

Practical No: 5

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Division : C

Batch : C2

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CSV File :

coffee - coffee.csv X

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Country of Origin	Number of Bags	Bag Weight	Aroma	Flavor	Aftertaste	Acidity	Balance	Sweetness	Mois
Taiwan	1	80 kg	8.5	8.5	7.92	8	8.25	10	10.5
Costa Rica	1	22 kg	8.08	8.17	8.17	8.25	8.08	10	11.8
Taiwan	1	27 kg	8.33	8.17	8.08	8	8.25	10	9.1
Taiwan	1	30 kg	8.08	8.08	8.25	8.08	8	10	10.8
Tanzania, United Republic Of	320	60 kg	8.08	8.17	8.08	8.17	8	10	11
Taiwan	1	60 kg	8.08	8	8.08	8.08	8	10	11.9
Colombia	70	35 kg	8.08	8	8.08	7.92	8	10	10.6
Taiwan	1	60 kg	8.17	8.08	8	7.92	7.92	10	10.2
Taiwan	5	2 kg	8	8.17	8	7.92	7.92	10	10.3
Tanzania, United Republic Of	200	30 kg	8.17	8	7.92	7.92	7.75	10	10
Guatemala	8	30 kg	8	7.92	8.08	7.92	8	10	11.6
Taiwan	1	20 kg	8.08	8	7.92	7.92	7.83	10	10.4
Taiwan	4	50 kg	7.83	8	7.92	8	7.92	10	10.6
Taiwan	1	90 kg	8.17	8.08	7.92	8	7.83	10	10.6
Taiwan	1	85 kg	8	8	8	7.92	7.92	10	10.2
United States (Hawaii)	80	15 kg	8	7.92	8	7.83	8	10	9.3
Taiwan	3	48 kg	8	8	7.83	7.83	7.92	10	11.4

Program :

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

```
#Read the CSV file into a pandas DataFrame
```

```
data= pd.read_csv('/content/coffee - coffee.csv')
```

```
data.plot()
```

```
plt.show()
```

```
#.BarChart-Number of bags for each country of origin
```

```
country_bags=data.groupby('Country of Origin')['Number of Bags'].sum()
```

```
plt.bar(country_bags.index,country_bags.values)
```

```
plt.xlabel('Country of Origin')
```

```
plt.ylabel('Number of Bags')
```

```
plt.title('Number of Bags for each Country of Origin')
```

```
plt.xticks(rotation=45)
```

```
plt.show()
```

```
#.LineChart-Change in aromarating over the dataset
```

```
plt.plot(data['Aroma'])
```

```
plt.xlabel('Data Point')
```

```
plt.ylabel('Aroma Rating')
```

```
plt.title('Change in Aroma Rating over the Dataset')
```

```
plt.show()
```

```
#.Scatter Plot-Relationship between flavor and acidity ratings
```

```
plt.scatter(data['Flavor'],data['Acidity'])
```

```
plt.xlabel('FlavorRating')
```

```
plt.ylabel('AcidityRating')
```

```
plt.title('Relationship between Flavor and Acidity Ratings')
```

```
plt.show()
```

```
#Histogram-Distribution of after tasteratings
```

```
plt.hist(data['Aftertaste'],bins=10)
```

```
plt.xlabel('After taste Rating')
```

```
plt.ylabel('Frequency')
```

```
plt.title('Distribution of After taste Ratings')
```

```
plt.show()
```

```
#.Stacked Bar Chart-Sweetness and moisture percentage for each country of origin
```

```
sweetness=data.groupby('Country of Origin')['Sweetness'].sum()
```

```
moisture=data.groupby('Country of Origin')['Moisture Percentage'].sum()
```

```
plt.bar(sweetness.index,sweetness.values,label='Sweetness')
```

```
plt.bar(moisture.index,moisture.values,bottom=sweetness.values,label='MoisturePercentage')
```

```
plt.xlabel('Country of Origin')
```

```
plt.ylabel('Value')
```

```
plt.title('Sweetness and Moisture Percentage for each Country of Origin')
```

```
plt.xticks(rotation=45)
```

```

plt.legend()
plt.show()

#Density Graph of Acidity
data.Acidity.plot.density(color='green')
plt.title('Density plot for Acidity')
plt.legend()
plt.show()

# Create a horizontal bar plot
plt.barh(data['Color'],data['Aroma'])
# Customize the plot
plt.xlabel("Color")
plt.ylabel("Aroma")
# Display the plot
plt.show()

```

Output :









