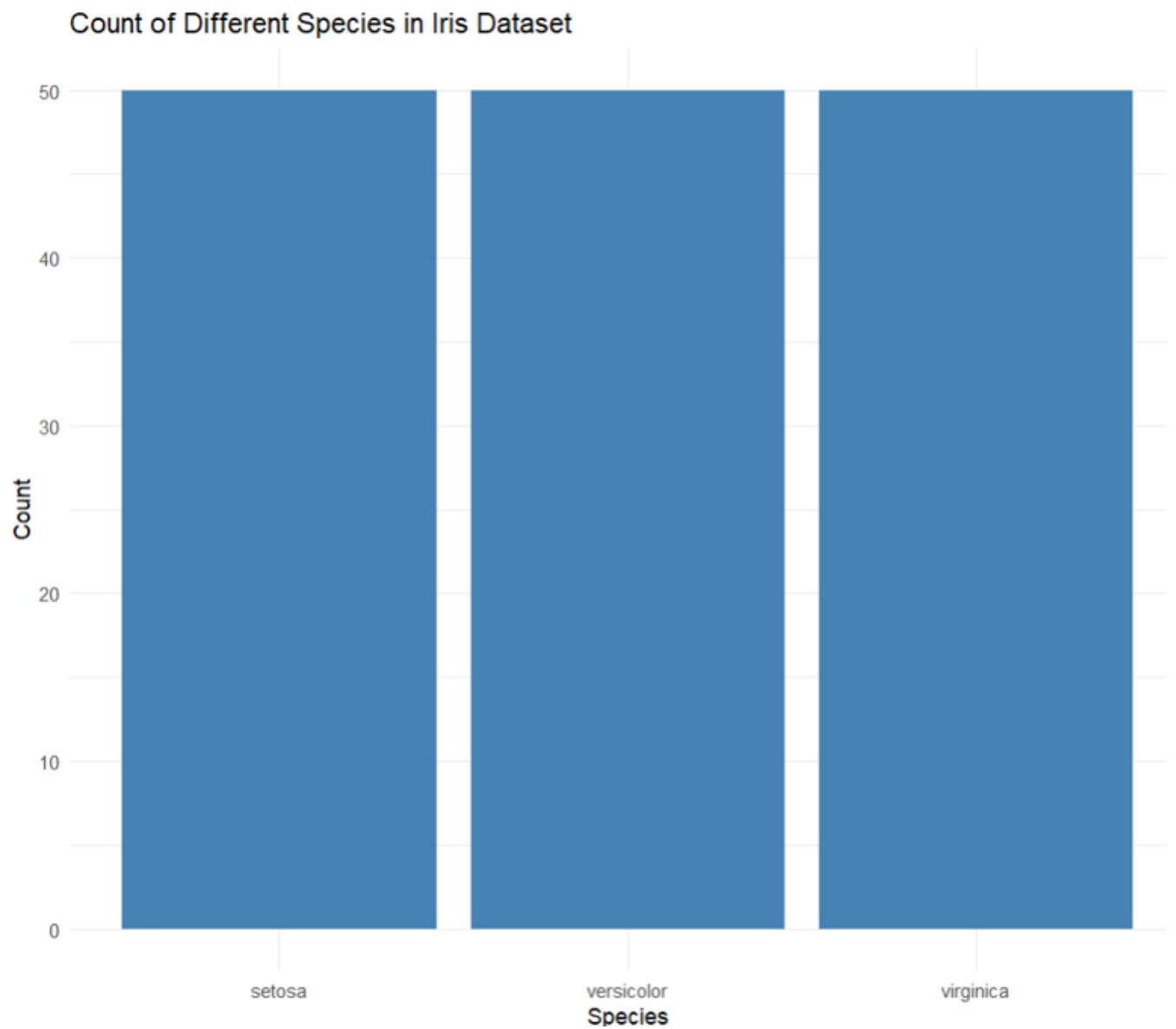Visualizing data using Scatter Plot is executed Successfully.

