**NAME: Sarthak Dumbare**

**DATASET OF COFFEE**

import csv

# Open the CSV file in read mode

with open('/content/sample\_data/cofee .csv', 'r') as file:

    # Create a CSV reader object

    reader = csv.DictReader(file)

    # Initialize an empty list to store the data

    data = []

    # Iterate over each row in the CSV file

    for row in reader:

        # Append the row as a dictionary to the data list

        data.append(dict(row))

# Print the contents of the data list

for row in data:

    print(row)

import pandas as pd

import numpy as np

# Read the CSV file into a DataFrame

df = pd.read\_csv('/content/sample\_data/cofee .csv')

# Convert DataFrame to matrix

matrix = df.to\_numpy()

# Perform matrix operations

# Transpose the matrix

transposed\_matrix = np.transpose(matrix)

# Print the results

print("Original Matrix:")

print(matrix)

print("Transposed Matrix:")

print(transposed\_matrix)

# Split the matrix into separate arrays

array1 = matrix[:, :6]  # Select the first 6 columns

array2 = matrix[:, 6:]  # Select the remaining columns

# Horizontally stack the arrays

horizontal\_stack = np.hstack((array1, array2))

# Vertically stack the arrays

vertical\_stack = np.vstack((array1, array2))

# Print the results

print("Horizontal Stack:")

print(horizontal\_stack)

print("Vertical Stack:")

print(vertical\_stack)

# Generate a custom sequence

custom\_sequence = ""

# Iterate over each row in the DataFrame

for index, row in df.iterrows():

    country = row['Country of Origin']

    bags = str(row['Number of Bags'])

    weight = row['Bag Weight']

    aroma = str(row['Aroma'])

    flavor = str(row['Flavor'])

    aftertaste = str(row['Aftertaste'])

    acidity = str(row['Acidity'])

    balance = str(row['Balance'])

    sweetness = str(row['Sweetness'])

    moisture = str(row['Moisture Percentage'])

    color = row['Color']

    defects = str(row['Category Two Defects'])

    # Create a custom sequence based on the row data

    sequence = f"Country: {country}, Bags: {bags}, Weight: {weight}, Aroma: {aroma}, Flavor: {flavor}, Aftertaste: {aftertaste}, Acidity: {acidity}, Balance: {balance}, Sweetness: {sweetness}, Moisture: {moisture}, Color: {color}, Defects: {defects}\n"

    # Append the sequence to the custom\_sequence string

    custom\_sequence += sequence

# Print the custom sequence

print(custom\_sequence)

# Arithmetic Operations

# Calculate the sum of 'Number of Bags' column

sum\_bags = df['Number of Bags'].sum()

# Statistical Operations

# Calculate the minimum value of 'Aroma' column

min\_aroma = df['Aroma'].min()

# Calculate the maximum value of 'Flavor' column

max\_flavor = df['Flavor'].max()

# Print the results

print("Arithmetic Operations:")

print("Sum of Number of Bags:", sum\_bags)

print()

print("Statistical Operations:")

print("Minimum Aroma:", min\_aroma)

print("Maximum Flavor:", max\_flavor)

print()

# Copy the arrays

country\_of\_origin = df['Country of Origin'].to\_numpy()

number\_of\_bags = df['Number of Bags'].to\_numpy()

bag\_weight = df['Bag Weight'].to\_numpy()

aroma = df['Aroma'].to\_numpy()

flavor = df['Flavor'].to\_numpy()

aftertaste = df['Aftertaste'].to\_numpy()

acidity = df['Acidity'].to\_numpy()

balance = df['Balance'].to\_numpy()

sweetness = df['Sweetness'].to\_numpy()

moisture\_percentage = df['Moisture Percentage'].to\_numpy()

color = df['Color'].to\_numpy()

category\_two\_defects = df['Category Two Defects'].to\_numpy()

# View the arrays

print("Country of Origin:")

print(country\_of\_origin)

print("Number of Bags:")

print(number\_of\_bags)

print("Bag Weight:")

print(bag\_weight)

print("Aroma:")

print(aroma)

print("Flavor:")

print(flavor)

print("Aftertaste:")

print(aftertaste)

print("Acidity:")

print(acidity)

print("Balance:")

print(balance)

print("Sweetness:")

print(sweetness)

print("Moisture Percentage:")

print(moisture\_percentage)

print("Color:")

print(color)

print("Category Two Defects:")

print(category\_two\_defects)

# Stacking (concatenating vertically) two DataFrames

stacked\_df = pd.concat([df, df], axis=0)

# Searching for rows where the 'Country of Origin' is 'Taiwan'

taiwan\_df = df[df['Country of Origin'] == 'Taiwan']

# Sorting the DataFrame by 'Number of Bags' in descending order

sorted\_df = df.sort\_values(by='Number of Bags', ascending=False)

# Counting the occurrences of each unique value in the 'Color' column

color\_counts = df['Color'].value\_counts()

# Broadcasting a new value to all rows in the 'Sweetness' column

df['Sweetness'] = 10.0

# Printing the results

print("Stacked DataFrame:")

print(stacked\_df)

print("Taiwan DataFrame:")

print(taiwan\_df)

print("Sorted DataFrame:")

print(sorted\_df)

print("Color Counts:")

print(color\_counts)

print("Broadcasted DataFrame:")

print(df)

**OUTPUT:**

{'Country of Origin': 'Colombia', 'Number of Bags': '1', 'Bag Weight': '35 kg', 'Aroma': '8.58', 'Flavor': '8.5', 'Aftertaste': '8.42', 'Acidity': '8.58', 'Balance': '8.42', 'Sweetness': '10', 'Moisture Percentage': '11.8', 'Color': 'green', 'Category Two Defects': '3'}

{'Country of Origin': 'Taiwan', 'Number of Bags': '1', 'Bag Weight': '80 kg', 'Aroma': '8.5', 'Flavor': '8.5', 'Aftertaste': '7.92', 'Acidity': '8', 'Balance': '8.25', 'Sweetness': '10', 'Moisture Percentage': '10.5', 'Color': 'blue-green', 'Category Two Defects': '0'}

{'Country of Origin': 'Laos', 'Number of Bags': '19', 'Bag Weight': '25 kg', 'Aroma': '8.33', 'Flavor': '8.42', 'Aftertaste': '8.08', 'Acidity': '8.17', 'Balance': '8.17', 'Sweetness': '10', 'Moisture Percentage': '10.4', 'Color': 'yellowish', 'Category Two Defects': '2'}

{'Country of Origin': 'Costa Rica', 'Number of Bags': '1', 'Bag Weight': '22 kg', 'Aroma': '8.08', 'Flavor': '8.17', 'Aftertaste': '8.17', 'Acidity': '8.25', 'Balance': '8.08', 'Sweetness': '10', 'Moisture Percentage': '11.8', 'Color': 'green', 'Category Two Defects': '0'}

{'Country of Origin': 'Colombia', 'Number of Bags': '2', 'Bag Weight': '24 kg', 'Aroma': '8.33', 'Flavor': '8.33', 'Aftertaste': '8.08', 'Acidity': '8.25', 'Balance': '7.92', 'Sweetness': '10', 'Moisture Percentage': '11.6', 'Color': 'yellow-green', 'Category Two Defects': '2'}

{'Country of Origin': 'Guatemala', 'Number of Bags': '5', 'Bag Weight': '30 kg', 'Aroma': '8.33', 'Flavor': '8.33', 'Aftertaste': '8.25', 'Acidity': '7.83', 'Balance': '8.17', 'Sweetness': '10', 'Moisture Percentage': '10.7', 'Color': 'green', 'Category Two Defects': '2'}

{'Country of Origin': 'Taiwan', 'Number of Bags': '1', 'Bag Weight': '27 kg', 'Aroma': '8.33', 'Flavor': '8.17', 'Aftertaste': '8.08', 'Acidity': '8', 'Balance': '8.25', 'Sweetness': '10', 'Moisture Percentage': '9.1', 'Color': 'green', 'Category Two Defects': '0'}

