Ex No: 10 **Roll No:210701123**

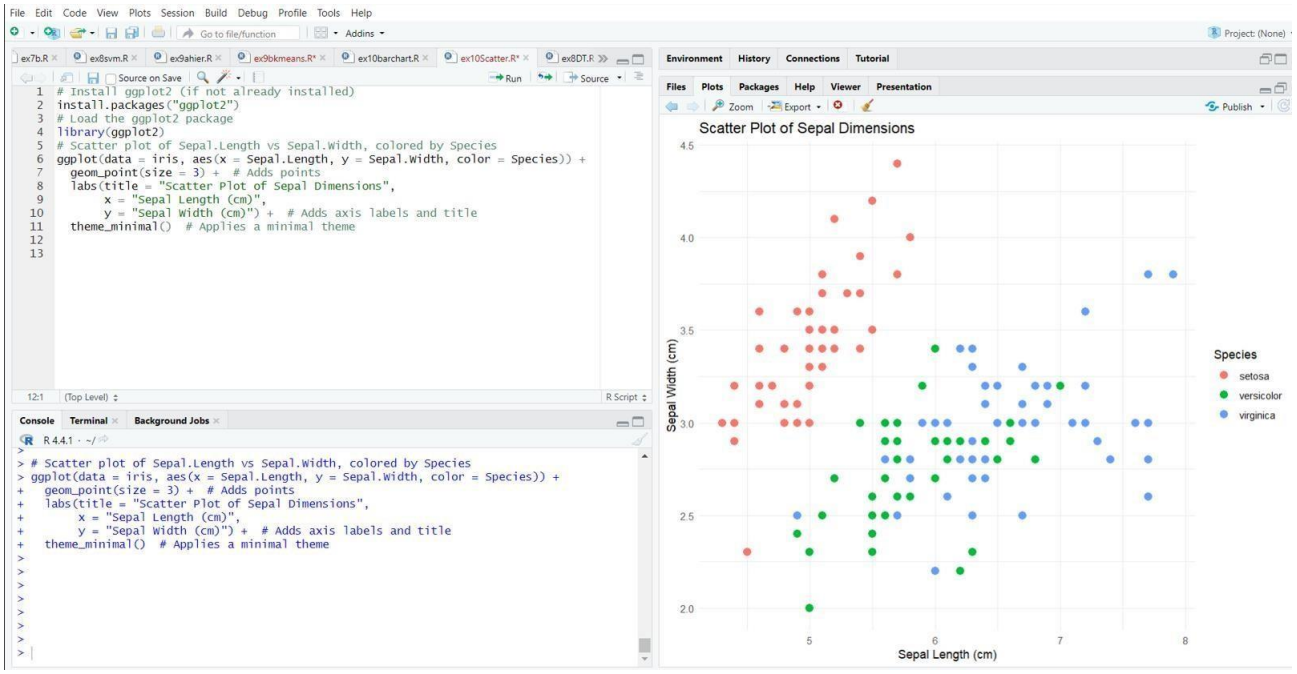
VISUALIZE DATA USING ANY PLOTTING FRAMEWORK

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:



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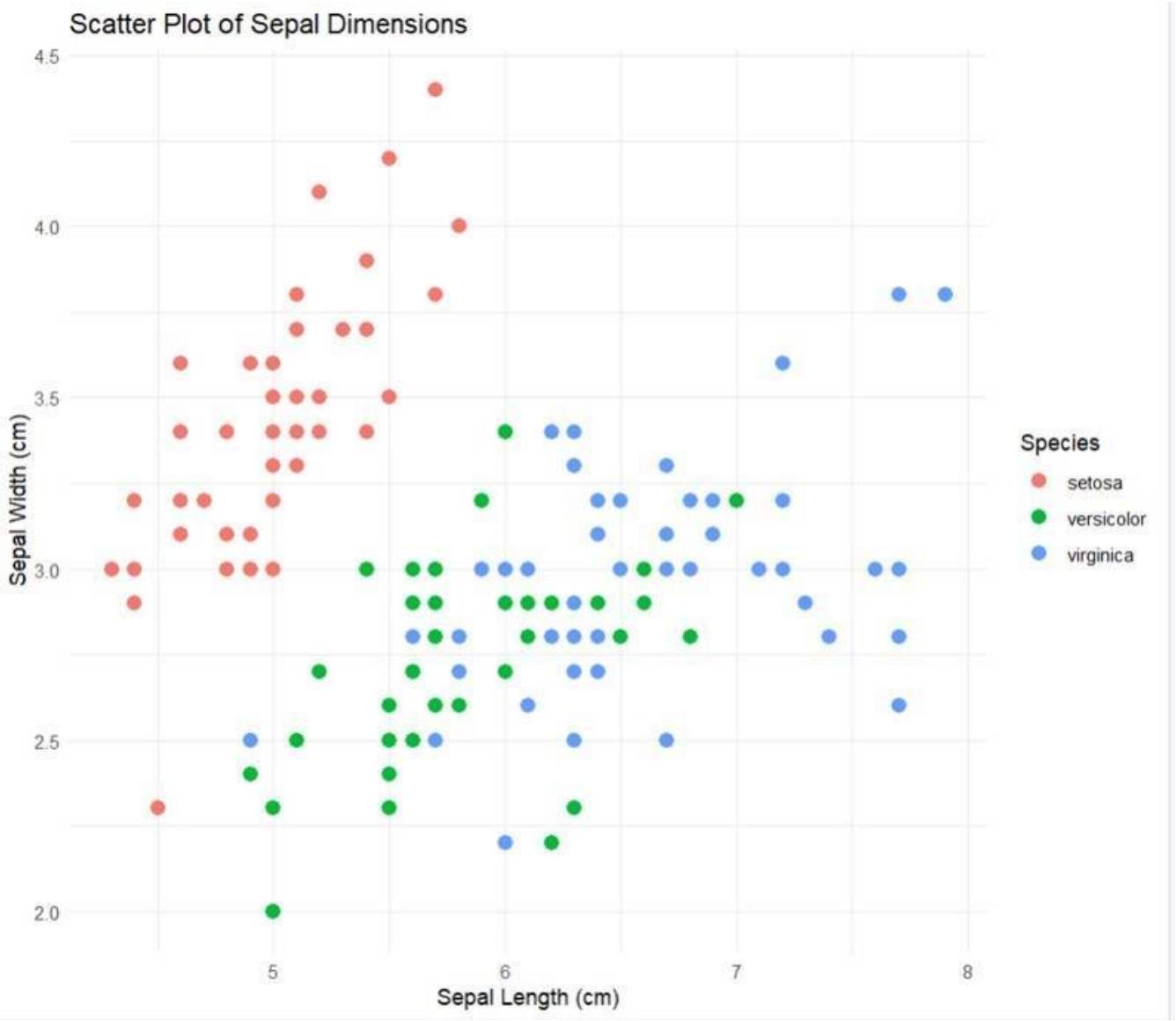


OUTPUT:

Visualizing data using Scatter Plot is executed Successfully.

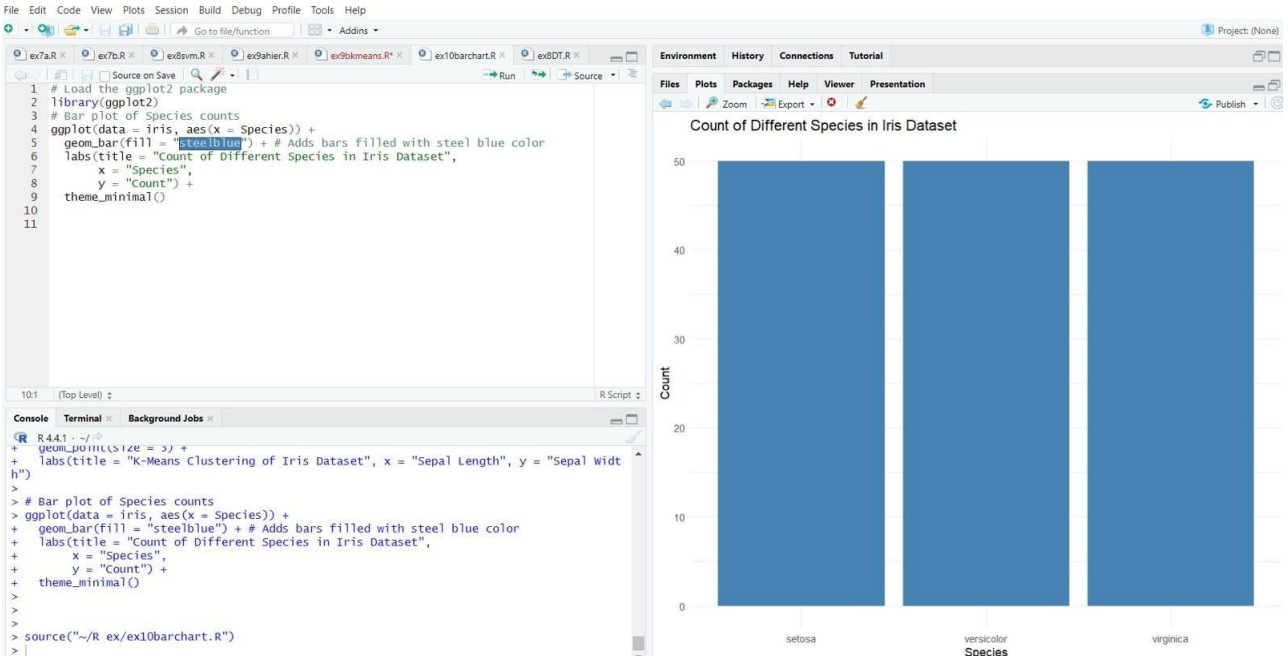
Ex No: 10 **Roll No:210701123**

2. BAR CHART

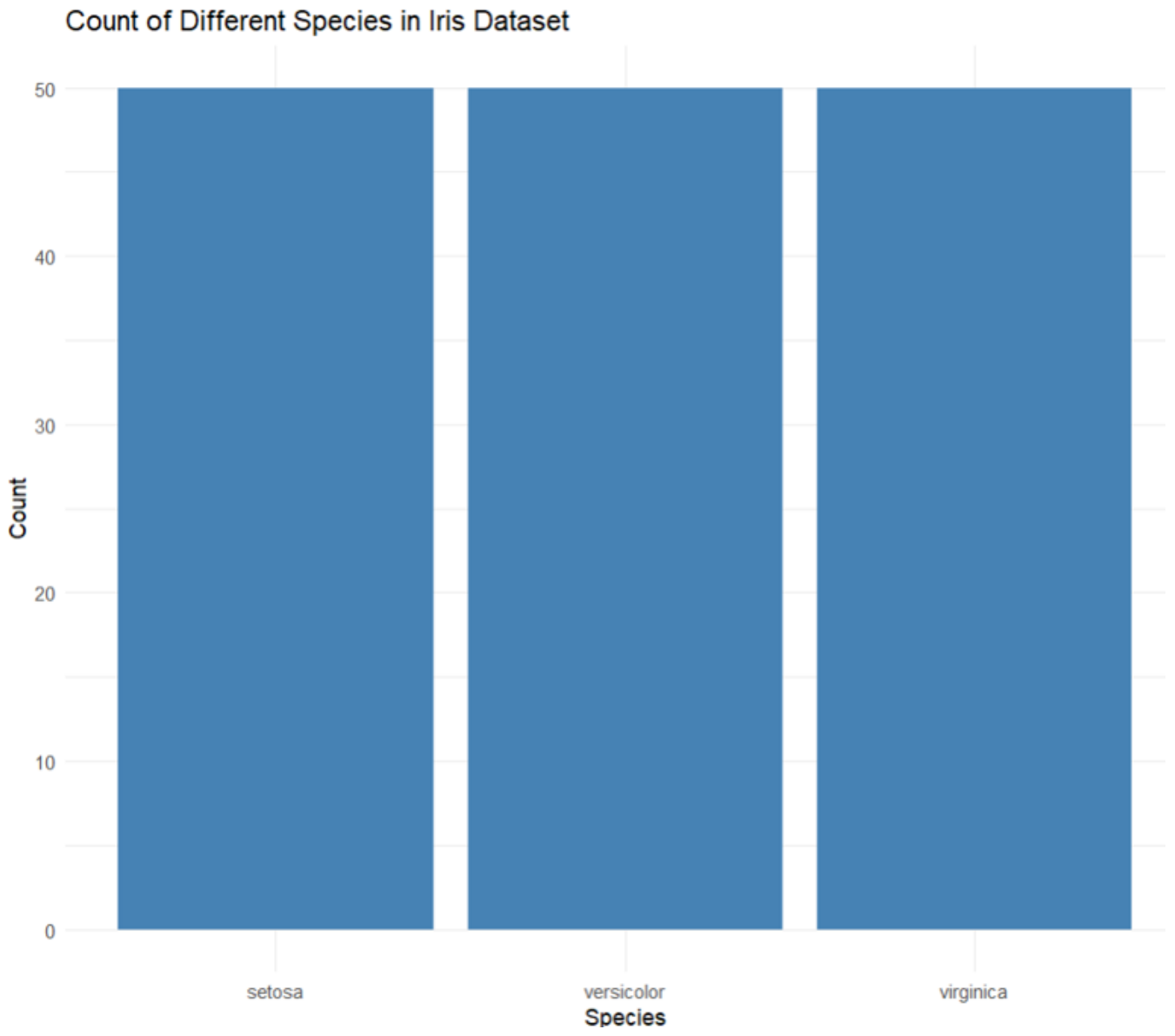
CODE:

```
# 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:



Ex No: 10 **Roll No:210701123**



RESULT:

Visualizing data using Bar Chart is executed Successfully.

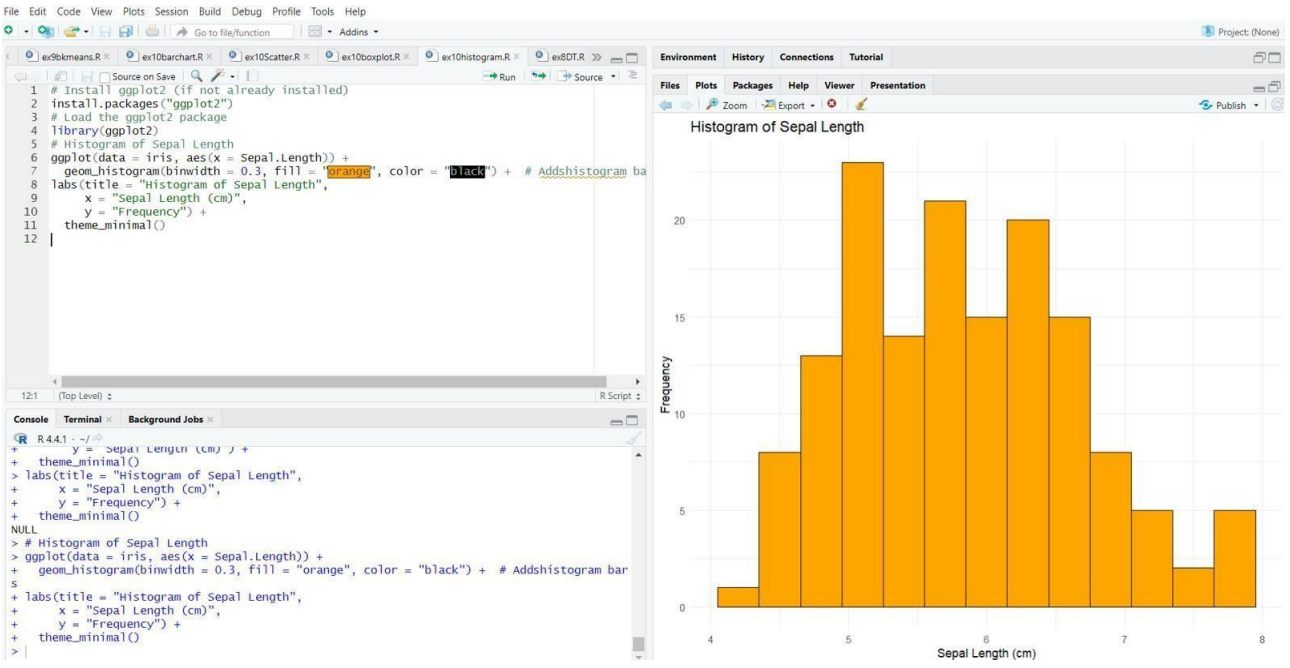
Ex No: 10 **Roll No:210701123**

3. HISTOGRAM

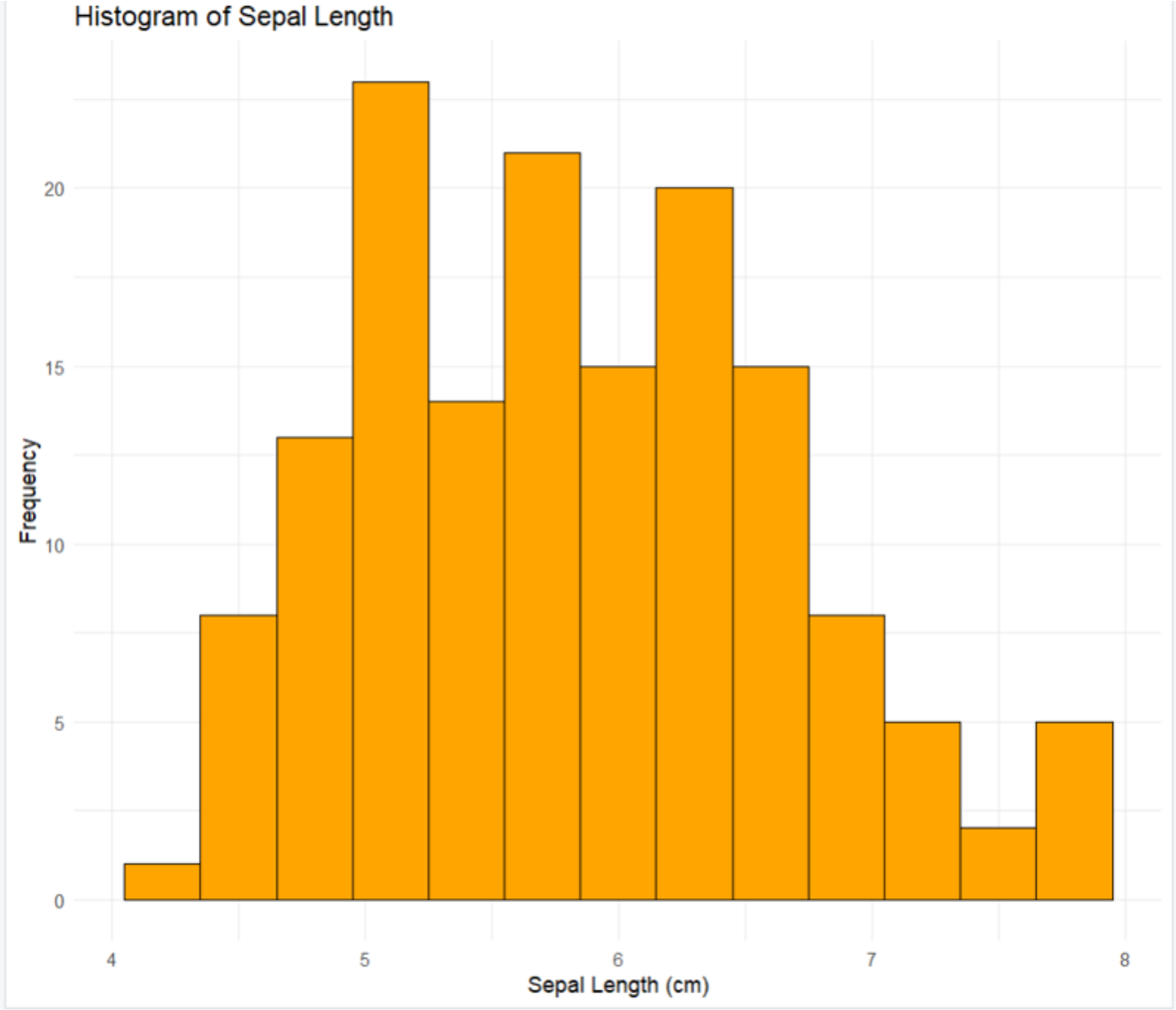
CODE:

```
# 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:



Ex No: 10 **Roll No:210701123**



RESULT:

Visualizing data using Histogram is executed Successfully.

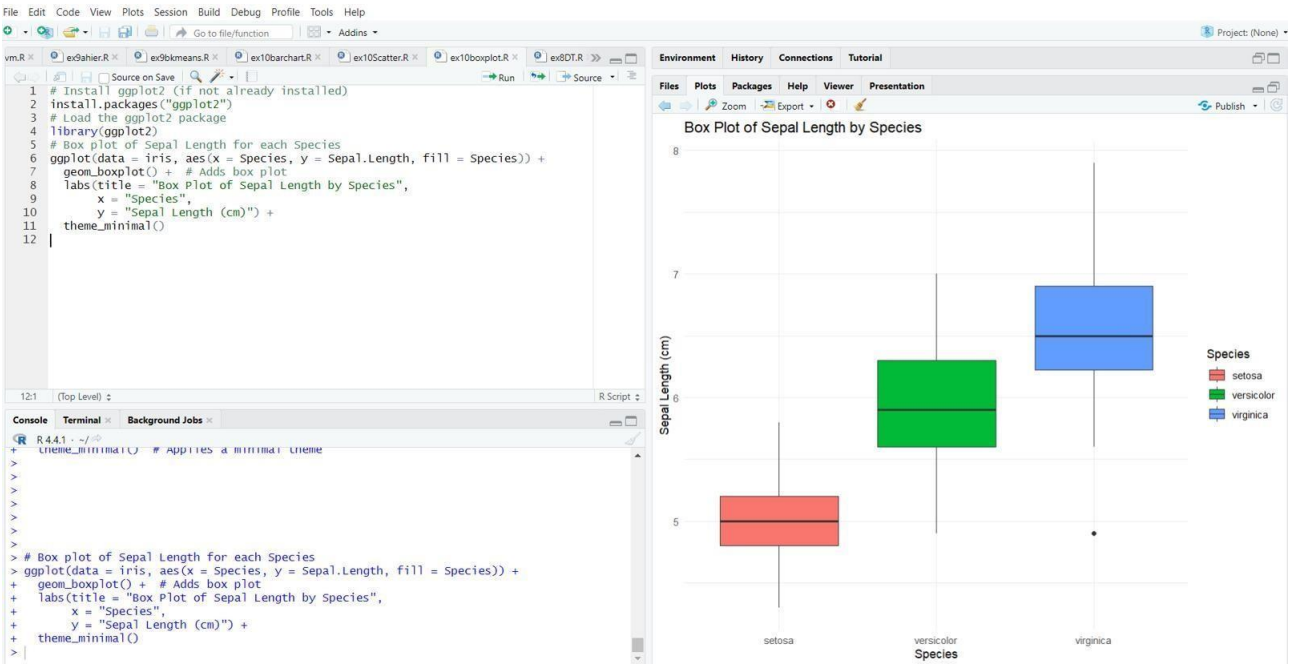
Ex No: 10 **Roll No:210701123**

4. BOX PLOT

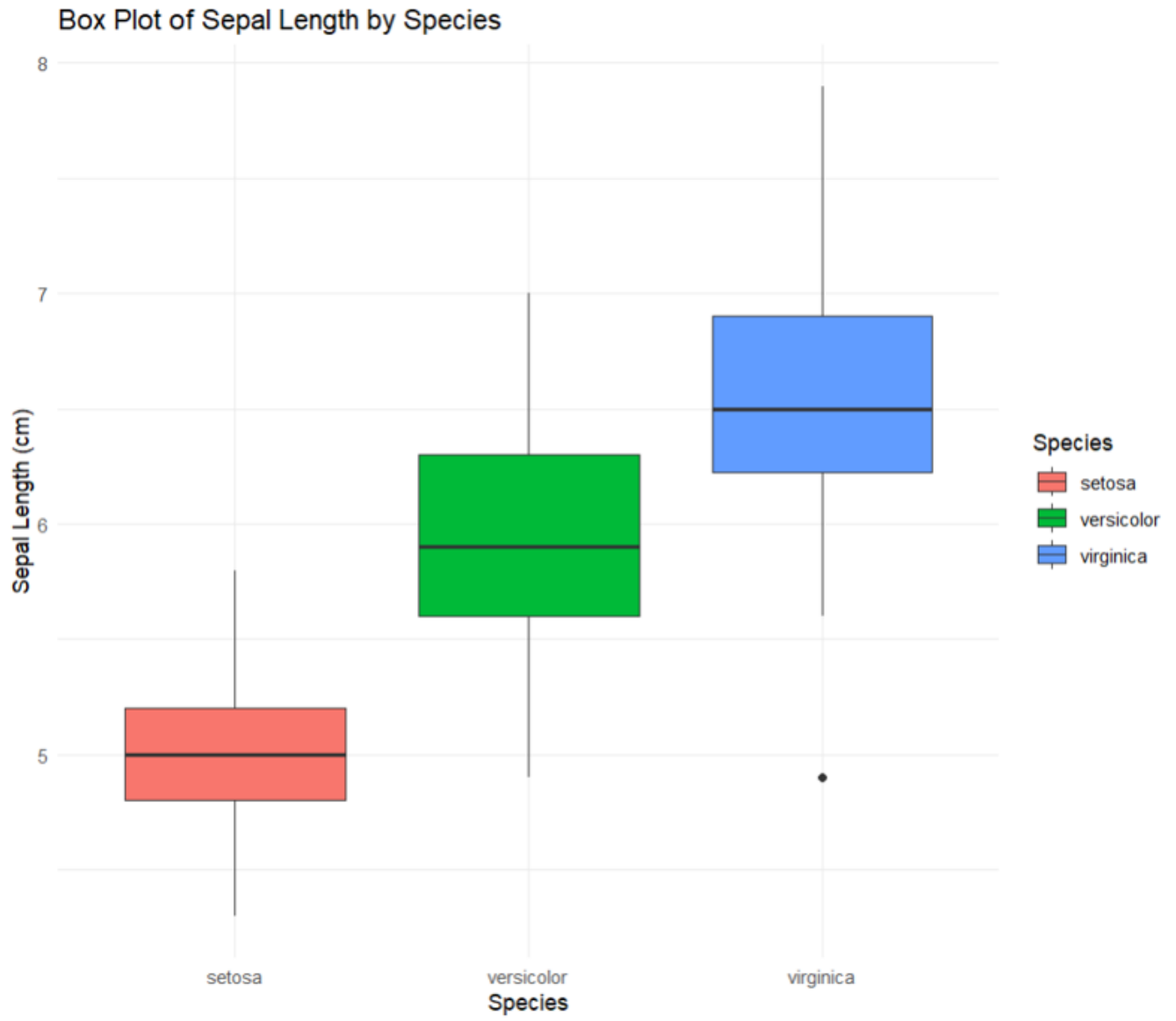
CODE:

```
# 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:



Ex No: 10 **Roll No:210701123**



RESULT:

Visualizing data using Box Plot is executed Successfully.