Practical No: 5

Name : Neha More

Div : G , Batch : G3

Roll no : 745

CSV File :

coffee - coffee.csv ×

1 to 25 of 34 entries Filter

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

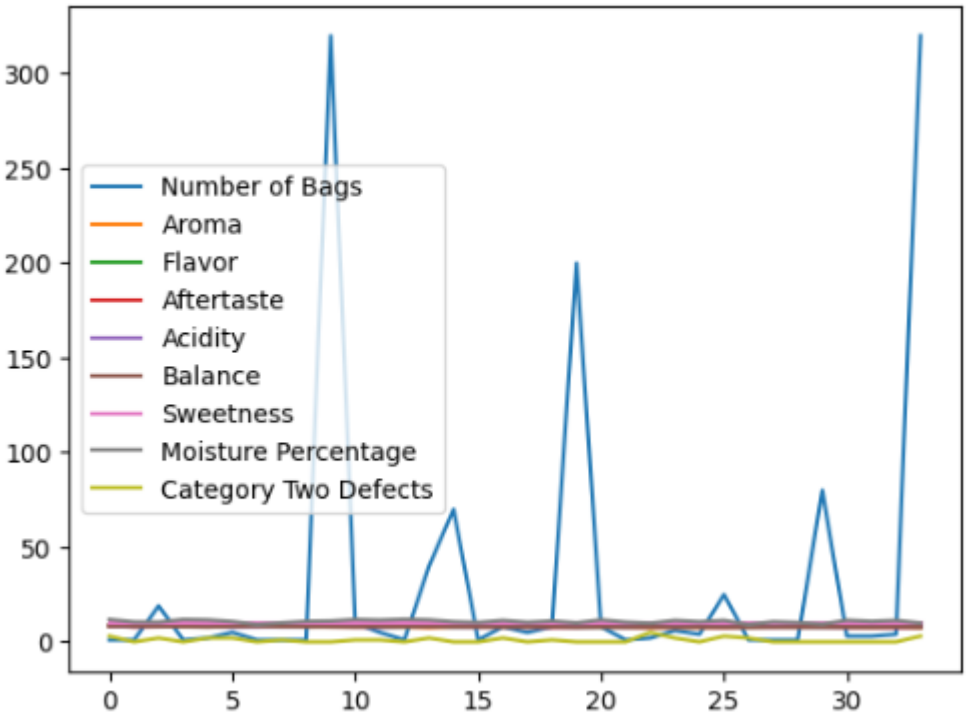
Program :

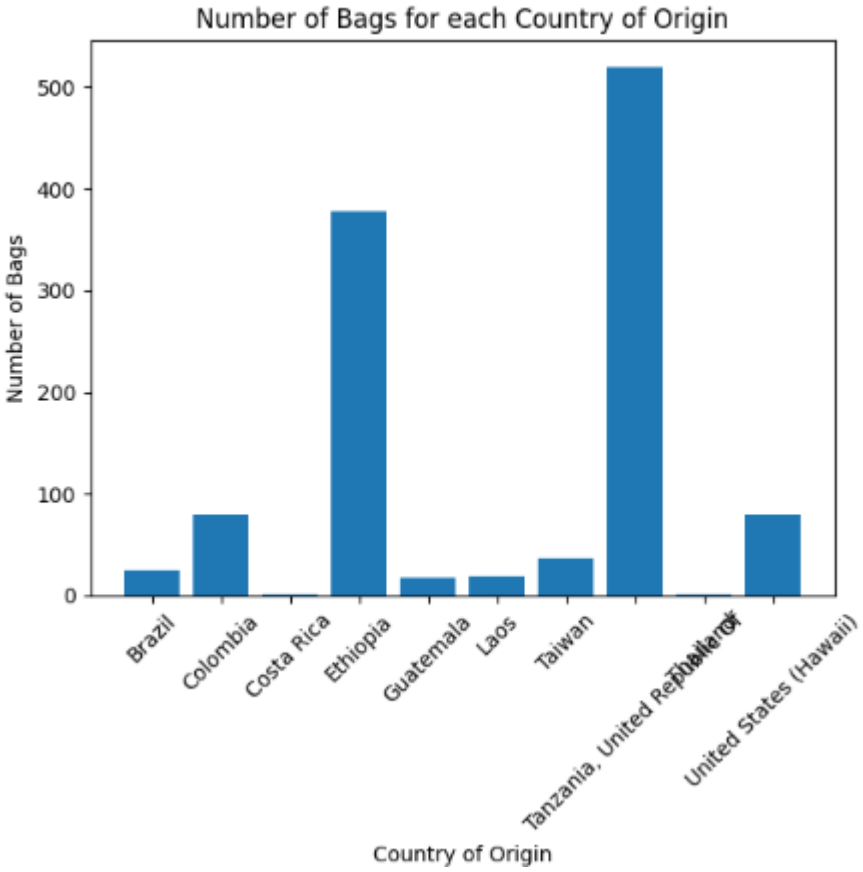
```
import pandas as pd
import matplotlib.pyplot as plt

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

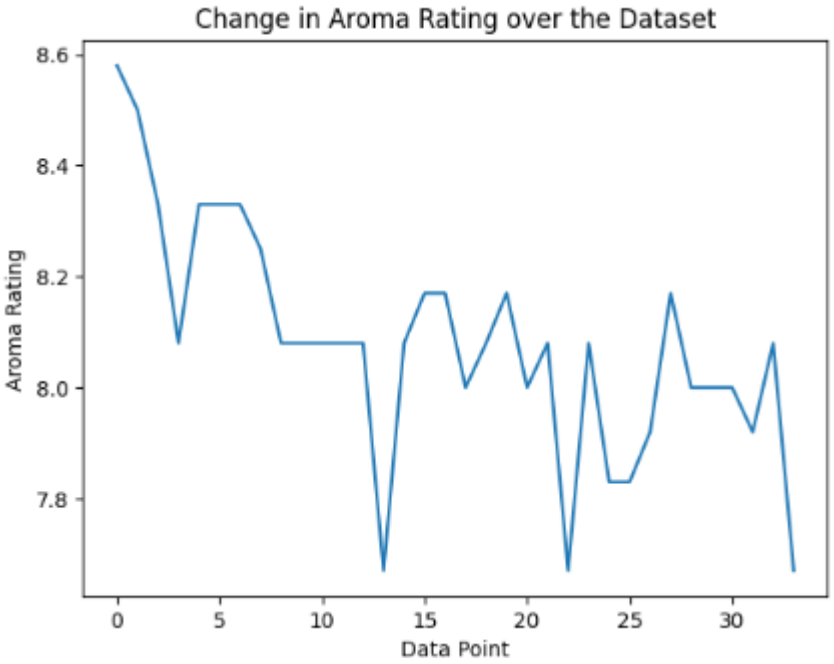
```
data= pd.read_csv('/content/coffee - coffee.csv')

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 ofo rigin
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='MoisturePercentag
e')
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()
```

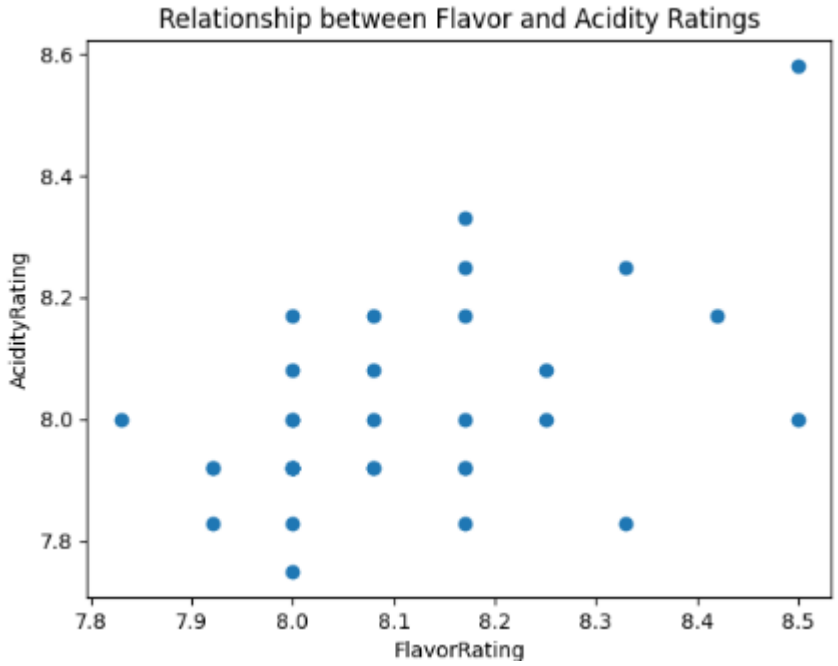
```
#Density Graph of Acidity
data.Acidity.plot.density(color='green')
plt.title('Density plot for Acidity')
plt.legend()
plt.show()
# Create a horizontal bar plot
plt.barh(data['Color'],data['Aroma'])
# Customize the plot
plt.xlabel("Color")
plt.ylabel("Aroma")
# Display the plot
plt.show()
```

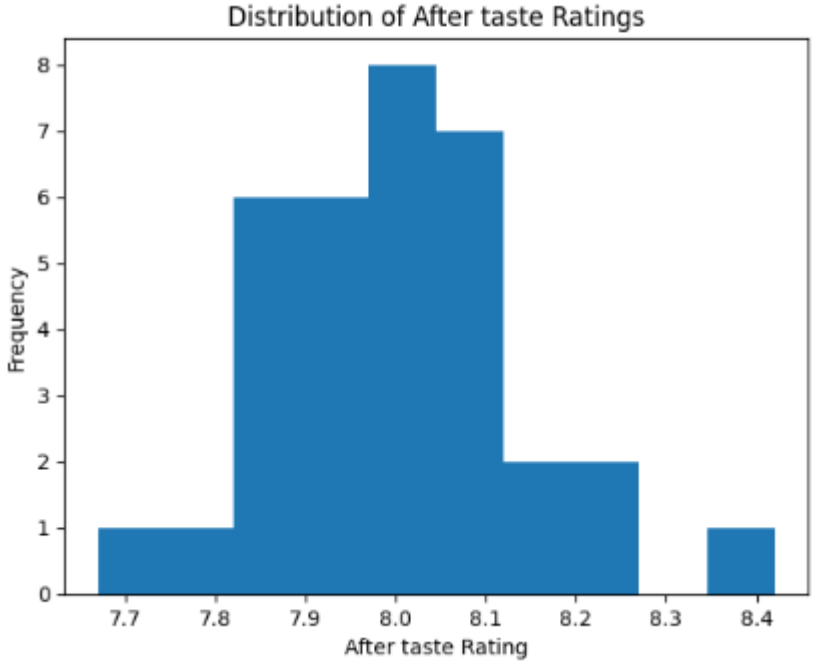
Output :

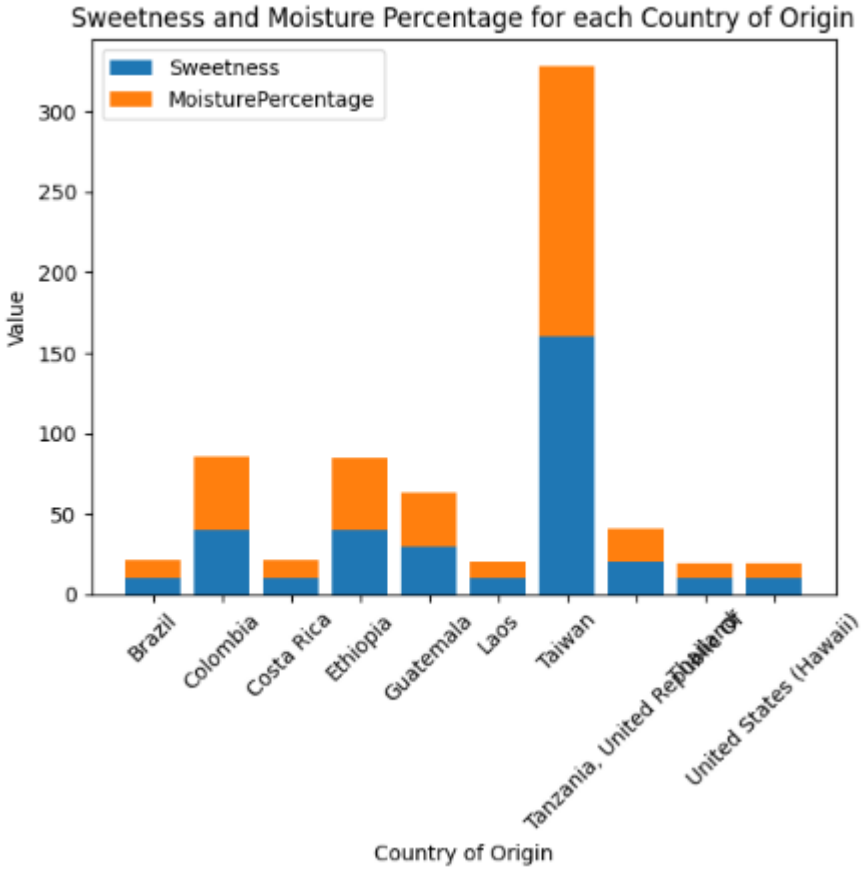


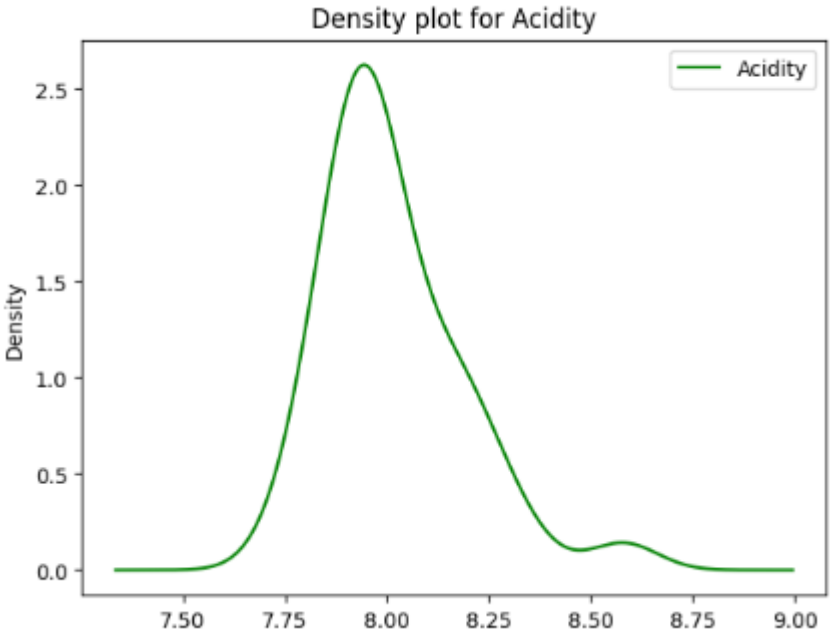

Number of Bags for each Country of Origin
Number of Bags
0
100
200
300
400
500
Brazil
Colombia
Costa Rica
Ethiopia
Guatemala
Laos
Taiwan
United States (Hawaii)
Country of Origin

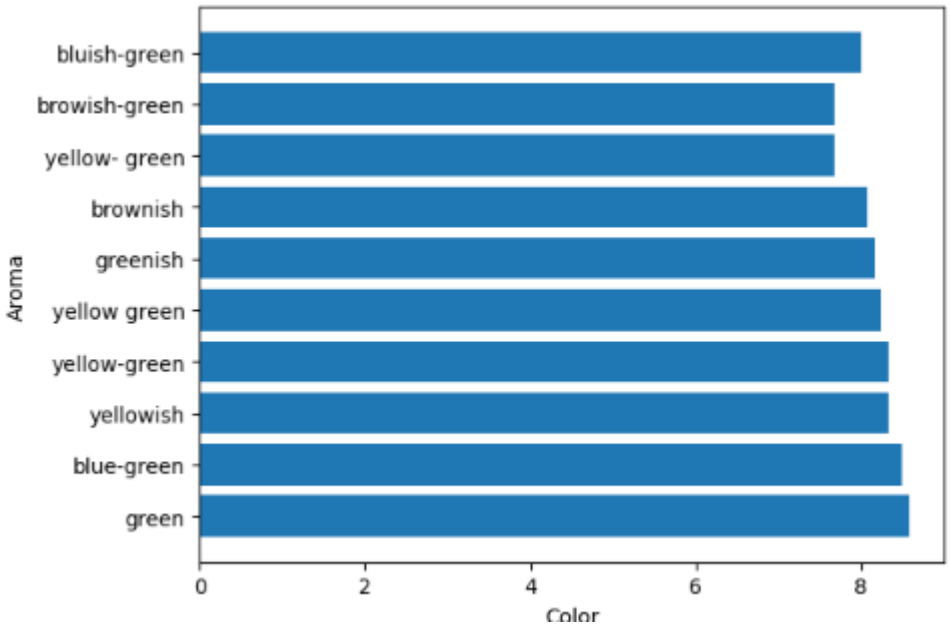

Change in Aroma Rating over the Dataset
Aroma Rating
7.8
8.0
8.2
8.4
8.6
0
5
10
15
20
25
30
Data Point

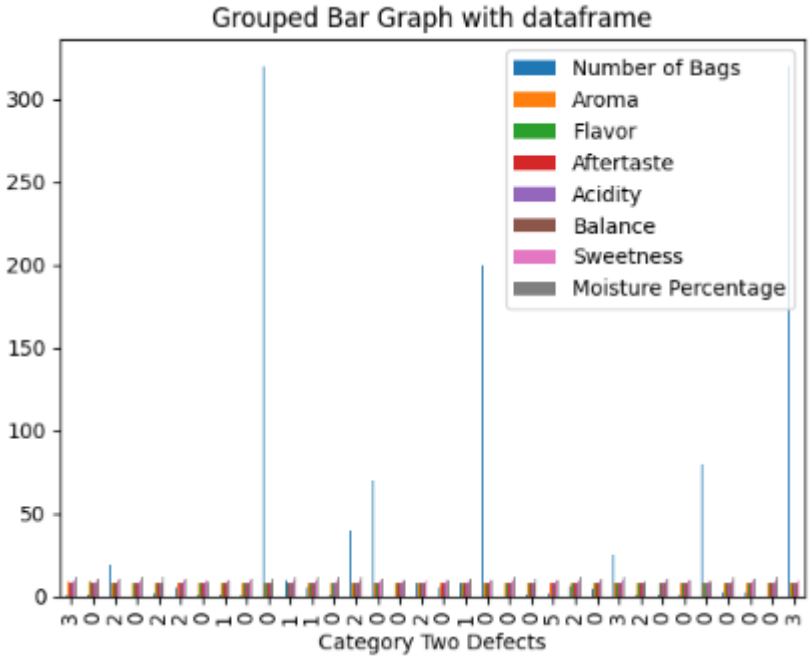

Relationship between Flavor and Acidity Ratings
AcidityRating
FlavorRating
8.6
8.4
8.2
8.0
7.8
7.8
7.9
8.0
8.1
8.2
8.3
8.4
8.5


Distribution of After taste Ratings
Frequency
After taste Rating
8
7
6
5
4
3
2
1
0
7.7
7.8
7.9
8.0
8.1
8.2
8.3
8.4


Sweetness and Moisture Percentage for each Country of Origin
Sweetness
MoisturePercentage
Value
0
50
100
150
200
250
300
Brazil
Colombia
Costa Rica
Ethiopia
Guatemala
Laos
Taiwan
United States (Hawaii)
Country of Origin


Density plot for Acidity
Acidity
Density
0.0
0.5
1.0
1.5
2.0
2.5
7.50
7.75
8.00
8.25
8.50
8.75
9.00


bluish-green
browish-green
yellow- green
brownish
greenish
yellow green
yellow-green
yellowish
blue-green
green
Aroma
0
2
4
6
8
Color


Grouped Bar Graph with dataframe
Number of Bags
Aroma
Flavor
Aftertaste
Acidity
Balance
Sweetness
Moisture Percentage
300
250
200
150
100
50
0
Category Two Defects