{'Country of Origin': 'Taiwan', 'Number of Bags': '1', 'Bag Weight': '90 kg', 'Aroma': '8.25', 'Flavor': '8.25', 'Aftertaste': '8.17', 'Acidity': '8', 'Balance': '8.08', 'Sweetness': '10', 'Moisture Percentage': '10', 'Color': 'yellow green', 'Category Two Defects': '1'}

{'Country of Origin': 'Taiwan', 'Number of Bags': '1', 'Bag Weight': '30 kg', 'Aroma': '8.08', 'Flavor': '8.08', 'Aftertaste': '8.25', 'Acidity': '8.08', 'Balance': '8', 'Sweetness': '10', 'Moisture Percentage': '10.8', 'Color': 'greenish', 'Category Two Defects': '0'}

{'Country of Origin': 'Tanzania, United Republic Of', 'Number of Bags': '320', 'Bag Weight': '60 kg', 'Aroma': '8.08', 'Flavor': '8.17', 'Aftertaste': '8.08', 'Acidity': '8.17', 'Balance': '8', 'Sweetness': '10', 'Moisture Percentage': '11', 'Color': 'greenish', 'Category Two Defects': '0'}

{'Country of Origin': 'Ethiopia', 'Number of Bags': '10', 'Bag Weight': '30 kg', 'Aroma': '8.08', 'Flavor': '8.25', 'Aftertaste': '8', 'Acidity': '8.08', 'Balance': '7.92', 'Sweetness': '10', 'Moisture Percentage': '11.8', 'Color': 'greenish', 'Category Two Defects': '1'}

{'Country of Origin': 'Guatemala', 'Number of Bags': '5', 'Bag Weight': '15 kg', 'Aroma': '8.08', 'Flavor': '8', 'Aftertaste': '8', 'Acidity': '7.75', 'Balance': '8.17', 'Sweetness': '10', 'Moisture Percentage': '11.5', 'Color': 'brownish', 'Category Two Defects': '1'}

{'Country of Origin': 'Taiwan', 'Number of Bags': '1', 'Bag Weight': '60 kg', 'Aroma': '8.08', 'Flavor': '8', 'Aftertaste': '8.08', 'Acidity': '8.08', 'Balance': '8', 'Sweetness': '10', 'Moisture Percentage': '11.9', 'Color': 'green', 'Category Two Defects': '0'}

{'Country of Origin': 'Ethiopia', 'Number of Bags': '40', 'Bag Weight': '60 kg', 'Aroma': '7.67', 'Flavor': '8.17', 'Aftertaste': '8', 'Acidity': '8.33', 'Balance': '8', 'Sweetness': '10', 'Moisture Percentage': '11.6', 'Color': 'yellow- green', 'Category Two Defects': '2'}

{'Country of Origin': 'Colombia', 'Number of Bags': '70', 'Bag Weight': '35 kg', 'Aroma': '8.08', 'Flavor': '8', 'Aftertaste': '8.08', 'Acidity': '7.92', 'Balance': '8', 'Sweetness': '10', 'Moisture Percentage': '10.6', 'Color': 'green', 'Category Two Defects': '0'}

{'Country of Origin': 'Taiwan', 'Number of Bags': '1', 'Bag Weight': '60 kg', 'Aroma': '8.17', 'Flavor': '8.08', 'Aftertaste': '8', 'Acidity': '7.92', 'Balance': '7.92', 'Sweetness': '10', 'Moisture Percentage': '10.2', 'Color': 'green', 'Category Two Defects': '0'}

{'Country of Origin': 'Ethiopia', 'Number of Bags': '8', 'Bag Weight': '5 kg', 'Aroma': '8.17', 'Flavor': '8.08', 'Aftertaste': '7.92', 'Acidity': '8.17', 'Balance': '7.92', 'Sweetness': '10', 'Moisture Percentage': '11.3', 'Color': 'green', 'Category Two Defects': '2'}

{'Country of Origin': 'Taiwan', 'Number of Bags': '5', 'Bag Weight': '2 kg', 'Aroma': '8', 'Flavor': '8.17', 'Aftertaste': '8', 'Acidity': '7.92', 'Balance': '7.92', 'Sweetness': '10', 'Moisture Percentage': '10.3', 'Color': 'yellow-green', 'Category Two Defects': '0'}

{'Country of Origin': 'Taiwan', 'Number of Bags': '8', 'Bag Weight': '1 kg', 'Aroma': '8.08', 'Flavor': '8.17', 'Aftertaste': '7.75', 'Acidity': '7.92', 'Balance': '8', 'Sweetness': '10', 'Moisture Percentage': '11', 'Color': 'brownish', 'Category Two Defects': '1'}

{'Country of Origin': 'Tanzania, United Republic Of', 'Number of Bags': '200', 'Bag Weight': '30 kg', 'Aroma': '8.17', 'Flavor': '8', 'Aftertaste': '7.92', 'Acidity': '7.92', 'Balance': '7.75', 'Sweetness': '10', 'Moisture Percentage': '10', 'Color': 'greenish', 'Category Two Defects': '0'}

{'Country of Origin': 'Guatemala', 'Number of Bags': '8', 'Bag Weight': '30 kg', 'Aroma': '8', 'Flavor': '7.92', 'Aftertaste': '8.08', 'Acidity': '7.92', 'Balance': '8', 'Sweetness': '10', 'Moisture Percentage': '11.6', 'Color': 'yellowish', 'Category Two Defects': '0'}

{'Country of Origin': 'Taiwan', 'Number of Bags': '1', 'Bag Weight': '20 kg', 'Aroma': '8.08', 'Flavor': '8', 'Aftertaste': '7.92', 'Acidity': '7.92', 'Balance': '7.83', 'Sweetness': '10', 'Moisture Percentage': '10.4', 'Color': 'green', 'Category Two Defects': '0'}

{'Country of Origin': 'Thailand', 'Number of Bags': '2', 'Bag Weight': '1 kg', 'Aroma': '7.67', 'Flavor': '8', 'Aftertaste': '7.83', 'Acidity': '8', 'Balance': '8', 'Sweetness': '10', 'Moisture Percentage': '9.8', 'Color': 'browish-green', 'Category Two Defects': '5'}

{'Country of Origin': 'Colombia', 'Number of Bags': '6', 'Bag Weight': '5 kg', 'Aroma': '8.08', 'Flavor': '8', 'Aftertaste': '7.83', 'Acidity': '8.17', 'Balance': '7.83', 'Sweetness': '10', 'Moisture Percentage': '11.3', 'Color': 'brownish', 'Category Two Defects': '2'}

{'Country of Origin': 'Taiwan', 'Number of Bags': '4', 'Bag Weight': '50 kg', 'Aroma': '7.83', 'Flavor': '8', 'Aftertaste': '7.92', 'Acidity': '8', 'Balance': '7.92', 'Sweetness': '10', 'Moisture Percentage': '10.6', 'Color': 'bluish-green', 'Category Two Defects': '0'}

{'Country of Origin': 'Brazil', 'Number of Bags': '25', 'Bag Weight': '60 kg', 'Aroma': '7.83', 'Flavor': '8.08', 'Aftertaste': '7.83', 'Acidity': '7.92', 'Balance': '7.83', 'Sweetness': '10', 'Moisture Percentage': '11.3', 'Color': 'green', 'Category Two Defects': '3'}

{'Country of Origin': 'Taiwan', 'Number of Bags': '1', 'Bag Weight': '100 kg', 'Aroma': '7.92', 'Flavor': '7.92', 'Aftertaste': '8', 'Acidity': '7.92', 'Balance': '7.92', 'Sweetness': '10', 'Moisture Percentage': '9.1', 'Color': 'green', 'Category Two Defects': '2'}

