Future Intern as Data Analysis

Task 3

Task: Create Histogram or bar chart to visualize the distribution of data in dataset

Solution:

Step:

1. Import packages and display iris dataset

```
[ ] import matplotlib.pyplot as plt
    import seaborn as sns
    import pandas as pd
```

```
[ ] #load the Iris dataset
    iris = pd .read_csv('Iris.csv')
```

```
[ ] iris.head()
```

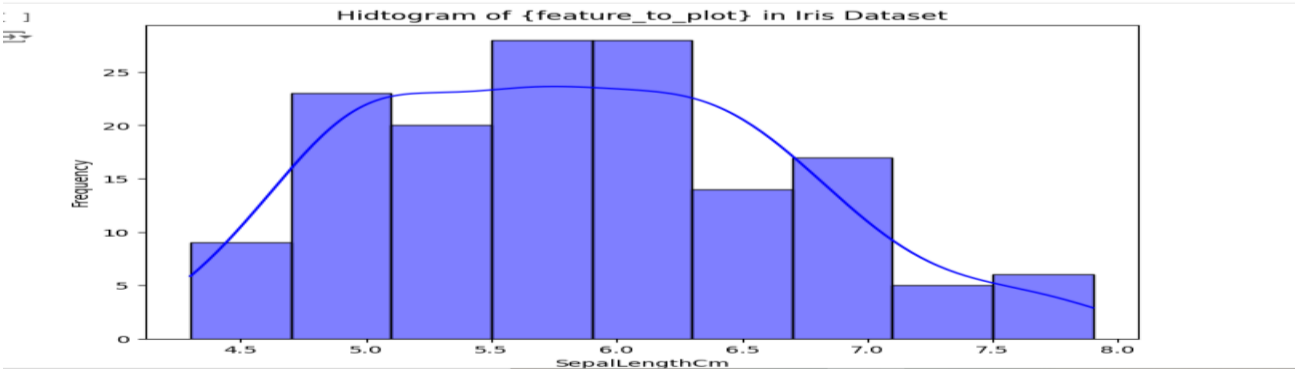
	Id	SepalLengthCm	SepalWidthCm	PetalLengthCm	PetalWidthCm	Species
0	1	5.1	3.5	1.4	0.2	Iris-setosa
1	2	4.9	3.0	1.4	0.2	Iris-setosa
2	3	4.7	3.2	1.3	0.2	Iris-setosa

2. Select the feature you want to visualize and create histogram

1. SepaLengthCm

```
[ ] #select the feater you want to visualize
    feature_to_plot="SepalLengthCm"
```

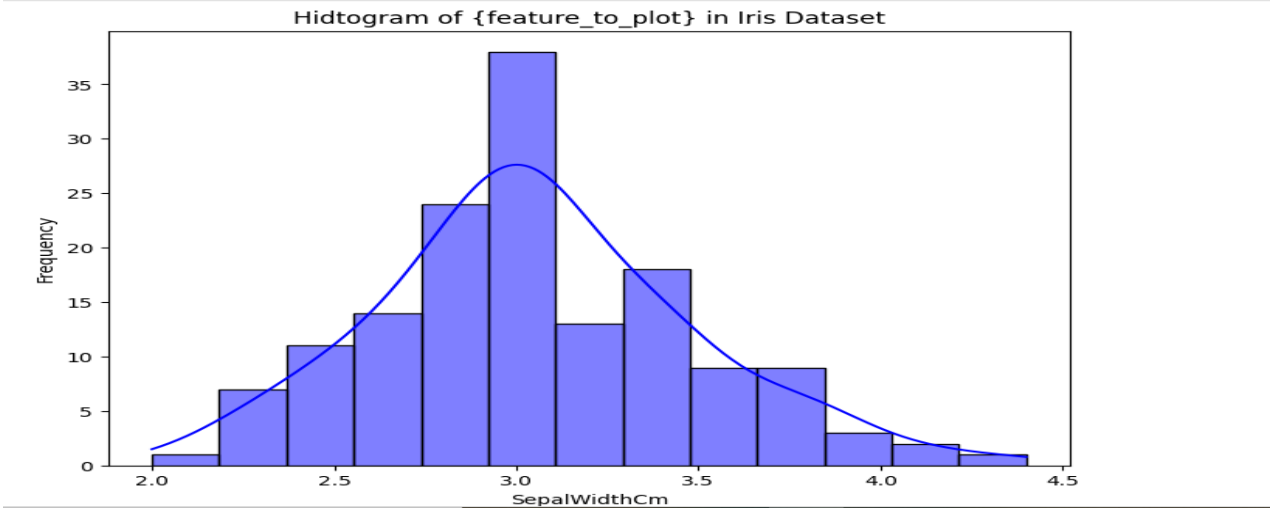
```
[ ] #create histogram SepalLengthCm
    plt.figure(figsize=(8, 6))
    sns.histplot(iris[feature_to_plot], kde=True, color ="blue")
    plt.title('Hidtogram of {feature_to_plot} in Iris Dataset')
    plt.xlabel(feature_to_plot)
    plt.ylabel("Frequency")
    plt.show()
```



2. SepaWidthCm

```
[ ] #select the feater you want to visualize
    feature_to_plot="SepalWidthCm"
```

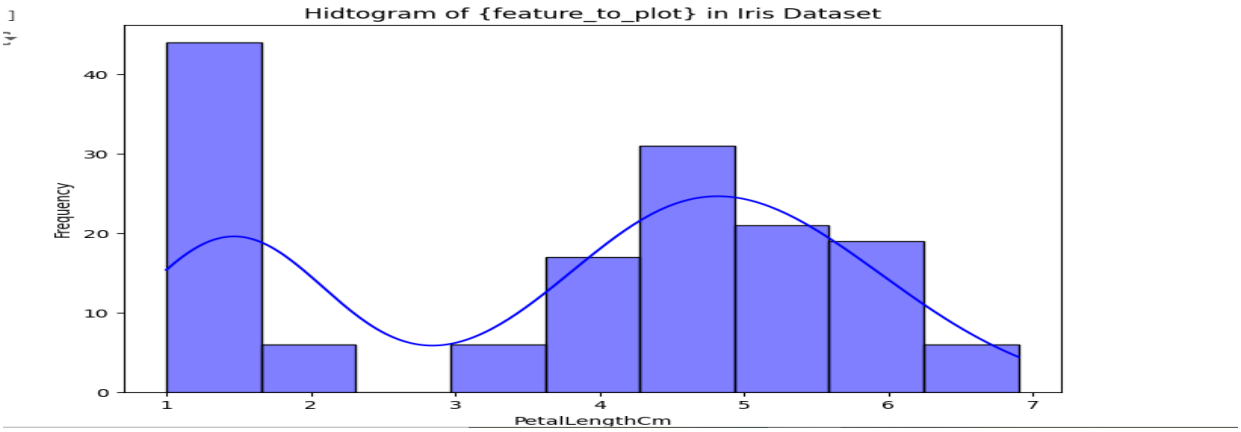
```
[ ] #create histogram SepalWidthCm
    plt.figure(figsize=(8, 6))
    sns.histplot(iris[feature_to_plot], kde=True, color ="blue")
    plt.title('Hidtogram of {feature_to_plot} in Iris Dataset')
    plt.xlabel(feature_to_plot)
    plt.ylabel("Frequency")
    plt.show()
```



3. PetalLengthCm

```
[ ] #select the feater you want to visualize
    feature_to_plot="PetalLengthCm"
```

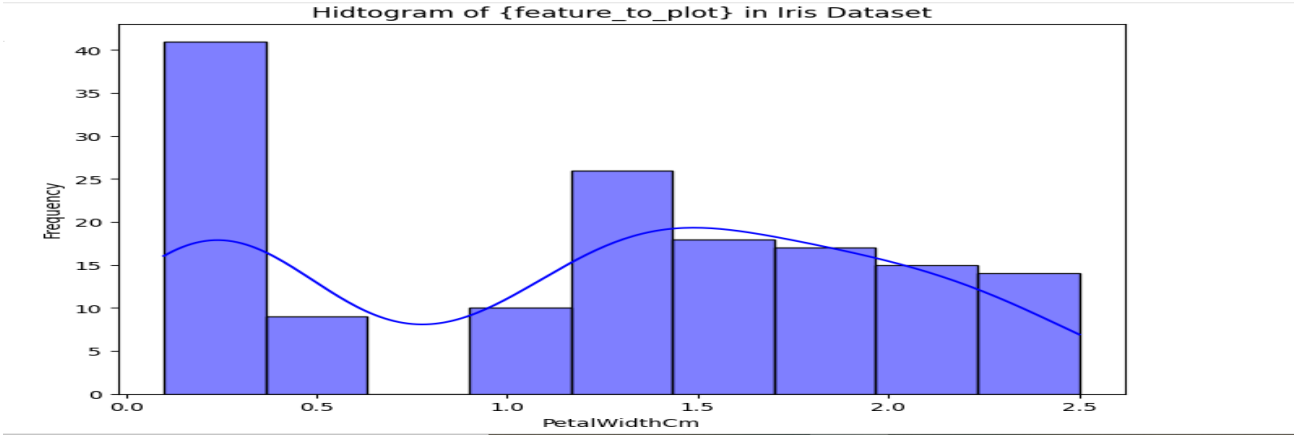
```
[ ] #create histogram PetalLengthCm
    plt.figure(figsize=(8, 6))
    sns.histplot(iris[feature_to_plot], kde=True, color ="blue")
    plt.title('Hidtogram of {feature_to_plot} in Iris Dataset')
    plt.xlabel(feature_to_plot)
    plt.ylabel("Frequency")
    plt.show()
```



