ASSIGNMENT 4

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Read given Dataset and solve the problems using pandas

1.How many bags of coffee beans from Guatemala have a bag weight of 30 kg?
2. How many bags of coffee beans from Taiwan have a bag weight of 27 kg?
3. How many bags of coffee beans from Taiwan have a bag weight of 90 kg?
4. How many bags of coffee beans from Taiwan have a bag weight of 30 kg?
5. What is the average aroma rating of coffee beans with a bag weight above 50 kg?
6. How many bags of coffee beans from Ethiopia have a greenish color?
7. How many bags of coffee beans from Guatemala have a bag weight of 15 kg?
8. How many bags of coffee beans from Taiwan have a bag weight of 60 kg?
9. How many bags of coffee beans from Ethiopia have a bag weight of 60 kg?
10. How many bags of coffee beans from Colombia have a bag weight of 35 kg?
11. How many bags of coffee beans from Taiwan have a bag weight of 60 kg?
12. How many bags of coffee beans from Ethiopia have a bag weight of 5 kg?
13. How many bags of coffee beans from Taiwan have a bag weight of 2 kg?
14. How many bags of coffee beans from Taiwan have a bag weight of 1 kg?
15. How many bags of coffee beans from Ethiopia have a bag weight of 60 kg?
16. What is the average acidity of coffee beans from Colombia with a bag weight of 35 kg?
17. How many bags of coffee beans from Taiwan have a bag weight of 80 kg?
18. What is the total number of bags of coffee beans from Laos?
19. How many bags of coffee beans from Costa Rica have a bag weight of 22 kg?
20. What is the average balance rating of coffee beans from Colombia with a bag weight of 24 kg?

Dataset: https://drive.google.com/file/d/1QFUIZbzZHuD24lpiBEqjb-38W6LUyw6q/view?usp=sharing

Assignment 4

```
[ ]  import numpy as np
     import pandas as pd

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

1: How many bags of coffee beans have a moisture percentage greater than 11%?

```
[ ]  moisture_above_11_count = data[data['Moisture Percentage'] > 11]['Number of Bags'].sum()

     print("The number of bags of coffee beans with a moisture percentage greater than 11% is",moisture_above_11_count)

     The number of bags of coffee beans with a moisture percentage greater than 11% is 114
```

2: What is the average acidity rating of coffee beans from Taiwan?

```
[ ]  taiwan_data = data[data['Country of Origin'] == 'Taiwan']
     average_acidity_taiwan = taiwan_data['Acidity'].mean()

     print("The average acidity rating of coffee beans from Taiwan is",round(average_acidity_taiwan,2))

     The average acidity rating of coffee beans from Taiwan is 7.95
```

3: How many bags of coffee beans from Colombia have a category two defect?

```
[ ]  colombia_defect_count = data[(data['Country of Origin'] == 'Colombia') & (data['Category Two Defects'] > 0)]['Number of Bags'].sum()

     print("The number of bags of coffee beans from Colombia with a category two defect is", colombia_defect_count)

     The number of bags of coffee beans from Colombia with a category two defect is 9
```

4: What is the average aroma rating of coffee beans with a bag weight above 50 kg?

```
[ ]  aroma_above_50kg_avg = data[data['Bag Weight'] > 50]['Aroma'].mean()

     print("The average aroma rating of coffee beans with a bag weight above 50 kg is",round(aroma_above_50kg_avg,2))

     The average aroma rating of coffee beans with a bag weight above 50 kg is 8.03
```

5: How many bags of coffee beans from Ethiopia have a greenish color?

```
[ ]  ethiopia_greenish_count = data[(data['Country of Origin'] == 'Ethiopia') & (data['Color'] == 'greenish')]['Number of Bags'].sum()

     print("The number of bags of coffee beans from Ethiopia with a greenish color is",ethiopia_greenish_count)
```

6: What is the average balance rating of coffee beans with a bag weight between 20 kg and 40 kg?

```
[ ]  balance_20_40kg_avg = data[(data['Bag Weight'] >= 20) & (data['Bag Weight'] <= 40)]['Balance'].mean()

     print("The average balance rating of coffee beans with a bag weight between 20 kg and 40 kg is",balance_20_40kg_avg)

     The average balance rating of coffee beans with a bag weight between 20 kg and 40 kg is 8.0425
```

7: How many bags of coffee beans from Costa Rica have a yellowish color?

```python
costa_rica_yellowish_count = data[(data['Country of Origin'] == 'Costa Rica') & (data['Color'] == 'yellowish')]['Number of Bags'].sum()

print("The number of bags of coffee beans from Costa Rica with a yellowish color is",costa_rica_yellowish_count)
```

8: What is the total acidity of coffee beans from Guatemala with a flavor rating above 8?

```python
guatemala_high_flavor_data = data[(data['Country of Origin'] == 'Guatemala') & (data['Flavor'] > 8)]
total_acidity_guatemala_high_flavor = guatemala_high_flavor_data['Acidity'].sum()

print("The total acidity of coffee beans from Guatemala with a flavor rating above 8 is",total_acidity_guatemala_high_flavor)
```

    The total acidity of coffee beans from Guatemala with a flavor rating above 8 is 7.83

9: How many bags of coffee beans from Laos have a sweetness rating above 10?

```python
laos_sweetness_above_10_count = data[(data['Country of Origin'] == 'Laos') & (data['Sweetness'] >= 10)]['Number of Bags'].sum()

print("The number of bags of coffee beans from Laos with a sweetness rating above 10 is",laos_sweetness_above_10_count)
```

    The number of bags of coffee beans from Laos with a sweetness rating above 10 is 19

10: What is the average flavor rating of coffee beans from Brazil with a bag weight above 50 kg?

```python
brazil_data = data[(data['Country of Origin'] == 'Brazil') & (data['Bag Weight'] > 50)]
average_flavor_brazil_above_50kg = brazil_data['Flavor'].mean()

print("The average flavor rating of coffee beans from Brazil with a bag weight above 50 kg is",average_flavor_brazil_above_50kg)
```

    The average flavor rating of coffee beans from Brazil with a bag weight above 50 kg is 8.08

11: How many bags of coffee beans from Tanzania have a blue-green color?

```python
tanzania_bluegreen_count = data[(data['Country of Origin'] == 'Tanzania, United Republic Of') & (data['Color'] == 'blue-green')]['Number of Bags'].sum()

print("The number of bags of coffee beans from Tanzania with a blue-green color is",tanzania_bluegreen_count)
```

12: What is the total aftertaste rating of coffee beans from Thailand with more than 4 category two defects?

```python
thailand_high_defects_data = data[(data['Country of Origin'] == 'Thailand') & (data['Category Two Defects'] > 4)]
total_aftertaste_thailand_high_defects = thailand_high_defects_data['Aftertaste'].sum()

print("The total aftertaste rating of coffee beans from Thailand with more than 4 category two defects is",total_aftertaste_thailand_high_defects)
```

    The total aftertaste rating of coffee beans from Thailand with more than 4 category two defects is 7.83

13: How many bags of coffee beans from United States (Hawaii) have a moisture percentage below 10%?

```python
hawaii_low_moisture_count = data[(data['Country of Origin'] == 'United States (Hawaii)') & (data['Moisture Percentage'] < 10)]['Number of Bags'].sum()

print("The number of bags of coffee beans from United States (Hawaii) with a moisture percentage below 10% is",hawaii_low_moisture_count)
```

    The number of bags of coffee beans from United States (Hawaii) with a moisture percentage below 10% is 80

14: What is the average sweetness rating of coffee beans from Ethiopia with a bag weight below 40 kg?

```python
ethiopia_below_40kg_data = data[(data['Country of Origin'] == 'Ethiopia') & (data['Bag Weight'] < 40)]
average_sweetness_ethiopia_below_40kg = ethiopia_below_40kg_data['Sweetness'].mean()

print("The average sweetness rating of coffee beans from Ethiopia with a bag weight below 40 kg is",average_sweetness_ethiopia_below_40kg)
```

    The average sweetness rating of coffee beans from Ethiopia with a bag weight below 40 kg is 10.0

15: How many bags of coffee beans from Taiwan have a yellow-green color and a flavor rating above 8?

```python
taiwan_yellowgreen_high_flavor_count = data[(data['Country of Origin'] == 'Taiwan') & (data['Color'] == 'yellow-green') & (data['Flavor'] > 8)]['Number of Bags'].sum()

print("The number of bags of coffee beans from Taiwan with a yellow-green color and a flavor rating above 8 is", taiwan_yellowgreen_high_flavor_count)
```

    The number of bags of coffee beans from Taiwan with a yellow-green color and a flavor rating above 8 is 5

16: What is the average bag weight of coffee beans across all countries?

```
[ ]   average_bag_weight = data['Bag Weight'].mean()

      print("The average bag weight of coffee beans is ",round(average_bag_weight,2),"kg.")

      The average bag weight of coffee beans is  39.41 kg.
```

17: Which country has the highest number of bags of coffee beans?

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

      print("The country with the highest number of bags of coffee beans is",country_with_highest_bags)

      The country with the highest number of bags of coffee beans is Tanzania, United Republic Of
```

18: What is the total sweetness of coffee beans from Guatemala?

```
[ ]   guatemala_data = data[data['Country of Origin'] == 'Guatemala']

      total_sweetness = guatemala_data['Sweetness'].sum()

      print("The total sweetness of coffee beans from Guatemala is", total_sweetness)

      The total sweetness of coffee beans from Guatemala is 30
```

19: How many bags of coffee beans have a flavor rating above 8?

```
▶     flavor_above_8_count = data[data['Flavor'] > 8]['Number of Bags'].sum()

      print("The number of bags of coffee beans with a flavor rating above 8 is",flavor_above_8_count)

      The number of bags of coffee beans with a flavor rating above 8 is 454
```

```
[ ]   country_highest_aftertaste = data.groupby('Country of Origin')['Aftertaste'].mean().idxmax()

      print("The country with the highest average aftertaste rating is",country_highest_aftertaste)
```