{'Country of Origin': 'Taiwan', 'Number of Bags': '1', 'Bag Weight': '90 kg', 'Aroma': '8.17', 'Flavor': '8.08', 'Aftertaste': '7.92', 'Acidity': '8', 'Balance': '7.83', 'Sweetness': '10', 'Moisture Percentage': '10.6', 'Color': 'green', 'Category Two Defects': '0'}

{'Country of Origin': 'Taiwan', 'Number of Bags': '1', 'Bag Weight': '85 kg', 'Aroma': '8', 'Flavor': '8', 'Aftertaste': '8', 'Acidity': '7.92', 'Balance': '7.92', 'Sweetness': '10', 'Moisture Percentage': '10.2', 'Color': 'blue-green', 'Category Two Defects': '0'}

{'Country of Origin': 'United States (Hawaii)', 'Number of Bags': '80', 'Bag Weight': '15 kg', 'Aroma': '8', 'Flavor': '7.92', 'Aftertaste': '8', 'Acidity': '7.83', 'Balance': '8', 'Sweetness': '10', 'Moisture Percentage': '9.3', 'Color': 'green', 'Category Two Defects': '0'}

{'Country of Origin': 'Taiwan', 'Number of Bags': '3', 'Bag Weight': '48 kg', 'Aroma': '8', 'Flavor': '8', 'Aftertaste': '7.83', 'Acidity': '7.83', 'Balance': '7.92', 'Sweetness': '10', 'Moisture Percentage': '11.4', 'Color': 'bluish-green', 'Category Two Defects': '0'}

{'Country of Origin': 'Taiwan', 'Number of Bags': '3', 'Bag Weight': '50 kg', 'Aroma': '7.92', 'Flavor': '8', 'Aftertaste': '7.83', 'Acidity': '7.92', 'Balance': '7.83', 'Sweetness': '10', 'Moisture Percentage': '10.8', 'Color': 'green', 'Category Two Defects': '0'}

{'Country of Origin': 'Taiwan', 'Number of Bags': '4', 'Bag Weight': '5 kg', 'Aroma': '8.08', 'Flavor': '8.17', 'Aftertaste': '7.67', 'Acidity': '7.83', 'Balance': '7.92', 'Sweetness': '10', 'Moisture Percentage': '11.3', 'Color': 'green', 'Category Two Defects': '0'}

{'Country of Origin': 'Ethiopia', 'Number of Bags': '320', 'Bag Weight': '60 kg', 'Aroma': '7.67', 'Flavor': '7.83', 'Aftertaste': '7.83', 'Acidity': '8', 'Balance': '8', 'Sweetness': '10', 'Moisture Percentage': '9.9', 'Color': 'green', 'Category Two Defects': '3'}

Original Matrix:

[['Colombia' 1 '35 kg' 8.58 8.5 8.42 8.58 8.42 10 11.8 'green' 3]

['Taiwan' 1 '80 kg' 8.5 8.5 7.92 8.0 8.25 10 10.5 'blue-green' 0]

['Laos' 19 '25 kg' 8.33 8.42 8.08 8.17 8.17 10 10.4 'yellowish' 2]

['Costa Rica' 1 '22 kg' 8.08 8.17 8.17 8.25 8.08 10 11.8 'green' 0]

['Colombia' 2 '24 kg' 8.33 8.33 8.08 8.25 7.92 10 11.6 'yellow-green' 2]

['Guatemala' 5 '30 kg' 8.33 8.33 8.25 7.83 8.17 10 10.7 'green' 2]

['Taiwan' 1 '27 kg' 8.33 8.17 8.08 8.0 8.25 10 9.1 'green' 0]

['Taiwan' 1 '90 kg' 8.25 8.25 8.17 8.0 8.08 10 10.0 'yellow green' 1]

['Taiwan' 1 '30 kg' 8.08 8.08 8.25 8.08 8.0 10 10.8 'greenish' 0]

['Tanzania, United Republic Of' 320 '60 kg' 8.08 8.17 8.08 8.17 8.0 10

11.0 'greenish' 0]

['Ethiopia' 10 '30 kg' 8.08 8.25 8.0 8.08 7.92 10 11.8 'greenish' 1]

['Guatemala' 5 '15 kg' 8.08 8.0 8.0 7.75 8.17 10 11.5 'brownish' 1]

['Taiwan' 1 '60 kg' 8.08 8.0 8.08 8.08 8.0 10 11.9 'green' 0]

['Ethiopia' 40 '60 kg' 7.67 8.17 8.0 8.33 8.0 10 11.6 'yellow- green' 2]

['Colombia' 70 '35 kg' 8.08 8.0 8.08 7.92 8.0 10 10.6 'green' 0]

['Taiwan' 1 '60 kg' 8.17 8.08 8.0 7.92 7.92 10 10.2 'green' 0]

['Ethiopia' 8 '5 kg' 8.17 8.08 7.92 8.17 7.92 10 11.3 'green' 2]

['Taiwan' 5 '2 kg' 8.0 8.17 8.0 7.92 7.92 10 10.3 'yellow-green' 0]

['Taiwan' 8 '1 kg' 8.08 8.17 7.75 7.92 8.0 10 11.0 'brownish' 1]

['Tanzania, United Republic Of' 200 '30 kg' 8.17 8.0 7.92 7.92 7.75 10

10.0 'greenish' 0]

['Guatemala' 8 '30 kg' 8.0 7.92 8.08 7.92 8.0 10 11.6 'yellowish' 0]

['Taiwan' 1 '20 kg' 8.08 8.0 7.92 7.92 7.83 10 10.4 'green' 0]

['Thailand' 2 '1 kg' 7.67 8.0 7.83 8.0 8.0 10 9.8 'browish-green' 5]

['Colombia' 6 '5 kg' 8.08 8.0 7.83 8.17 7.83 10 11.3 'brownish' 2]

['Taiwan' 4 '50 kg' 7.83 8.0 7.92 8.0 7.92 10 10.6 'bluish-green' 0]

['Brazil' 25 '60 kg' 7.83 8.08 7.83 7.92 7.83 10 11.3 'green' 3]

['Taiwan' 1 '100 kg' 7.92 7.92 8.0 7.92 7.92 10 9.1 'green' 2]

['Taiwan' 1 '90 kg' 8.17 8.08 7.92 8.0 7.83 10 10.6 'green' 0]

['Taiwan' 1 '85 kg' 8.0 8.0 8.0 7.92 7.92 10 10.2 'blue-green' 0]

['United States (Hawaii)' 80 '15 kg' 8.0 7.92 8.0 7.83 8.0 10 9.3

'green' 0]

['Taiwan' 3 '48 kg' 8.0 8.0 7.83 7.83 7.92 10 11.4 'bluish-green' 0]

['Taiwan' 3 '50 kg' 7.92 8.0 7.83 7.92 7.83 10 10.8 'green' 0]

['Taiwan' 4 '5 kg' 8.08 8.17 7.67 7.83 7.92 10 11.3 'green' 0]

['Ethiopia' 320 '60 kg' 7.67 7.83 7.83 8.0 8.0 10 9.9 'green' 3]]

Transposed Matrix:

[['Colombia' 'Taiwan' 'Laos' 'Costa Rica' 'Colombia' 'Guatemala' 'Taiwan'

'Taiwan' 'Taiwan' 'Tanzania, United Republic Of' 'Ethiopia' 'Guatemala'

'Taiwan' 'Ethiopia' 'Colombia' 'Taiwan' 'Ethiopia' 'Taiwan' 'Taiwan'

'Tanzania, United Republic Of' 'Guatemala' 'Taiwan' 'Thailand'

'Colombia' 'Taiwan' 'Brazil' 'Taiwan' 'Taiwan' 'Taiwan'

'United States (Hawaii)' 'Taiwan' 'Taiwan' 'Taiwan' 'Ethiopia']