4. PetalWidthCm

```
[ ] #select the feater you want to visualize
    feature_to_plot="PetalWidthCm"
```

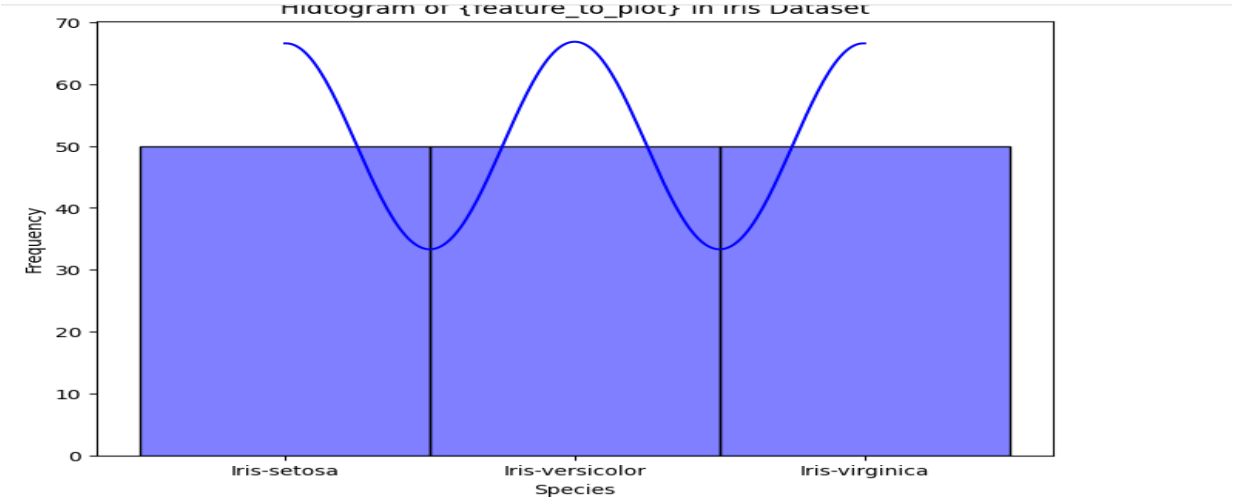
```
[ ] #create histogram PetalWidthCm
    plt.figure(figsize=(8, 6))
    sns.histplot(iris[feature_to_plot], kde=True, color ="blue")
    plt.title('Hidtogram of {feature_to_plot} in Iris Dataset')
    plt.xlabel(feature_to_plot)
    plt.ylabel("Frequency")
    plt.show()
```



5. Species

```
[ ] #select the feater you want to visualize
    feature_to_plot="Species"
```

```
[ ] #create histogram Species
    plt.figure(figsize=(8, 6))
    sns.histplot(iris[feature_to_plot], kde=True, color ="blue")
    plt.title('Hidtogram of {feature_to_plot} in Iris Dataset')
    plt.xlabel(feature_to_plot)
    plt.ylabel("Frequency")
    plt.show()
```

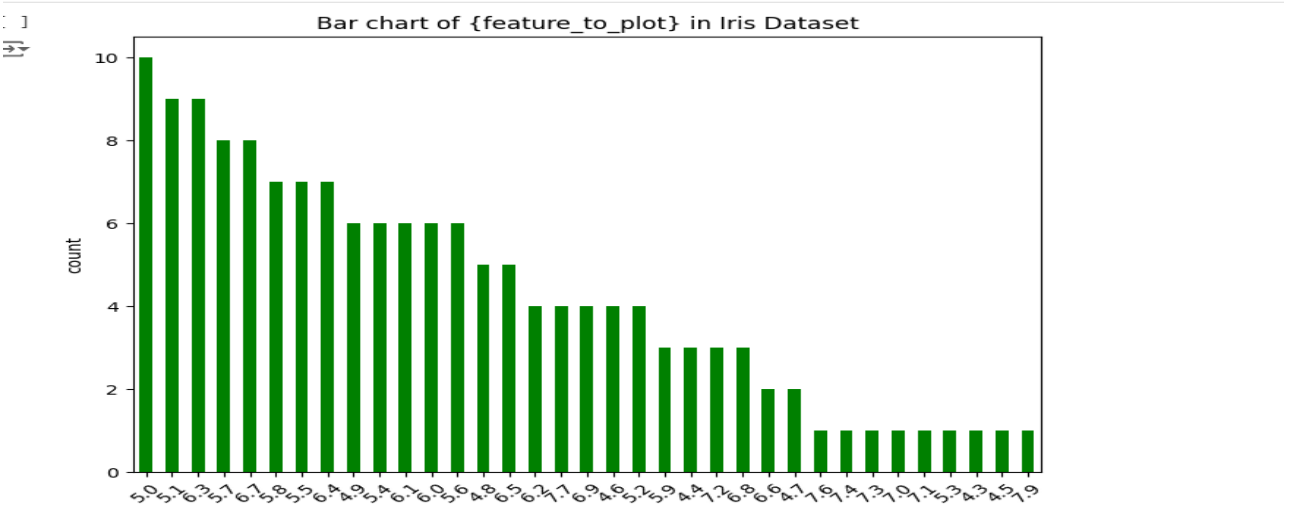


3. Select the feature you want to visualize and create bar chart

1. SepaLengthCm

```
[ ] #select the feater you want to visualize
    feature_to_plot="SepalLengthCm"
```

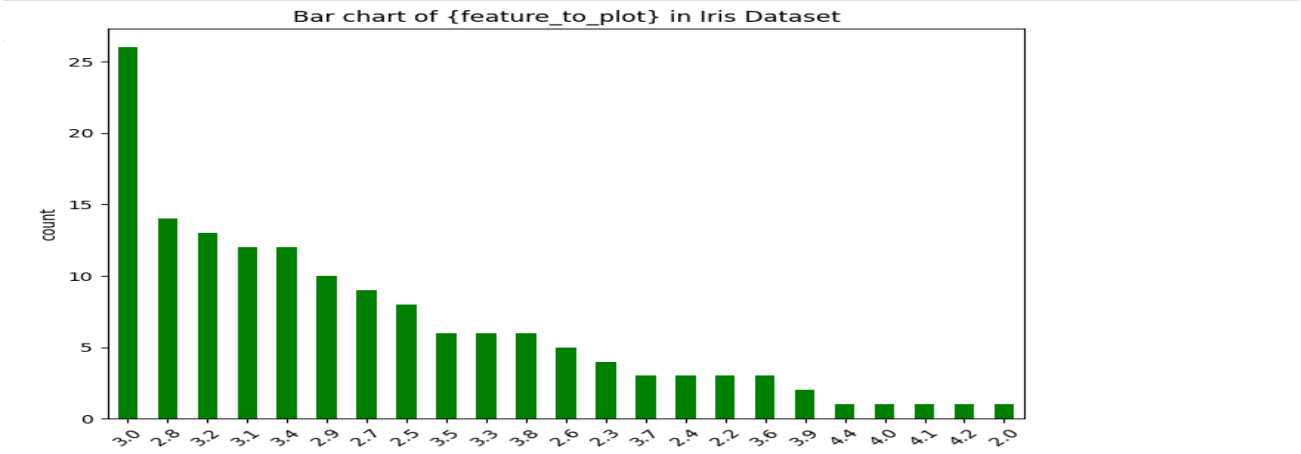
```
[ ] #create histogram SepalLengthCm
    plt.figure(figsize=(8, 6))
    iris[feature_to_plot]. value_counts().plot(kind="bar" , color="green")
    plt.title('Bar chart of {feature_to_plot} in Iris Dataset')
    plt.xlabel(feature_to_plot)
    plt.ylabel("count")
    plt.xticks(rotation=45)
    plt.show()
```



