Assignment No 4

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Batch 3

Class :T.Y.Bsc(Computer Science)

Write a Python program to create box plots to see how each feature i.e. Sepal Length, Sepal Width, Petal Length, Petal Width are distributed across the three species. (Use iris.csv dataset)

In [1]:
```python
import pandas as pd
import seaborn as sns  # used for creating statistical graphics.
import matplotlib.pyplot as plt
```

In [8]:
```python
# Load the iris dataset
df = pd.read_csv("iris.csv")
```

In [9]:
```python
features = ['sepal_length', 'sepal_width', 'petal_length', 'petal_width']
```

In [10]:
```python
for feature in features:
    sns.boxplot(x='species', y=feature, data=df)
    plt.title(f'{feature.capitalize()} Distribution by Species')
    plt.show()
```

Sepal_width Distribution by Species

Petal_length Distribution by Species

Petal_width Distribution by Species
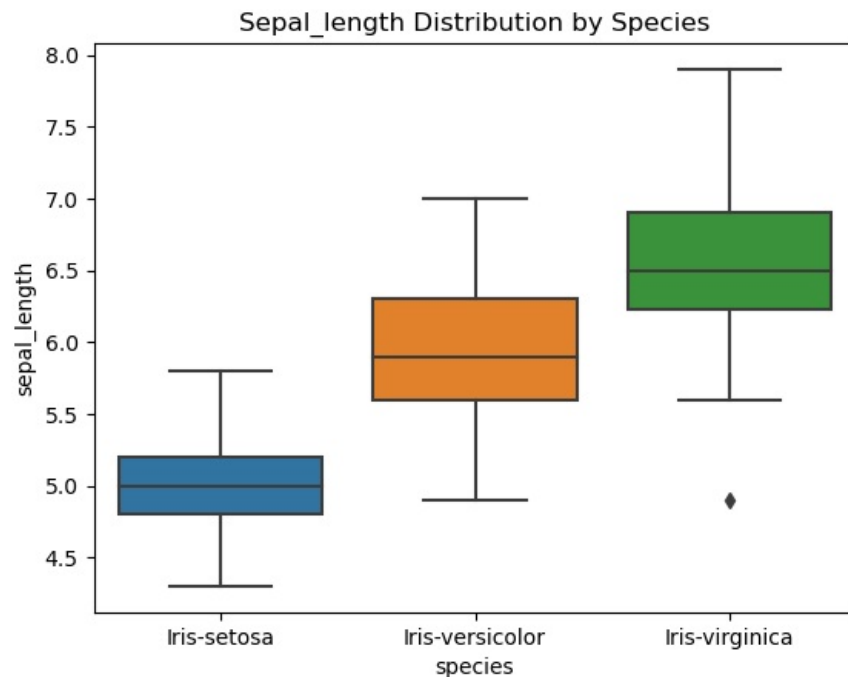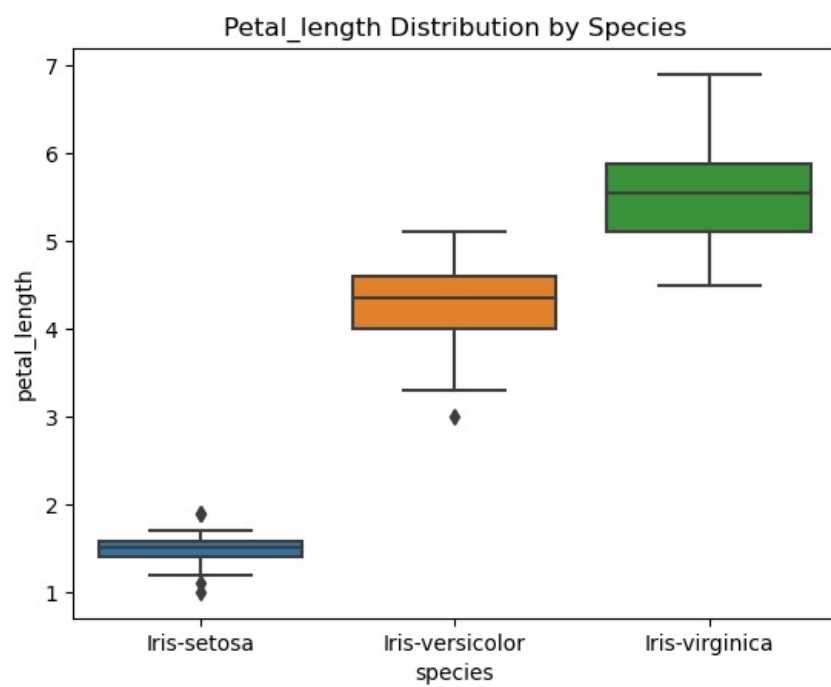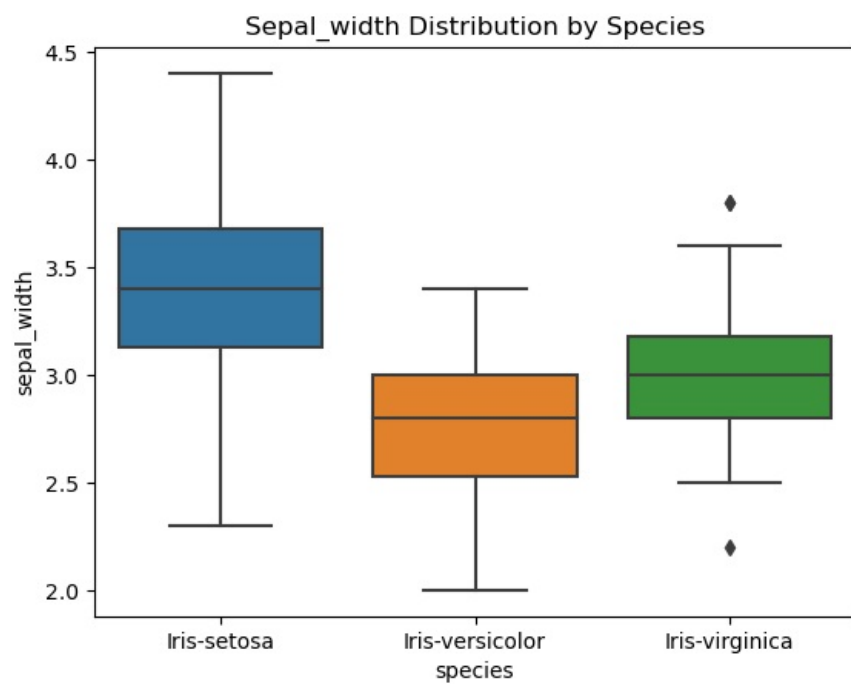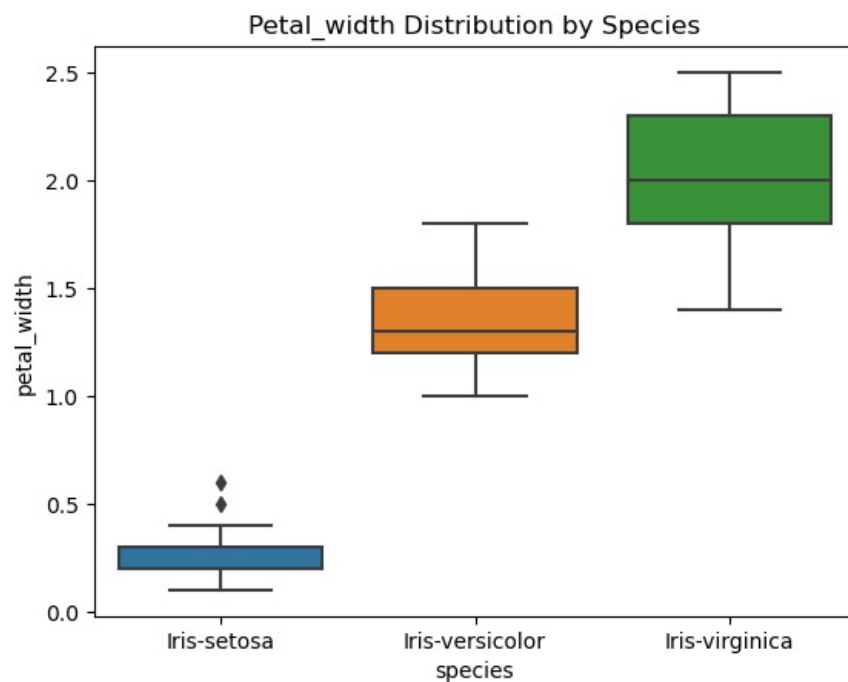
Slip 21,24 (A)