[1 1 19 1 2 5 1 1 1 320 10 5 1 40 70 1 8 5 8 200 8 1 2 6 4 25 1 1 1 80 3

3 4 320]

['35 kg' '80 kg' '25 kg' '22 kg' '24 kg' '30 kg' '27 kg' '90 kg' '30 kg'

'60 kg' '30 kg' '15 kg' '60 kg' '60 kg' '35 kg' '60 kg' '5 kg' '2 kg'

'1 kg' '30 kg' '30 kg' '20 kg' '1 kg' '5 kg' '50 kg' '60 kg' '100 kg'

'90 kg' '85 kg' '15 kg' '48 kg' '50 kg' '5 kg' '60 kg']

[8.58 8.5 8.33 8.08 8.33 8.33 8.33 8.25 8.08 8.08 8.08 8.08 8.08 7.67

8.08 8.17 8.17 8.0 8.08 8.17 8.0 8.08 7.67 8.08 7.83 7.83 7.92 8.17 8.0

8.0 8.0 7.92 8.08 7.67]

[8.5 8.5 8.42 8.17 8.33 8.33 8.17 8.25 8.08 8.17 8.25 8.0 8.0 8.17 8.0

8.08 8.08 8.17 8.17 8.0 7.92 8.0 8.0 8.0 8.0 8.08 7.92 8.08 8.0 7.92

8.0 8.0 8.17 7.83]

[8.42 7.92 8.08 8.17 8.08 8.25 8.08 8.17 8.25 8.08 8.0 8.0 8.08 8.0 8.08

8.0 7.92 8.0 7.75 7.92 8.08 7.92 7.83 7.83 7.92 7.83 8.0 7.92 8.0 8.0

7.83 7.83 7.67 7.83]

[8.58 8.0 8.17 8.25 8.25 7.83 8.0 8.0 8.08 8.17 8.08 7.75 8.08 8.33 7.92

7.92 8.17 7.92 7.92 7.92 7.92 7.92 8.0 8.17 8.0 7.92 7.92 8.0 7.92 7.83

7.83 7.92 7.83 8.0]

[8.42 8.25 8.17 8.08 7.92 8.17 8.25 8.08 8.0 8.0 7.92 8.17 8.0 8.0 8.0

7.92 7.92 7.92 8.0 7.75 8.0 7.83 8.0 7.83 7.92 7.83 7.92 7.83 7.92 8.0

7.92 7.83 7.92 8.0]

[10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10

10 10 10 10 10 10 10 10 10 10]

[11.8 10.5 10.4 11.8 11.6 10.7 9.1 10.0 10.8 11.0 11.8 11.5 11.9 11.6

10.6 10.2 11.3 10.3 11.0 10.0 11.6 10.4 9.8 11.3 10.6 11.3 9.1 10.6

10.2 9.3 11.4 10.8 11.3 9.9]

['green' 'blue-green' 'yellowish' 'green' 'yellow-green' 'green' 'green'

'yellow green' 'greenish' 'greenish' 'greenish' 'brownish' 'green'

'yellow- green' 'green' 'green' 'green' 'yellow-green' 'brownish'

'greenish' 'yellowish' 'green' 'browish-green' 'brownish'

'bluish-green' 'green' 'green' 'green' 'blue-green' 'green'

'bluish-green' 'green' 'green' 'green']

[3 0 2 0 2 2 0 1 0 0 1 1 0 2 0 0 2 0 1 0 0 0 5 2 0 3 2 0 0 0 0 0 0 3]]

Horizontal Stack:

[['Colombia' 1 '35 kg' 8.58 8.5 8.42 8.58 8.42 10 11.8 'green' 3]

['Taiwan' 1 '80 kg' 8.5 8.5 7.92 8.0 8.25 10 10.5 'blue-green' 0]

['Laos' 19 '25 kg' 8.33 8.42 8.08 8.17 8.17 10 10.4 'yellowish' 2]

['Costa Rica' 1 '22 kg' 8.08 8.17 8.17 8.25 8.08 10 11.8 'green' 0]

['Colombia' 2 '24 kg' 8.33 8.33 8.08 8.25 7.92 10 11.6 'yellow-green' 2]

['Guatemala' 5 '30 kg' 8.33 8.33 8.25 7.83 8.17 10 10.7 'green' 2]

['Taiwan' 1 '27 kg' 8.33 8.17 8.08 8.0 8.25 10 9.1 'green' 0]

['Taiwan' 1 '90 kg' 8.25 8.25 8.17 8.0 8.08 10 10.0 'yellow green' 1]

['Taiwan' 1 '30 kg' 8.08 8.08 8.25 8.08 8.0 10 10.8 'greenish' 0]

['Tanzania, United Republic Of' 320 '60 kg' 8.08 8.17 8.08 8.17 8.0 10

11.0 'greenish' 0]

['Ethiopia' 10 '30 kg' 8.08 8.25 8.0 8.08 7.92 10 11.8 'greenish' 1]

['Guatemala' 5 '15 kg' 8.08 8.0 8.0 7.75 8.17 10 11.5 'brownish' 1]

['Taiwan' 1 '60 kg' 8.08 8.0 8.08 8.08 8.0 10 11.9 'green' 0]

['Ethiopia' 40 '60 kg' 7.67 8.17 8.0 8.33 8.0 10 11.6 'yellow- green' 2]

['Colombia' 70 '35 kg' 8.08 8.0 8.08 7.92 8.0 10 10.6 'green' 0]

['Taiwan' 1 '60 kg' 8.17 8.08 8.0 7.92 7.92 10 10.2 'green' 0]

['Ethiopia' 8 '5 kg' 8.17 8.08 7.92 8.17 7.92 10 11.3 'green' 2]

['Taiwan' 5 '2 kg' 8.0 8.17 8.0 7.92 7.92 10 10.3 'yellow-green' 0]

['Taiwan' 8 '1 kg' 8.08 8.17 7.75 7.92 8.0 10 11.0 'brownish' 1]

['Tanzania, United Republic Of' 200 '30 kg' 8.17 8.0 7.92 7.92 7.75 10

10.0 'greenish' 0]

['Guatemala' 8 '30 kg' 8.0 7.92 8.08 7.92 8.0 10 11.6 'yellowish' 0]

['Taiwan' 1 '20 kg' 8.08 8.0 7.92 7.92 7.83 10 10.4 'green' 0]

['Thailand' 2 '1 kg' 7.67 8.0 7.83 8.0 8.0 10 9.8 'browish-green' 5]

['Colombia' 6 '5 kg' 8.08 8.0 7.83 8.17 7.83 10 11.3 'brownish' 2]

['Taiwan' 4 '50 kg' 7.83 8.0 7.92 8.0 7.92 10 10.6 'bluish-green' 0]

['Brazil' 25 '60 kg' 7.83 8.08 7.83 7.92 7.83 10 11.3 'green' 3]

['Taiwan' 1 '100 kg' 7.92 7.92 8.0 7.92 7.92 10 9.1 'green' 2]

['Taiwan' 1 '90 kg' 8.17 8.08 7.92 8.0 7.83 10 10.6 'green' 0]

['Taiwan' 1 '85 kg' 8.0 8.0 8.0 7.92 7.92 10 10.2 'blue-green' 0]

['United States (Hawaii)' 80 '15 kg' 8.0 7.92 8.0 7.83 8.0 10 9.3

'green' 0]

['Taiwan' 3 '48 kg' 8.0 8.0 7.83 7.83 7.92 10 11.4 'bluish-green' 0]

['Taiwan' 3 '50 kg' 7.92 8.0 7.83 7.92 7.83 10 10.8 'green' 0]

['Taiwan' 4 '5 kg' 8.08 8.17 7.67 7.83 7.92 10 11.3 'green' 0]

['Ethiopia' 320 '60 kg' 7.67 7.83 7.83 8.0 8.0 10 9.9 'green' 3]]

Vertical Stack:

[['Colombia' 1 '35 kg' 8.58 8.5 8.42]

['Taiwan' 1 '80 kg' 8.5 8.5 7.92]

['Laos' 19 '25 kg' 8.33 8.42 8.08]

['Costa Rica' 1 '22 kg' 8.08 8.17 8.17]

['Colombia' 2 '24 kg' 8.33 8.33 8.08]

['Guatemala' 5 '30 kg' 8.33 8.33 8.25]

['Taiwan' 1 '27 kg' 8.33 8.17 8.08]

['Taiwan' 1 '90 kg' 8.25 8.25 8.17]

['Taiwan' 1 '30 kg' 8.08 8.08 8.25]

['Tanzania, United Republic Of' 320 '60 kg' 8.08 8.17 8.08]

['Ethiopia' 10 '30 kg' 8.08 8.25 8.0]

['Guatemala' 5 '15 kg' 8.08 8.0 8.0]

['Taiwan' 1 '60 kg' 8.08 8.0 8.08]

['Ethiopia' 40 '60 kg' 7.67 8.17 8.0]

['Colombia' 70 '35 kg' 8.08 8.0 8.08]

['Taiwan' 1 '60 kg' 8.17 8.08 8.0]

['Ethiopia' 8 '5 kg' 8.17 8.08 7.92]

['Taiwan' 5 '2 kg' 8.0 8.17 8.0]

['Taiwan' 8 '1 kg' 8.08 8.17 7.75]

['Tanzania, United Republic Of' 200 '30 kg' 8.17 8.0 7.92]

['Guatemala' 8 '30 kg' 8.0 7.92 8.08]

['Taiwan' 1 '20 kg' 8.08 8.0 7.92]

['Thailand' 2 '1 kg' 7.67 8.0 7.83]

['Colombia' 6 '5 kg' 8.08 8.0 7.83]

['Taiwan' 4 '50 kg' 7.83 8.0 7.92]

['Brazil' 25 '60 kg' 7.83 8.08 7.83]

['Taiwan' 1 '100 kg' 7.92 7.92 8.0]

['Taiwan' 1 '90 kg' 8.17 8.08 7.92]

['Taiwan' 1 '85 kg' 8.0 8.0 8.0]

['United States (Hawaii)' 80 '15 kg' 8.0 7.92 8.0]

['Taiwan' 3 '48 kg' 8.0 8.0 7.83]

['Taiwan' 3 '50 kg' 7.92 8.0 7.83]

['Taiwan' 4 '5 kg' 8.08 8.17 7.67]

['Ethiopia' 320 '60 kg' 7.67 7.83 7.83]

[8.58 8.42 10 11.8 'green' 3]

[8.0 8.25 10 10.5 'blue-green' 0]

[8.17 8.17 10 10.4 'yellowish' 2]

[8.25 8.08 10 11.8 'green' 0]

[8.25 7.92 10 11.6 'yellow-green' 2]

[7.83 8.17 10 10.7 'green' 2]

[8.0 8.25 10 9.1 'green' 0]

[8.0 8.08 10 10.0 'yellow green' 1]

[8.08 8.0 10 10.8 'greenish' 0]

[8.17 8.0 10 11.0 'greenish' 0]

[8.08 7.92 10 11.8 'greenish' 1]

[7.75 8.17 10 11.5 'brownish' 1]

[8.08 8.0 10 11.9 'green' 0]

[8.33 8.0 10 11.6 'yellow- green' 2]

[7.92 8.0 10 10.6 'green' 0]

[7.92 7.92 10 10.2 'green' 0]

[8.17 7.92 10 11.3 'green' 2]

[7.92 7.92 10 10.3 'yellow-green' 0]

[7.92 8.0 10 11.0 'brownish' 1]

[7.92 7.75 10 10.0 'greenish' 0]

[7.92 8.0 10 11.6 'yellowish' 0]

[7.92 7.83 10 10.4 'green' 0]

[8.0 8.0 10 9.8 'browish-green' 5]

[8.17 7.83 10 11.3 'brownish' 2]

[8.0 7.92 10 10.6 'bluish-green' 0]

[7.92 7.83 10 11.3 'green' 3]

[7.92 7.92 10 9.1 'green' 2]

[8.0 7.83 10 10.6 'green' 0]

[7.92 7.92 10 10.2 'blue-green' 0]

[7.83 8.0 10 9.3 'green' 0]

[7.83 7.92 10 11.4 'bluish-green' 0]

[7.92 7.83 10 10.8 'green' 0]

[7.83 7.92 10 11.3 'green' 0]

[8.0 8.0 10 9.9 'green' 3]]

Country: Colombia, Bags: 1, Weight: 35 kg, Aroma: 8.58, Flavor: 8.5, Aftertaste: 8.42, Acidity: 8.58, Balance: 8.42, Sweetness: 10, Moisture: 11.8, Color: green, Defects: 3

Country: Taiwan, Bags: 1, Weight: 80 kg, Aroma: 8.5, Flavor: 8.5, Aftertaste: 7.92, Acidity: 8.0, Balance: 8.25, Sweetness: 10, Moisture: 10.5, Color: blue-green, Defects: 0

Country: Laos, Bags: 19, Weight: 25 kg, Aroma: 8.33, Flavor: 8.42, Aftertaste: 8.08, Acidity: 8.17, Balance: 8.17, Sweetness: 10, Moisture: 10.4, Color: yellowish, Defects: 2

Country: Costa Rica, Bags: 1, Weight: 22 kg, Aroma: 8.08, Flavor: 8.17, Aftertaste: 8.17, Acidity: 8.25, Balance: 8.08, Sweetness: 10, Moisture: 11.8, Color: green, Defects: 0

Country: Colombia, Bags: 2, Weight: 24 kg, Aroma: 8.33, Flavor: 8.33, Aftertaste: 8.08, Acidity: 8.25, Balance: 7.92, Sweetness: 10, Moisture: 11.6, Color: yellow-green, Defects: 2

Country: Guatemala, Bags: 5, Weight: 30 kg, Aroma: 8.33, Flavor: 8.33, Aftertaste: 8.25, Acidity: 7.83, Balance: 8.17, Sweetness: 10, Moisture: 10.7, Color: green, Defects: 2

Country: Taiwan, Bags: 1, Weight: 27 kg, Aroma: 8.33, Flavor: 8.17, Aftertaste: 8.08, Acidity: 8.0, Balance: 8.25, Sweetness: 10, Moisture: 9.1, Color: green, Defects: 0

Country: Taiwan, Bags: 1, Weight: 90 kg, Aroma: 8.25, Flavor: 8.25, Aftertaste: 8.17, Acidity: 8.0, Balance: 8.08, Sweetness: 10, Moisture: 10.0, Color: yellow green, Defects: 1

Country: Taiwan, Bags: 1, Weight: 30 kg, Aroma: 8.08, Flavor: 8.08, Aftertaste: 8.25, Acidity: 8.08, Balance: 8.0, Sweetness: 10, Moisture: 10.8, Color: greenish, Defects: 0

Country: Tanzania, United Republic Of, Bags: 320, Weight: 60 kg, Aroma: 8.08, Flavor: 8.17, Aftertaste: 8.08, Acidity: 8.17, Balance: 8.0, Sweetness: 10, Moisture: 11.0, Color: greenish, Defects: 0

Country: Ethiopia, Bags: 10, Weight: 30 kg, Aroma: 8.08, Flavor: 8.25, Aftertaste: 8.0, Acidity: 8.08, Balance: 7.92, Sweetness: 10, Moisture: 11.8, Color: greenish, Defects: 1

Country: Guatemala, Bags: 5, Weight: 15 kg, Aroma: 8.08, Flavor: 8.0, Aftertaste: 8.0, Acidity: 7.75, Balance: 8.17, Sweetness: 10, Moisture: 11.5, Color: brownish, Defects: 1

Country: Taiwan, Bags: 1, Weight: 60 kg, Aroma: 8.08, Flavor: 8.0, Aftertaste: 8.08, Acidity: 8.08, Balance: 8.0, Sweetness: 10, Moisture: 11.9, Color: green, Defects: 0

Country: Ethiopia, Bags: 40, Weight: 60 kg, Aroma: 7.67, Flavor: 8.17, Aftertaste: 8.0, Acidity: 8.33, Balance: 8.0, Sweetness: 10, Moisture: 11.6, Color: yellow- green, Defects: 2

Country: Colombia, Bags: 70, Weight: 35 kg, Aroma: 8.08, Flavor: 8.0, Aftertaste: 8.08, Acidity: 7.92, Balance: 8.0, Sweetness: 10, Moisture: 10.6, Color: green, Defects: 0

Country: Taiwan, Bags: 1, Weight: 60 kg, Aroma: 8.17, Flavor: 8.08, Aftertaste: 8.0, Acidity: 7.92, Balance: 7.92, Sweetness: 10, Moisture: 10.2, Color: green, Defects: 0

Country: Ethiopia, Bags: 8, Weight: 5 kg, Aroma: 8.17, Flavor: 8.08, Aftertaste: 7.92, Acidity: 8.17, Balance: 7.92, Sweetness: 10, Moisture: 11.3, Color: green, Defects: 2

Country: Taiwan, Bags: 5, Weight: 2 kg, Aroma: 8.0, Flavor: 8.17, Aftertaste: 8.0, Acidity: 7.92, Balance: 7.92, Sweetness: 10, Moisture: 10.3, Color: yellow-green, Defects: 0

Country: Taiwan, Bags: 8, Weight: 1 kg, Aroma: 8.08, Flavor: 8.17, Aftertaste: 7.75, Acidity: 7.92, Balance: 8.0, Sweetness: 10, Moisture: 11.0, Color: brownish, Defects: 1

Country: Tanzania, United Republic Of, Bags: 200, Weight: 30 kg, Aroma: 8.17, Flavor: 8.0, Aftertaste: 7.92, Acidity: 7.92, Balance: 7.75, Sweetness: 10, Moisture: 10.0, Color: greenish, Defects: 0

Country: Guatemala, Bags: 8, Weight: 30 kg, Aroma: 8.0, Flavor: 7.92, Aftertaste: 8.08, Acidity: 7.92, Balance: 8.0, Sweetness: 10, Moisture: 11.6, Color: yellowish, Defects: 0

Country: Taiwan, Bags: 1, Weight: 20 kg, Aroma: 8.08, Flavor: 8.0, Aftertaste: 7.92, Acidity: 7.92, Balance: 7.83, Sweetness: 10, Moisture: 10.4, Color: green, Defects: 0

Country: Thailand, Bags: 2, Weight: 1 kg, Aroma: 7.67, Flavor: 8.0, Aftertaste: 7.83, Acidity: 8.0, Balance: 8.0, Sweetness: 10, Moisture: 9.8, Color: browish-green, Defects: 5

Country: Colombia, Bags: 6, Weight: 5 kg, Aroma: 8.08, Flavor: 8.0, Aftertaste: 7.83, Acidity: 8.17, Balance: 7.83, Sweetness: 10, Moisture: 11.3, Color: brownish, Defects: 2

Country: Taiwan, Bags: 4, Weight: 50 kg, Aroma: 7.83, Flavor: 8.0, Aftertaste: 7.92, Acidity: 8.0, Balance: 7.92, Sweetness: 10, Moisture: 10.6, Color: bluish-green, Defects: 0

Country: Brazil, Bags: 25, Weight: 60 kg, Aroma: 7.83, Flavor: 8.08, Aftertaste: 7.83, Acidity: 7.92, Balance: 7.83, Sweetness: 10, Moisture: 11.3, Color: green, Defects: 3

Country: Taiwan, Bags: 1, Weight: 100 kg, Aroma: 7.92, Flavor: 7.92, Aftertaste: 8.0, Acidity: 7.92, Balance: 7.92, Sweetness: 10, Moisture: 9.1, Color: green, Defects: 2

Country: Taiwan, Bags: 1, Weight: 90 kg, Aroma: 8.17, Flavor: 8.08, Aftertaste: 7.92, Acidity: 8.0, Balance: 7.83, Sweetness: 10, Moisture: 10.6, Color: green, Defects: 0

Country: Taiwan, Bags: 1, Weight: 85 kg, Aroma: 8.0, Flavor: 8.0, Aftertaste: 8.0, Acidity: 7.92, Balance: 7.92, Sweetness: 10, Moisture: 10.2, Color: blue-green, Defects: 0

Country: United States (Hawaii), Bags: 80, Weight: 15 kg, Aroma: 8.0, Flavor: 7.92, Aftertaste: 8.0, Acidity: 7.83, Balance: 8.0, Sweetness: 10, Moisture: 9.3, Color: green, Defects: 0

Country: Taiwan, Bags: 3, Weight: 48 kg, Aroma: 8.0, Flavor: 8.0, Aftertaste: 7.83, Acidity: 7.83, Balance: 7.92, Sweetness: 10, Moisture: 11.4, Color: bluish-green, Defects: 0

Country: Taiwan, Bags: 3, Weight: 50 kg, Aroma: 7.92, Flavor: 8.0, Aftertaste: 7.83, Acidity: 7.92, Balance: 7.83, Sweetness: 10, Moisture: 10.8, Color: green, Defects: 0

Country: Taiwan, Bags: 4, Weight: 5 kg, Aroma: 8.08, Flavor: 8.17, Aftertaste: 7.67, Acidity: 7.83, Balance: 7.92, Sweetness: 10, Moisture: 11.3, Color: green, Defects: 0

Country: Ethiopia, Bags: 320, Weight: 60 kg, Aroma: 7.67, Flavor: 7.83, Aftertaste: 7.83, Acidity: 8.0, Balance: 8.0, Sweetness: 10, Moisture: 9.9, Color: green, Defects: 3

Arithmetic Operations:

Sum of Number of Bags: 1159

Statistical Operations:

Minimum Aroma: 7.67

Maximum Flavor: 8.5

Country of Origin:

['Colombia' 'Taiwan' 'Laos' 'Costa Rica' 'Colombia' 'Guatemala' 'Taiwan'

'Taiwan' 'Taiwan' 'Tanzania, United Republic Of' 'Ethiopia' 'Guatemala'

'Taiwan' 'Ethiopia' 'Colombia' 'Taiwan' 'Ethiopia' 'Taiwan' 'Taiwan'

'Tanzania, United Republic Of' 'Guatemala' 'Taiwan' 'Thailand' 'Colombia'

'Taiwan' 'Brazil' 'Taiwan' 'Taiwan' 'Taiwan' 'United States (Hawaii)'

'Taiwan' 'Taiwan' 'Taiwan' 'Ethiopia']

Number of Bags:

[ 1 1 19 1 2 5 1 1 1 320 10 5 1 40 70 1 8 5

8 200 8 1 2 6 4 25 1 1 1 80 3 3 4 320]

Bag Weight:

['35 kg' '80 kg' '25 kg' '22 kg' '24 kg' '30 kg' '27 kg' '90 kg' '30 kg'

'60 kg' '30 kg' '15 kg' '60 kg' '60 kg' '35 kg' '60 kg' '5 kg' '2 kg'

'1 kg' '30 kg' '30 kg' '20 kg' '1 kg' '5 kg' '50 kg' '60 kg' '100 kg'

'90 kg' '85 kg' '15 kg' '48 kg' '50 kg' '5 kg' '60 kg']

Aroma:

[8.58 8.5 8.33 8.08 8.33 8.33 8.33 8.25 8.08 8.08 8.08 8.08 8.08 7.67

8.08 8.17 8.17 8. 8.08 8.17 8. 8.08 7.67 8.08 7.83 7.83 7.92 8.17

8. 8. 8. 7.92 8.08 7.67]

Flavor:

[8.5 8.5 8.42 8.17 8.33 8.33 8.17 8.25 8.08 8.17 8.25 8. 8. 8.17

8. 8.08 8.08 8.17 8.17 8. 7.92 8. 8. 8. 8. 8.08 7.92 8.08

8. 7.92 8. 8. 8.17 7.83]

Aftertaste:

[8.42 7.92 8.08 8.17 8.08 8.25 8.08 8.17 8.25 8.08 8. 8. 8.08 8.

8.08 8. 7.92 8. 7.75 7.92 8.08 7.92 7.83 7.83 7.92 7.83 8. 7.92

8. 8. 7.83 7.83 7.67 7.83]

Acidity:

[8.58 8. 8.17 8.25 8.25 7.83 8. 8. 8.08 8.17 8.08 7.75 8.08 8.33

7.92 7.92 8.17 7.92 7.92 7.92 7.92 7.92 8. 8.17 8. 7.92 7.92 8.

7.92 7.83 7.83 7.92 7.83 8. ]

Balance:

[8.42 8.25 8.17 8.08 7.92 8.17 8.25 8.08 8. 8. 7.92 8.17 8. 8.

8. 7.92 7.92 7.92 8. 7.75 8. 7.83 8. 7.83 7.92 7.83 7.92 7.83

7.92 8. 7.92 7.83 7.92 8. ]

Sweetness:

[10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10 10

10 10 10 10 10 10 10 10 10 10]

Moisture Percentage:

[11.8 10.5 10.4 11.8 11.6 10.7 9.1 10. 10.8 11. 11.8 11.5 11.9 11.6

10.6 10.2 11.3 10.3 11. 10. 11.6 10.4 9.8 11.3 10.6 11.3 9.1 10.6

10.2 9.3 11.4 10.8 11.3 9.9]

Color:

['green' 'blue-green' 'yellowish' 'green' 'yellow-green' 'green' 'green'

'yellow green' 'greenish' 'greenish' 'greenish' 'brownish' 'green'

'yellow- green' 'green' 'green' 'green' 'yellow-green' 'brownish'

'greenish' 'yellowish' 'green' 'browish-green' 'brownish' 'bluish-green'

'green' 'green' 'green' 'blue-green' 'green' 'bluish-green' 'green'

'green' 'green']

Category Two Defects:

[3 0 2 0 2 2 0 1 0 0 1 1 0 2 0 0 2 0 1 0 0 0 5 2 0 3 2 0 0 0 0 0 0 3]

Stacked DataFrame:

Country of Origin Number of Bags Bag Weight Aroma Flavor \

0 Colombia 1 35 kg 8.58 8.50

1 Taiwan 1 80 kg 8.50 8.50

2 Laos 19 25 kg 8.33 8.42

3 Costa Rica 1 22 kg 8.08 8.17

4 Colombia 2 24 kg 8.33 8.33

.. ... ... ... ... ...

29 United States (Hawaii) 80 15 kg 8.00 7.92

30 Taiwan 3 48 kg 8.00 8.00

31 Taiwan 3 50 kg 7.92 8.00

32 Taiwan 4 5 kg 8.08 8.17

33 Ethiopia 320 60 kg 7.67 7.83

Aftertaste Acidity Balance Sweetness Moisture Percentage \

0 8.42 8.58 8.42 10 11.8

1 7.92 8.00 8.25 10 10.5

2 8.08 8.17 8.17 10 10.4

3 8.17 8.25 8.08 10 11.8

4 8.08 8.25 7.92 10 11.6

.. ... ... ... ... ...

29 8.00 7.83 8.00 10 9.3

30 7.83 7.83 7.92 10 11.4

31 7.83 7.92 7.83 10 10.8

32 7.67 7.83 7.92 10 11.3

33 7.83 8.00 8.00 10 9.9

Color Category Two Defects

0 green 3

1 blue-green 0

2 yellowish 2

3 green 0

4 yellow-green 2

.. ... ...

29 green 0

30 bluish-green 0

31 green 0

32 green 0

33 green 3

[68 rows x 12 columns]

Taiwan DataFrame:

Country of Origin Number of Bags Bag Weight Aroma Flavor Aftertaste \

1 Taiwan 1 80 kg 8.50 8.50 7.92

6 Taiwan 1 27 kg 8.33 8.17 8.08

7 Taiwan 1 90 kg 8.25 8.25 8.17

8 Taiwan 1 30 kg 8.08 8.08 8.25

12 Taiwan 1 60 kg 8.08 8.00 8.08

15 Taiwan 1 60 kg 8.17 8.08 8.00

17 Taiwan 5 2 kg 8.00 8.17 8.00

18 Taiwan 8 1 kg 8.08 8.17 7.75

21 Taiwan 1 20 kg 8.08 8.00 7.92

24 Taiwan 4 50 kg 7.83 8.00 7.92

26 Taiwan 1 100 kg 7.92 7.92 8.00

27 Taiwan 1 90 kg 8.17 8.08 7.92

28 Taiwan 1 85 kg 8.00 8.00 8.00

30 Taiwan 3 48 kg 8.00 8.00 7.83

31 Taiwan 3 50 kg 7.92 8.00 7.83

32 Taiwan 4 5 kg 8.08 8.17 7.67

Acidity Balance Sweetness Moisture Percentage Color \

1 8.00 8.25 10 10.5 blue-green

6 8.00 8.25 10 9.1 green

7 8.00 8.08 10 10.0 yellow green

8 8.08 8.00 10 10.8 greenish

12 8.08 8.00 10 11.9 green

15 7.92 7.92 10 10.2 green

17 7.92 7.92 10 10.3 yellow-green

18 7.92 8.00 10 11.0 brownish

21 7.92 7.83 10 10.4 green

24 8.00 7.92 10 10.6 bluish-green

26 7.92 7.92 10 9.1 green

27 8.00 7.83 10 10.6 green

28 7.92 7.92 10 10.2 blue-green

30 7.83 7.92 10 11.4 bluish-green

31 7.92 7.83 10 10.8 green

32 7.83 7.92 10 11.3 green

Category Two Defects

1 0

6 0

7 1

8 0

12 0

15 0

17 0

18 1

21 0

24 0

26 2

27 0

28 0

30 0

31 0

32 0

Sorted DataFrame:

Country of Origin Number of Bags Bag Weight Aroma Flavor \

33 Ethiopia 320 60 kg 7.67 7.83

9 Tanzania, United Republic Of 320 60 kg 8.08 8.17

19 Tanzania, United Republic Of 200 30 kg 8.17 8.00

29 United States (Hawaii) 80 15 kg 8.00 7.92

14 Colombia 70 35 kg 8.08 8.00

13 Ethiopia 40 60 kg 7.67 8.17

25 Brazil 25 60 kg 7.83 8.08

2 Laos 19 25 kg 8.33 8.42

10 Ethiopia 10 30 kg 8.08 8.25

20 Guatemala 8 30 kg 8.00 7.92

18 Taiwan 8 1 kg 8.08 8.17

16 Ethiopia 8 5 kg 8.17 8.08

23 Colombia 6 5 kg 8.08 8.00

17 Taiwan 5 2 kg 8.00 8.17

11 Guatemala 5 15 kg 8.08 8.00

5 Guatemala 5 30 kg 8.33 8.33

24 Taiwan 4 50 kg 7.83 8.00

32 Taiwan 4 5 kg 8.08 8.17

31 Taiwan 3 50 kg 7.92 8.00

30 Taiwan 3 48 kg 8.00 8.00

22 Thailand 2 1 kg 7.67 8.00

4 Colombia 2 24 kg 8.33 8.33

26 Taiwan 1 100 kg 7.92 7.92

3 Costa Rica 1 22 kg 8.08 8.17

28 Taiwan 1 85 kg 8.00 8.00

27 Taiwan 1 90 kg 8.17 8.08

12 Taiwan 1 60 kg 8.08 8.00

15 Taiwan 1 60 kg 8.17 8.08

21 Taiwan 1 20 kg 8.08 8.00

6 Taiwan 1 27 kg 8.33 8.17

7 Taiwan 1 90 kg 8.25 8.25

8 Taiwan 1 30 kg 8.08 8.08

1 Taiwan 1 80 kg 8.50 8.50

0 Colombia 1 35 kg 8.58 8.50

Aftertaste Acidity Balance Sweetness Moisture Percentage \

33 7.83 8.00 8.00 10 9.9

9 8.08 8.17 8.00 10 11.0

19 7.92 7.92 7.75 10 10.0

29 8.00 7.83 8.00 10 9.3

14 8.08 7.92 8.00 10 10.6

13 8.00 8.33 8.00 10 11.6

25 7.83 7.92 7.83 10 11.3

2 8.08 8.17 8.17 10 10.4

10 8.00 8.08 7.92 10 11.8

20 8.08 7.92 8.00 10 11.6

18 7.75 7.92 8.00 10 11.0

16 7.92 8.17 7.92 10 11.3

23 7.83 8.17 7.83 10 11.3

17 8.00 7.92 7.92 10 10.3

11 8.00 7.75 8.17 10 11.5

5 8.25 7.83 8.17 10 10.7

24 7.92 8.00 7.92 10 10.6

32 7.67 7.83 7.92 10 11.3

31 7.83 7.92 7.83 10 10.8

30 7.83 7.83 7.92 10 11.4

22 7.83 8.00 8.00 10 9.8

4 8.08 8.25 7.92 10 11.6

26 8.00 7.92 7.92 10 9.1

3 8.17 8.25 8.08 10 11.8

28 8.00 7.92 7.92 10 10.2

27 7.92 8.00 7.83 10 10.6

12 8.08 8.08 8.00 10 11.9

15 8.00 7.92 7.92 10 10.2

21 7.92 7.92 7.83 10 10.4

6 8.08 8.00 8.25 10 9.1

7 8.17 8.00 8.08 10 10.0

8 8.25 8.08 8.00 10 10.8

1 7.92 8.00 8.25 10 10.5

0 8.42 8.58 8.42 10 11.8

Color Category Two Defects

33 green 3

9 greenish 0

19 greenish 0

29 green 0

14 green 0

13 yellow- green 2

25 green 3

2 yellowish 2

10 greenish 1

20 yellowish 0

18 brownish 1

16 green 2

23 brownish 2

17 yellow-green 0

11 brownish 1

5 green 2

24 bluish-green 0

32 green 0

31 green 0

30 bluish-green 0

22 browish-green 5

4 yellow-green 2

26 green 2

3 green 0

28 blue-green 0

27 green 0

12 green 0

15 green 0

21 green 0

6 green 0

7 yellow green 1

8 greenish 0

1 blue-green 0

0 green 3

Color Counts:

green 16

greenish 4

brownish 3

blue-green 2

yellowish 2

yellow-green 2

bluish-green 2

yellow green 1

yellow- green 1

browish-green 1

Name: Color, dtype: int64

Broadcasted DataFrame:

Country of Origin Number of Bags Bag Weight Aroma Flavor \

0 Colombia 1 35 kg 8.58 8.50

1 Taiwan 1 80 kg 8.50 8.50

2 Laos 19 25 kg 8.33 8.42

3 Costa Rica 1 22 kg 8.08 8.17

4 Colombia 2 24 kg 8.33 8.33

5 Guatemala 5 30 kg 8.33 8.33

6 Taiwan 1 27 kg 8.33 8.17

7 Taiwan 1 90 kg 8.25 8.25

8 Taiwan 1 30 kg 8.08 8.08

9 Tanzania, United Republic Of 320 60 kg 8.08 8.17

10 Ethiopia 10 30 kg 8.08 8.25

11 Guatemala 5 15 kg 8.08 8.00

12 Taiwan 1 60 kg 8.08 8.00

13 Ethiopia 40 60 kg 7.67 8.17

14 Colombia 70 35 kg 8.08 8.00

15 Taiwan 1 60 kg 8.17 8.08

16 Ethiopia 8 5 kg 8.17 8.08

17 Taiwan 5 2 kg 8.00 8.17

18 Taiwan 8 1 kg 8.08 8.17

19 Tanzania, United Republic Of 200 30 kg 8.17 8.00

20 Guatemala 8 30 kg 8.00 7.92

21 Taiwan 1 20 kg 8.08 8.00

22 Thailand 2 1 kg 7.67 8.00

23 Colombia 6 5 kg 8.08 8.00

24 Taiwan 4 50 kg 7.83 8.00

25 Brazil 25 60 kg 7.83 8.08

26 Taiwan 1 100 kg 7.92 7.92

27 Taiwan 1 90 kg 8.17 8.08

28 Taiwan 1 85 kg 8.00 8.00

29 United States (Hawaii) 80 15 kg 8.00 7.92

30 Taiwan 3 48 kg 8.00 8.00

31 Taiwan 3 50 kg 7.92 8.00

32 Taiwan 4 5 kg 8.08 8.17

33 Ethiopia 320 60 kg 7.67 7.83

Aftertaste Acidity Balance Sweetness Moisture Percentage \

0 8.42 8.58 8.42 10.0 11.8

1 7.92 8.00 8.25 10.0 10.5

2 8.08 8.17 8.17 10.0 10.4

3 8.17 8.25 8.08 10.0 11.8

4 8.08 8.25 7.92 10.0 11.6

5 8.25 7.83 8.17 10.0 10.7

6 8.08 8.00 8.25 10.0 9.1

7 8.17 8.00 8.08 10.0 10.0

8 8.25 8.08 8.00 10.0 10.8

9 8.08 8.17 8.00 10.0 11.0

10 8.00 8.08 7.92 10.0 11.8

11 8.00 7.75 8.17 10.0 11.5

12 8.08 8.08 8.00 10.0 11.9

13 8.00 8.33 8.00 10.0 11.6

14 8.08 7.92 8.00 10.0 10.6

15 8.00 7.92 7.92 10.0 10.2

16 7.92 8.17 7.92 10.0 11.3

17 8.00 7.92 7.92 10.0 10.3

18 7.75 7.92 8.00 10.0 11.0

19 7.92 7.92 7.75 10.0 10.0

20 8.08 7.92 8.00 10.0 11.6

21 7.92 7.92 7.83 10.0 10.4

22 7.83 8.00 8.00 10.0 9.8

23 7.83 8.17 7.83 10.0 11.3

24 7.92 8.00 7.92 10.0 10.6

25 7.83 7.92 7.83 10.0 11.3

26 8.00 7.92 7.92 10.0 9.1

27 7.92 8.00 7.83 10.0 10.6

28 8.00 7.92 7.92 10.0 10.2

29 8.00 7.83 8.00 10.0 9.3

30 7.83 7.83 7.92 10.0 11.4

31 7.83 7.92 7.83 10.0 10.8

32 7.67 7.83 7.92 10.0 11.3

33 7.83 8.00 8.00 10.0 9.9

Color Category Two Defects

0 green 3

1 blue-green 0

2 yellowish 2

3 green 0

4 yellow-green 2

5 green 2

6 green 0

7 yellow green 1

8 greenish 0

9 greenish 0

10 greenish 1

11 brownish 1

12 green 0

13 yellow- green 2

14 green 0

15 green 0

16 green 2

17 yellow-green 0

18 brownish 1

19 greenish 0

20 yellowish 0

21 green 0

22 browish-green 5

23 brownish 2

24 bluish-green 0

25 green 3

26 green 2

27 green 0

28 blue-green 0

29 green 0

30 bluish-green 0

31 green 0

32 green 0

33 green 3