2. BAR CHART

CODE:

```
# 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:
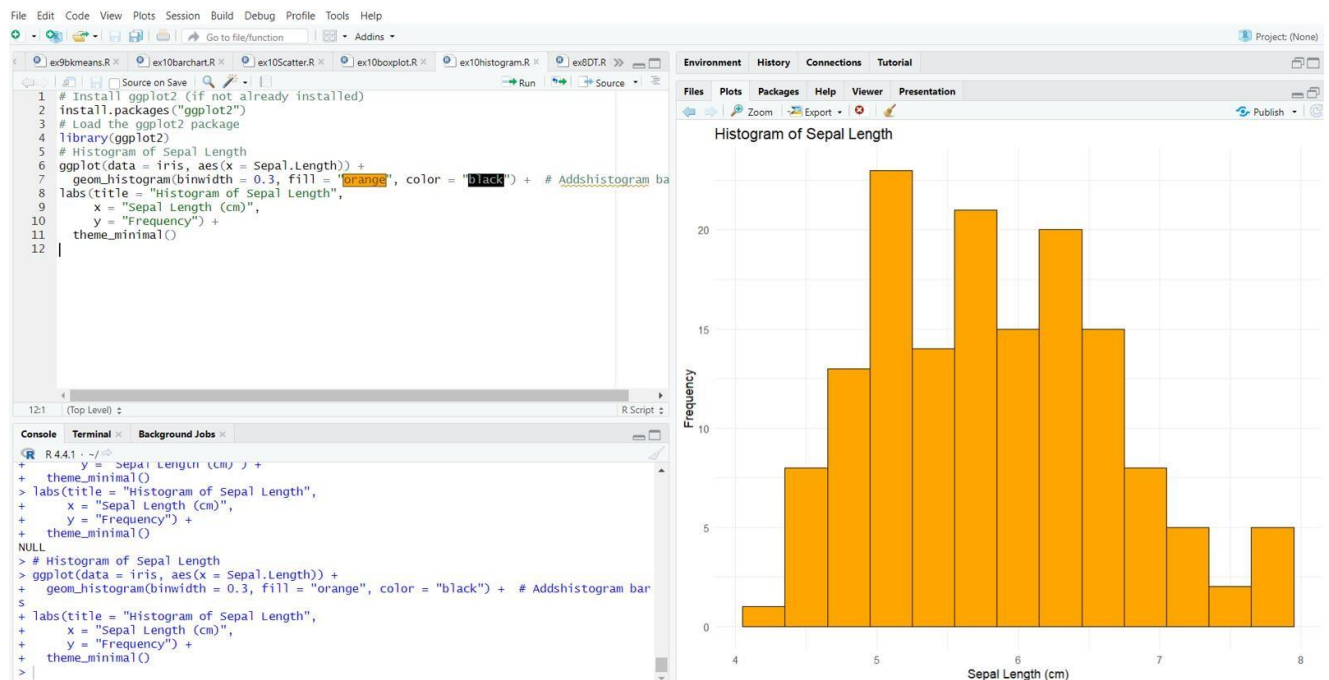
Count of Different Species in Iris Dataset

RESULT:

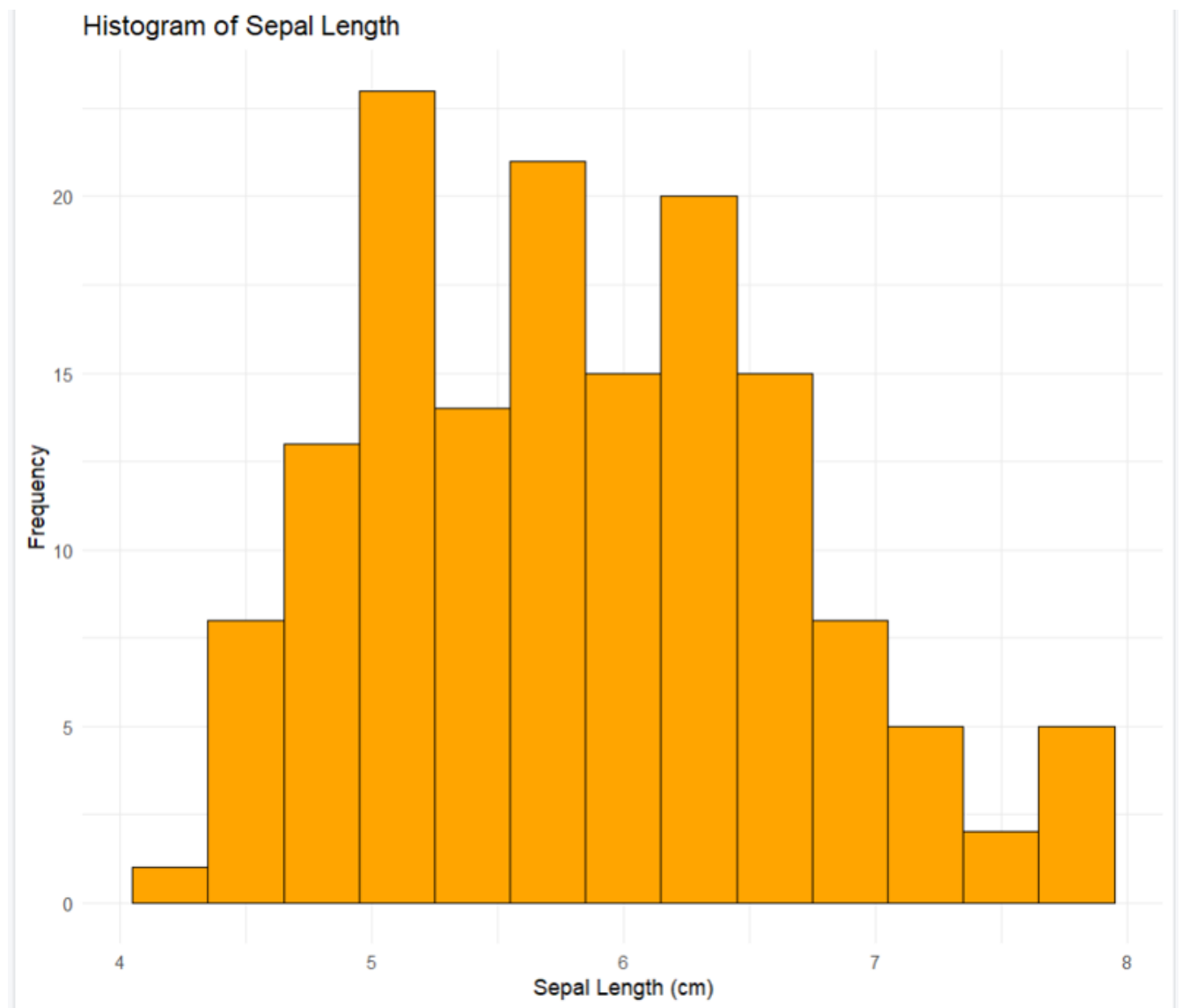Visualizing data using Bar Chart is executed Successfully.

3. HISTOGRAM

CODE:

```
# 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") + # Addshistogram bars
labs(title = "Histogram of Sepal Length",
    x = "Sepal Length (cm)",
    y = "Frequency") +
  theme_minimal()
```
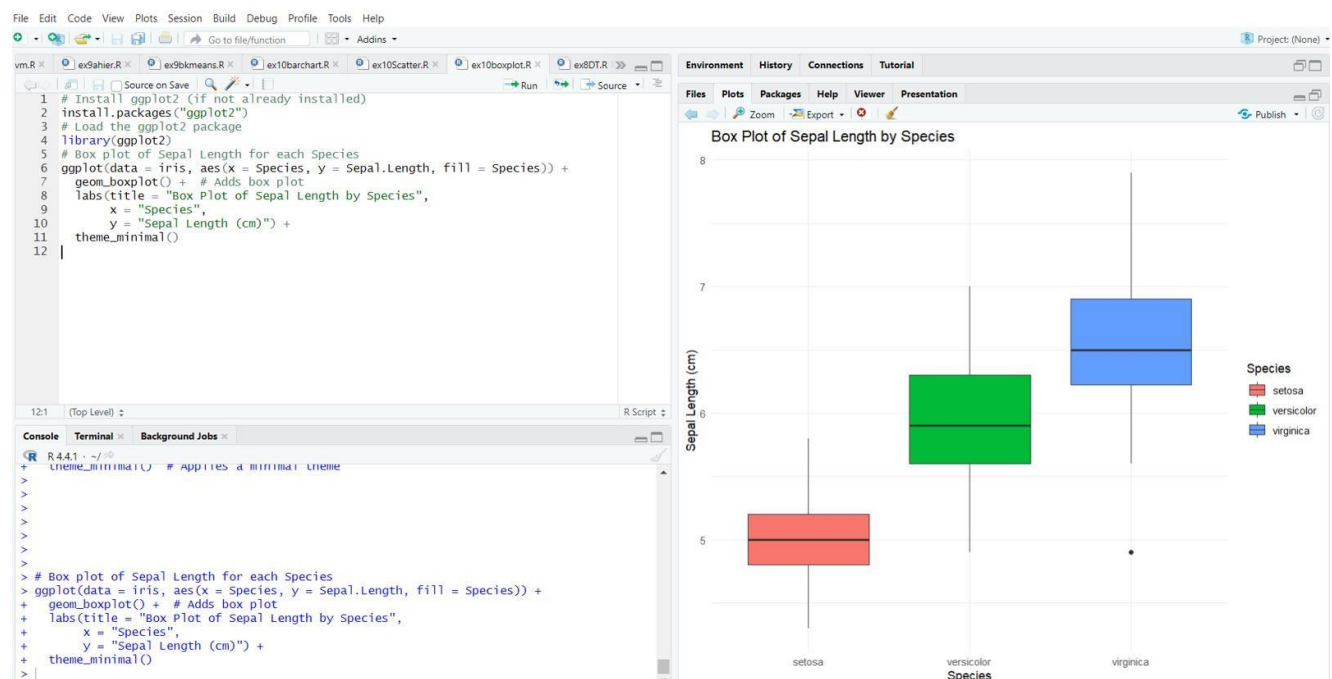
OUTPUT:

Histogram of Sepal Length

RESULT:
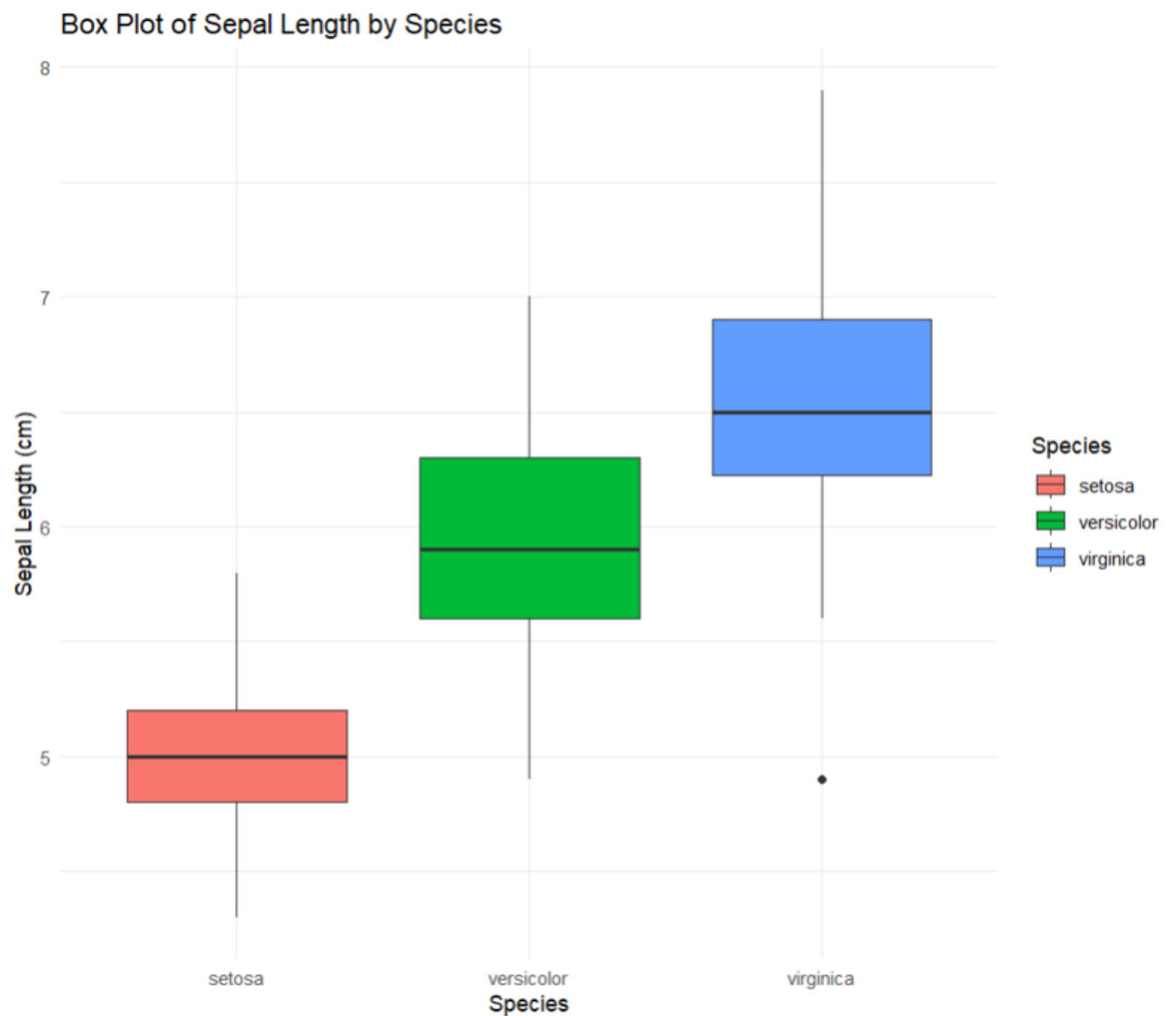
Visualizing data using Histogram is executed Successfully.

4. BOX PLOT

CODE:

```
# 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:

Box Plot of Sepal Length by Species

RESULT:

Visualizing data using Box Plot is executed Successfully.