2. SepaWidthCm

```
[ ] #select the feater you want to visualize
    feature_to_plot="SepalWidthCm"
```

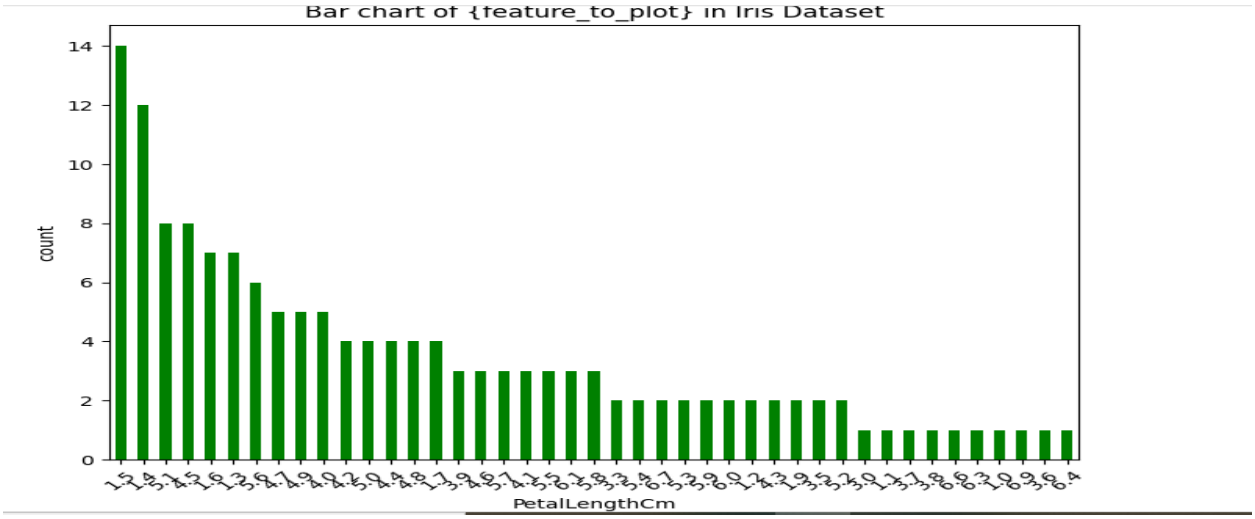
```
[ ] #create histogram SepalWidthCm
    plt.figure(figsize=(8, 6))
    iris[feature_to_plot]. value_counts().plot(kind="bar" , color="green")
    plt.title('Bar chart of {feature_to_plot} in Iris Dataset')
    plt.xlabel(feature_to_plot)
    plt.ylabel("count")
    plt.xticks(rotation=45)
    plt.show()
```



3. PetalLengthCm

```
[ ] #select the feater you want to visualize
    feature_to_plot="PetalLengthCm"
```

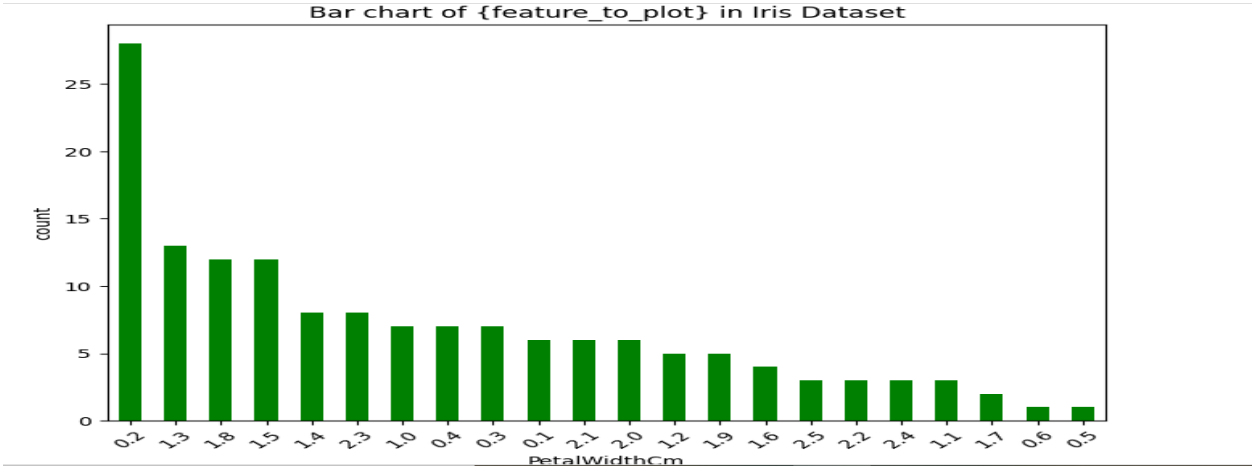
```
[ ] #create histogram PetalLengthCm
    plt.figure(figsize=(8, 6))
    iris[feature_to_plot]. value_counts().plot(kind="bar" , color="green")
    plt.title('Bar chart of {feature_to_plot} in Iris Dataset')
    plt.xlabel(feature_to_plot)
    plt.ylabel("count")
    plt.xticks(rotation=45)
    plt.show()
```



4. PetalWidthCm

```
[ ] #select the feater you want to visualize
    feature_to_plot="PetalWidthCm"
```

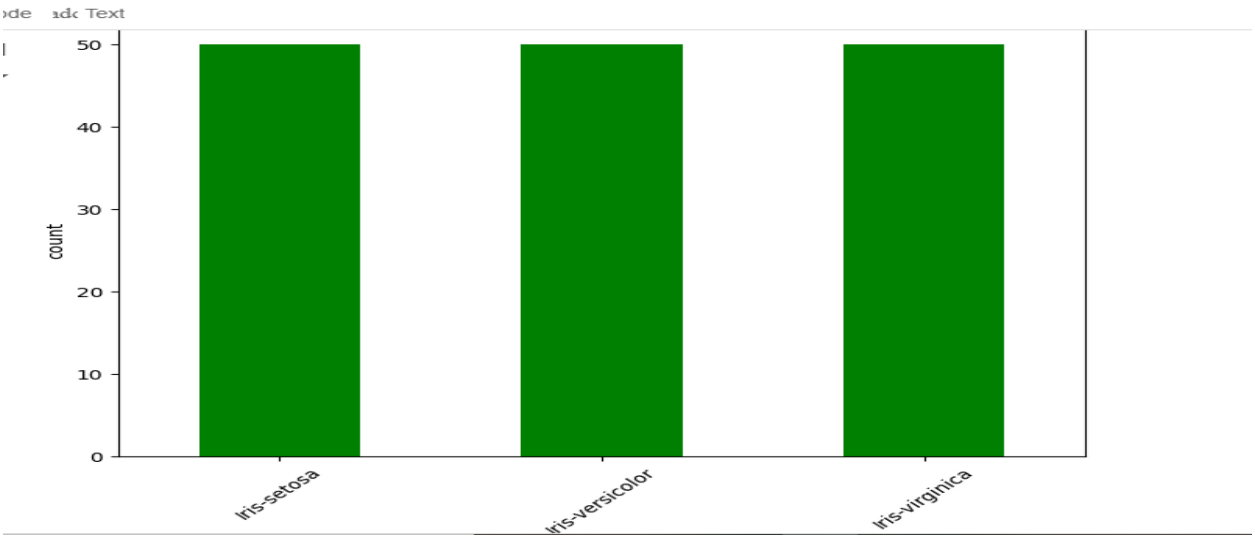
```
[ ] #create histogram PetalWidthCm
    plt.figure(figsize=(8, 6))
    iris[feature_to_plot]. value_counts().plot(kind="bar" , color="green")
    plt.title('Bar chart of {feature_to_plot} in Iris Dataset')
    plt.xlabel(feature_to_plot)
    plt.ylabel("count")
    plt.xticks(rotation=45)
    plt.show()
```



5. Species

```
[ ] #select the feater you want to visualize
    feature_to_plot="Species"
```

```
[ ] #create histogram Species
    plt.figure(figsize=(8, 6))
    iris[feature_to_plot]. value_counts().plot(kind="bar" , color="green")
    plt.title('Bar chart of {feature_to_plot} in Iris Dataset')
    plt.xlabel(feature_to_plot)
    plt.ylabel("count")
    plt.xticks(rotation=45)
    plt.show()
```



4. Plotting the scatter

```
[ ] fig ,ax =plt.subplots(ncols=2, figsize=(16,4))
    sns.scatterplot(iris, x='SepalLengthCm',y='SepalWidthCm',hue='Species',ax=ax[0])
    sns.scatterplot(iris, x='PetalLengthCm',y='PetalWidthCm',hue='Species',ax=ax[1])
```

```
<Axes: xlabel='PetalLengthCm', ylabel='PetalWidthCm'>
```