Import dataset "iris.csv". Write a Python program to create a Bar plot to get the frequency of the three species of the Iris data.
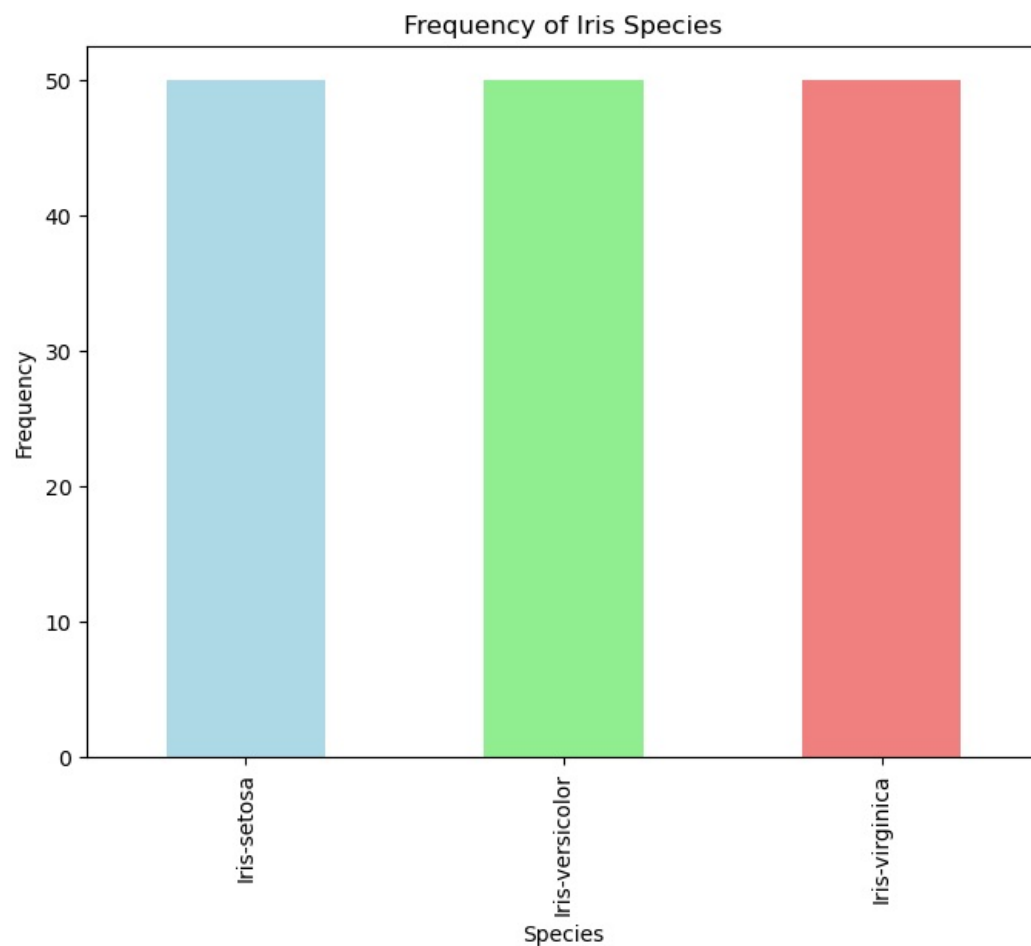
```
In [1]:  import pandas as pd
         import matplotlib.pyplot as plt
```

```
In [2]:  df = pd.read_csv("iris.csv")
         species_counts = df['species'].value_counts()
```

```
In [3]:  plt.figure(figsize=(8, 6))
         species_counts.plot(kind='bar', color=['lightblue', 'lightgreen', 'lightcoral'])


         plt.title('Frequency of Iris Species')
         plt.xlabel('Species')
         plt.ylabel('Frequency')


         plt.show()
```
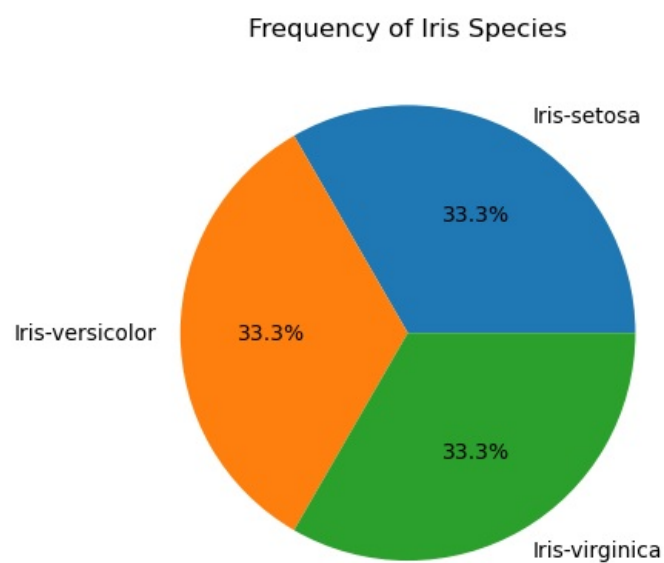
Frequency of Iris Species

Slip 1,11 (A)

Write a Python program to create a Pie plot to get the frequency of the three species of the Iris data (Use iris.csv)

```python
import pandas as pd
import matplotlib.pyplot as plt
```

```python
df = pd.read_csv("iris.csv")
```

```python
species_counts = df['species'].value_counts()
```

```python
plt.pie(species_counts, labels=species_counts.index, autopct='%1.1f%%')
plt.title('Frequency of Iris Species')
plt.show()
```


Frequency of Iris Species

In [ ]: