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CS539-F23-F02

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## ▼ Lab 4-1: The Wonderful World of Ramen

### Ramen Rater Background

[The Ramen Rater](#) has been publishing reviews of ramen noodles for years. They have collected the highlights of their reviews of 2700 ramen varieties in a single dataset. In what country is the best ramen made? Does the best ramen come in a bowl, a cup, or a pack? What company makes the best (and worst) ramen?

Let's find out!

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The entire dataset is available [here](#), as a web table, a PDF, and a spreadsheet.

Import The Ramen Rater's BIG LIST of ramen reviews from `ramen_ratings.csv` and view the first few records.

- Import `pandas` as `pd` and `matplotlib.pyplot` as `plt`.
- Use the `pandas` function `read_csv()` to read `ramen_ratings.csv` from the folder `datasets` into a `pandas` dataframe called `ramen`.
- Use `print()` and `head()` to show the first few rows of the dataframe.

---

### Some Good References

Here is a helpful [Pandas cheatsheet](#) to remind you of some of the basic commands and workflows we'll be exploring here. Another great reference for pertinent skills and terms is introduced in [Python Data Science Toolbox, Part 1](#). Please do feel free to review the slides and exercises there as you go through this project.

```
from google.colab import drive
drive.mount('/content/drive')
```

Mounted at `/content/drive`

```

### TODO
# Import pandas as pd and matplotlib.pyplot as plt
import random
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import csv

path = "/content/drive/MyDrive/Colab Notebooks/"
ramen_file_path = "/content/drive/MyDrive/Colab Notebooks/ramen_ratings.csv"

# Initialize an empty list to store the data
ramen_data = []

# Read the CSV file
with open(ramen_file_path, mode='r', newline='') as file:
    csv_reader = csv.DictReader(file)

    # Iterate over rows and store data
    for row in csv_reader:
        ramen_data.append(row)

# Print the first few rows of the data
for i in range(min(5, len(ramen_data))):
    print(ramen_data[i])
...

{'review': '2700', 'brand': 'Vedan', 'variety': 'Jhen Mian Tang Spicy Hot Noodle', 'sty
{'review': '2699', 'brand': 'Myojo', 'variety': 'Chicken Shio Wonton Noodles', 'style':
{'review': '2698', 'brand': 'Nissin', 'variety': 'Cup Noodles Chilli Crab Flavour (More
{'review': '2697', 'brand': 'Maruchan', 'variety': 'Bowl Taste Of Asia Hot & Spicy Kimc
{'review': '2696', 'brand': 'Nongshim', 'variety': 'Neoguri Spicy Seafood Noodle Soup',
Ellipsis

```

## ▼ Ramen throughout the world

Ramen noodles come from all over the world so let's get an idea about where they're from. Let's start by printing each country in `ramen`.

- Create a `for` loop that iterates through each entry in the `country` column in `ramen`.
- Inside your `for` loop, print the country.

---

This will print a really long list with a lot of duplicates. But don't worry, we'll clean it up shortly.

```

import random
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt

```

```
import csv

path = "/content/drive/MyDrive/Colab Notebooks/"
ramen_file_path = "/content/drive/MyDrive/Colab Notebooks/ramen_ratings.csv"

# Initialize an empty list to store the data
ramen_data = []

# Read the CSV file
with open(ramen_file_path, mode='r', newline='') as file:
    csv_reader = csv.DictReader(file)

    # Iterate over rows and store data
    for row in csv_reader:
        ramen_data.append(row)

for row in ramen_data:
    if "Ramen" in row["variety"]:
        print(row)
```

```
{ 'review': '160', 'brand': 'Myojo', 'variety': 'Ramen Desse Soy Sauce', 'style': 'Bow
{ 'review': '108', 'brand': 'Teriyaki Time', 'variety': 'Ramen', 'style': 'Bowl', 'cou
{ 'review': '104', 'brand': 'Maruchan', 'variety': 'Ramen Noodle Soup Chicken', 'style
{ 'review': '85', 'brand': 'Nissin', 'variety': 'Demae Ramen Sesame', 'style': 'Pack',
{ 'review': '83', 'brand': 'Nissin', 'variety': 'Demae Ramen Spicy Flavor', 'style': '
{ 'review': '82', 'brand': 'Nissin', 'variety': 'Demae Ramen Miso', 'style': 'Pack', '
{ 'review': '78', 'brand': 'Nissin', 'variety': 'Demae Ramen Seafood', 'style': 'Pack'
{ 'review': '77', 'brand': 'Nissin', 'variety': 'Demae Ramen Prawn', 'style': 'Pack',
{ 'review': '74', 'brand': 'Nissin', 'variety': 'Demae Ramen Shoyu', 'style': 'Pack',
{ 'review': '73', 'brand': 'Nissin', 'variety': 'Demae Ramen Five Spices Artificial Be
{ 'review': '72', 'brand': 'Nissin', 'variety': 'Demae Ramen Tonkatsu Artificial Pork'
{ 'review': '71', 'brand': 'Nissin', 'variety': 'Demae Ramen Satay', 'style': 'Pack',
{ 'review': '70', 'brand': 'Nissin', 'variety': 'Demae Ramen XO Sauce Seafood', 'style
{ 'review': '67', 'brand': 'Maruchan', 'variety': 'Ramen Noodle Soup Lime Chili Shrimp
{ 'review': '66', 'brand': 'Maruchan', 'variety': 'Ramen Noodle Soup Pork', 'style': '
{ 'review': '65', 'brand': 'Nissin', 'variety': 'Top Ramen Oriental', 'style': 'Pack',
{ 'review': '34', 'brand': 'Maruchan', 'variety': 'Ramen Noodle Soup Shrimp', 'style':
{ 'review': '28', 'brand': 'Nissin', 'variety': 'Chikin Ramen', 'style': 'Pack', 'coun
{ 'review': '27', 'brand': 'Nissin', 'variety': 'Demae Ramen Curry Flavor', 'style': '
{ 'review': '25', 'brand': 'Nissin', 'variety': 'Demae Ramen Spicy Flavor', 'style': '
{ 'review': '24', 'brand': 'Nissin', 'variety': 'Demae Ramen Spicy Seafood With Chili
{ 'review': '23', 'brand': 'Nissin', 'variety': 'Top Ramen Creamy Chicken', 'style': '
{ 'review': '18', 'brand': 'Ottogi', 'variety': 'Jin Ramen (Hot Taste)', 'style': 'Pac
```

## ▼ The Ramen Olympics

To get a better handle on the countries represented here, let's clean that list up a bit. Let's get each country represented at least once in the ramen review dataset, listed only once each.

To do so, let's take the code from the previous task and expand it so that it only prints each country once.

- Define an empty list `countries`.
- Loop through the `country` column in `ramen`.
- In your loop, use an `if` statement to append the country name to the list `countries` *only* if it is not already in `countries`.
- Create another `for` loop that iterates through the list `countries` and prints each country in the list.

---

Note: the `set()` function can also be used to remove duplicates from a list; but, for now, let's take the opportunity to practice `for` loops and `if` statements.

```
import random
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import csv
```

```
path = "/content/drive/MyDrive/Colab Notebooks/"
ramen_file_path = "/content/drive/MyDrive/Colab Notebooks/ramen_ratings.csv"

# Initialize an empty list to store the data
ramen_data = []

# Read the CSV file
with open(ramen_file_path, mode='r', newline='') as file:
    csv_reader = csv.DictReader(file)

    # Iterate over rows and store data
    for row in csv_reader:
        ramen_data.append(row)

# Initialize an empty list to store unique countries
countries = []

# Loop through the "country" column in ramen_data
for row in ramen_data:
    country = row["country"]

    # Use an if statement to append the country name to the list countries
    # only if it is not already in countries
    if country not in countries:
        countries.append(country)

# Create another loop to print each country in the list countries
for country in countries:
    print(country)

Taiwan
Japan
Singapore
United States
Philippines
China
Hong Kong
India
South Korea
Malaysia
Indonesia
Nigeria
Thailand
Vietnam
Ghana
Germany
Hungary
Mexico
Fiji
Australia
Pakistan
Bangladesh
Canada
```

```

Nepal
Brazil
UK
Myanmar
Netherlands
Cambodia
Finland
Sarawak
Philippines
Sweden
Colombia
Estonia
Holland
Poland
Dubai

```

## ▼ The Most Prolific Ramen Nations

It's fun to see all the countries that produce ramen but which country produces ramen that is most reviewed by The Ramen Reviewer? And, even more importantly, which country produces the best ramen? Let's see which country's ramen has been reviewed the most at The Ramen Reviewer first.

In order to do so, let's create a dictionary `country_count` that contains the number of ramen varieties reviewed at The Ramen Reviewer and then print them out.

- Create an empty dictionary, `country_count`.
- Loop through the `country` column in `ramen`.
- If the country is not already in `country_count.keys()`, assign a value of `1` to that country in `country_count`.
- If the country is already in `country_count.keys()`, add `1` to its existing value.
- Create another `for` loop that iterates through the keys and values in `country_count.items()` and prints each country and its total number of reviews.

---

Note that there are other, simpler ways to count the items in a dataframe, but doing it this way will help us master the logic of `for` loops and `dictionaries`, as well.

```

import random
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import csv

```

```

path = "/content/drive/MyDrive/Colab Notebooks/"
ramen_file_path = "/content/drive/MyDrive/Colab Notebooks/ramen_ratings.csv"

```

```

# Initialize an empty list to store the data
ramen_data = []

```

```
# Read the CSV file
with open(ramen_file_path, mode='r', newline='') as file:
    csv_reader = csv.DictReader(file)

    # Iterate over rows and store data
    for row in csv_reader:
        ramen_data.append(row)

# Initialize an empty dictionary to store country review counts
country_count = {}

# Loop through the "country" column in ramen_data
for row in ramen_data:
    country = row["country"]

    # Check if the country is not already in country_count.keys()
    if country not in country_count:
        # If not, assign a value of 1 to that country in country_count
        country_count[country] = 1
    else:
        # If it's already in country_count.keys(), add 1 to its existing value
        country_count[country] += 1

# Create another loop to print each country and its total number of reviews
for country, count in country_count.items():
    print(f"Country: {country}, Total Reviews: {count}")
```

```
Country: Taiwan, Total Reviews: 229
Country: Japan, Total Reviews: 381
Country: Singapore, Total Reviews: 122
Country: United States, Total Reviews: 340
Country: Philippines, Total Reviews: 1
Country: China, Total Reviews: 175
Country: Hong Kong, Total Reviews: 144
Country: India, Total Reviews: 39
Country: South Korea, Total Reviews: 326
Country: Malaysia, Total Reviews: 158
Country: Indonesia, Total Reviews: 141
Country: Nigeria, Total Reviews: 2
Country: Thailand, Total Reviews: 191
Country: Vietnam, Total Reviews: 108
Country: Ghana, Total Reviews: 2
Country: Germany, Total Reviews: 27
Country: Hungary, Total Reviews: 9
Country: Mexico, Total Reviews: 25
Country: Fiji, Total Reviews: 4
Country: Australia, Total Reviews: 22
Country: Pakistan, Total Reviews: 9
Country: Bangladesh, Total Reviews: 7
Country: Canada, Total Reviews: 41
Country: Nepal, Total Reviews: 14
```

```
Country: Brazil, Total Reviews: 5
Country: UK, Total Reviews: 69
Country: Myanmar, Total Reviews: 14
Country: Netherlands, Total Reviews: 15
Country: Cambodia, Total Reviews: 5
Country: Finland, Total Reviews: 3
Country: Sarawak, Total Reviews: 3
Country: Philippines, Total Reviews: 47
Country: Sweden, Total Reviews: 3
Country: Colombia, Total Reviews: 6
Country: Estonia, Total Reviews: 2
Country: Holland, Total Reviews: 4
Country: Poland, Total Reviews: 4
Country: Dubai, Total Reviews: 3
```

## ▼ Ordering ramen

It looks like Japan has produced the most ramen reviewed by The Ramen Rater. Let's confirm this and also make things easier to read by ranking these review counts.

So let's count the number of occurrences of each country the `pandas` way and print the results in descending order.

- Use the `.value_counts()` method to count the unique values in `ramen['country']`, and assign the result to `country_count`
  - You might not have seen the `.value_counts()` method before but it's very useful and simple so this is a good time to explore it and add it to your toolbox.
- Print `country_count`.

---

This is a faster and more efficient way to do what we did in the previous task and makes use of a built-in `pandas` method. It even arranges the values for us automatically! Be sure to add `.value_counts()` to your notes for future usage.



```
import pandas as pd
import csv

path = "/content/drive/MyDrive/Colab Notebooks/"
ramen_file_path = "/content/drive/MyDrive/Colab Notebooks/ramen_ratings.csv"

# Read the CSV file into a pandas DataFrame
ramen_data = pd.read_csv(ramen_file_path)

# Use the .value_counts() method to count the occurrences of each country
country_count = ramen_data['country'].value_counts()

# Print the results in descending order
print(country_count)
```

Japan	381
United States	340
South Korea	326
Taiwan	229
Thailand	191
China	175
Malaysia	158
Hong Kong	144
Indonesia	141
Singapore	122
Vietnam	108
UK	69
Philippines	47
Canada	41
India	39
Germany	27
Mexico	25
Australia	22
Netherlands	15
Nepal	14
Myanmar	14
Pakistan	9
Hungary	9
Bangladesh	7
Colombia	6
Cambodia	5
Brazil	5
Poland	4
Holland	4
Fiji	4
Sarawak	3
Sweden	3
Finland	3
Dubai	3
Estonia	2
Nigeria	2
Ghana	2
Philippines	1

Name: country, dtype: int64

## ▼ Summarizing Ramen Reviews

Now that we know whose Ramens were reviewed the most -- Asian countries and the US, mainly -- let's find out whose are the best! To start, let's see how the ramen reviews are distributed in general.

Let's plot a histogram of ramen ratings. (Use `ratings`, which contains only the numeric values in `ramen['rating']`.)

- Create a histogram based on `ratings`.
- Try a few different amounts of bins and keep the one that best exemplifies the distribution of the data.
- Add appropriate X and Y axis labels and a plot title.

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

path = "/content/drive/MyDrive/Colab Notebooks/"
ramen_file_path = "/content/drive/MyDrive/Colab Notebooks/ramen_ratings.csv"

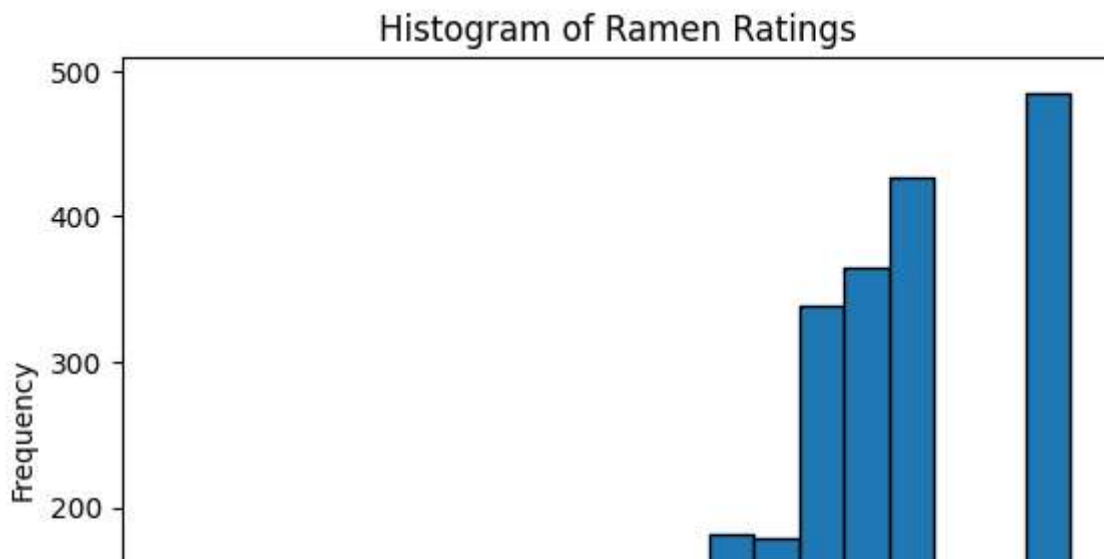
# Read the CSV file into a pandas DataFrame
ramen_data = pd.read_csv(ramen_file_path)

# Remove non-numeric values from ramen['rating']
ratings = pd.to_numeric(ramen_data['rating'], errors='coerce').dropna()

# Create a histogram based on ratings with a suitable number of bins
plt.hist(ratings, bins=20, edgecolor='k') # You can adjust the number of bins as needed

# Add labels and title
plt.xlabel('Ramen Ratings')
plt.ylabel('Frequency')
plt.title('Histogram of Ramen Ratings')

# Show the plot
plt.show()
```



### ▼ Which country has the best ramen?

Now that we know the general distribution of ramen ratings, let's find the average ramen rating for countries in the dataset. Since some countries were only reviewed a small number of times, their averages could easily be swayed by outliers. So let's focus just on the 10 countries that were reviewed the most often.

Let's find and print the average rating for ramen varieties from each of the 10 most reviewed countries.

- Import `numpy` as `np`.
- Make a list `high_volume` containing the first 10 countries in `country_count`. (Remember that the country names are keys in that dictionary.)
- Loop through the countries in the new list `high_volume`.
- For each of those countries, subset `ramen['rating']` to include only the reviews where `ramen['country']` corresponds to the country in question, and then use `np.mean()` to find the average rating for that country.
- Still in that `for` loop, assign that average rating (the value) to the country name (the key) in the dictionary `average_ratings`.
- Loop through the new dictionary `average_ratings` and print each key-value pair, separated by a colon and a space.

---

As above, there is a simpler `pandas` way to do this, but this exercise will help us further solidify the logic of loops, dictionaries, and dataframes. Plus, we'll see the simpler `pandas` way below.

Keep in mind that even though the `for` loop sounds complicated, it is made of several pieces, each of which you have done before, and each of which is simple *on its own*. Be slow and deliberate about breaking down those steps, and you'll definitely be able to figure it out!

```
import pandas as pd
import csv
import matplotlib.pyplot as plt
import numpy as np

path = "/content/drive/MyDrive/Colab Notebooks/"
ramen_file_path = "/content/drive/MyDrive/Colab Notebooks/ramen_ratings.csv"

# Read the CSV file into a pandas DataFrame
ramen_data = pd.read_csv(ramen_file_path)

# Remove non-numeric values from ramen['rating']
ratings = pd.to_numeric(ramen_data['rating'], errors='coerce').dropna()

# Create a histogram based on ratings with a suitable number of bins
plt.hist(ratings, bins=20, edgecolor='k') # You can adjust the number of bins as needed

# Add labels and title
plt.xlabel('Ramen Ratings')
plt.ylabel('Frequency')
plt.title('Histogram of Ramen Ratings')

# Show the plot
plt.show()

# Import numpy as np
import numpy as np

# Make a list high_volume containing the first 10 countries in country_count
high_volume = list(country_count.keys())[:10]

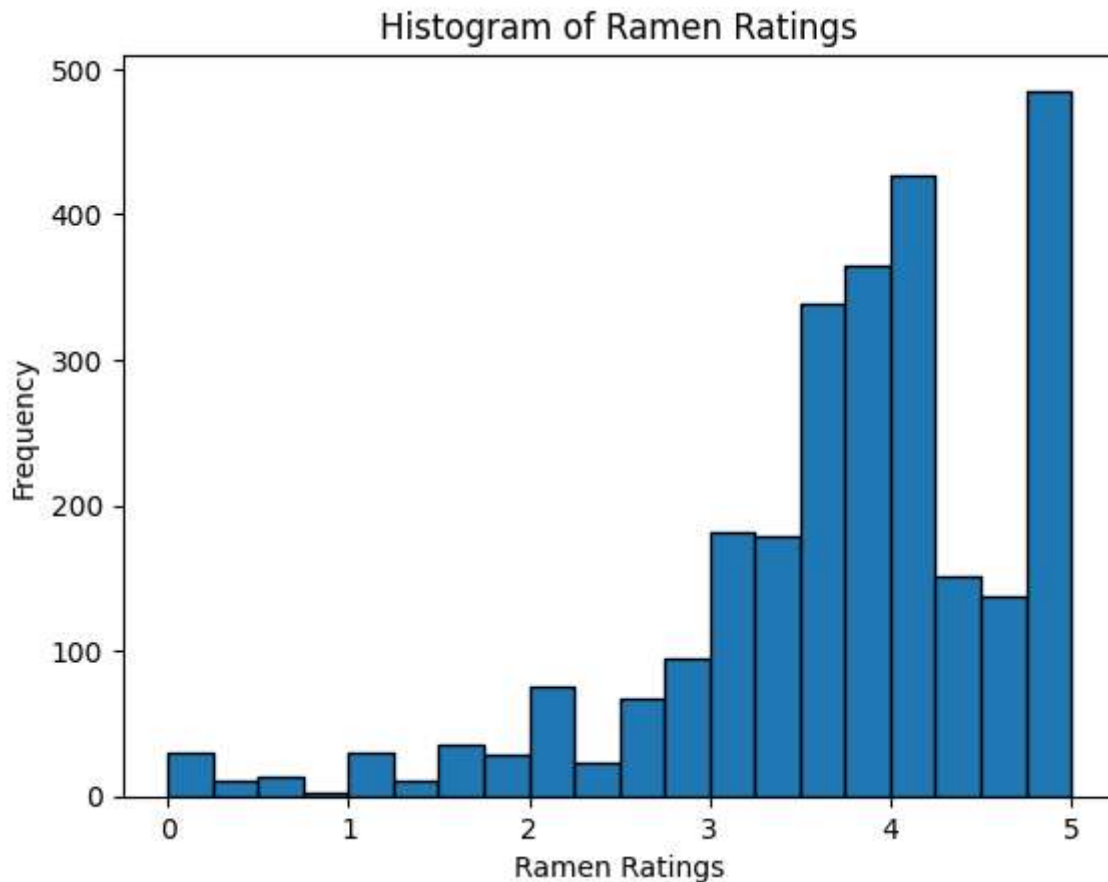
# Create an empty dictionary of ramen ratings
average_ratings = {}

# Loop through countries in high_volume
for country in high_volume:
    # Subset ramen['rating'] to include only the reviews for the current country
    country_ratings = ratings[ramen_data['country'] == country]

    # Use np.mean() to find the average rating for that country
    average_rating = np.mean(country_ratings)

    # Assign the average rating for `country` to `average_ratings`
    average_ratings[country] = average_rating

# Loop through the new dictionary `average_ratings` and print each key-value pair
for country, avg_rating in average_ratings.items():
    print(f"{country}: {avg_rating}")
```



```

Japan: 3.982915567282322
United States: 3.4833584337349395
South Korea: 3.7976851851851854
Taiwan: 3.688864628820961
Thailand: 3.380104712041885
China: 3.434571428571428
Malaysia: 4.16656050955414
Hong Kong: 3.8093749999999997
Indonesia: 4.067275006571072

```

## ▼ Ranking the countries

That list is great, but let's rank those countries according to their average rating.

This isn't so much an exercise as code to look at, in anticipation of things we'll do in the future. Lists, dictionaries, and for loops can be very useful but, as our data gets bigger, our code will get simpler (and faster!) if we learn some of the built-in functions and methods that the `pandas` package provides.

Simply look over this code and see if you can figure out what it's doing.

```

import pandas as pd
import csv
import matplotlib.pyplot as plt
import numpy as np

```

```
path = "/content/drive/MyDrive/Colab Notebooks/"
ramen_file_path = "/content/drive/MyDrive/Colab Notebooks/ramen_ratings.csv"

# Read the CSV file into a pandas DataFrame
ramen_data = pd.read_csv(ramen_file_path)

# Convert the "rating" column to numeric, coerce errors to NaN
ramen_data['rating'] = pd.to_numeric(ramen_data['rating'], errors='coerce')

# Remove rows with NaN values in the "rating" column
ramen_data = ramen_data.dropna(subset=['rating'])

# Create a histogram based on ratings with a suitable number of bins
plt.hist(ramen_data['rating'], bins=20, edgecolor='k') # You can adjust the number of bins as needed

# Add labels and title
plt.xlabel('Ramen Ratings')
plt.ylabel('Frequency')
plt.title('Histogram of Ramen Ratings')

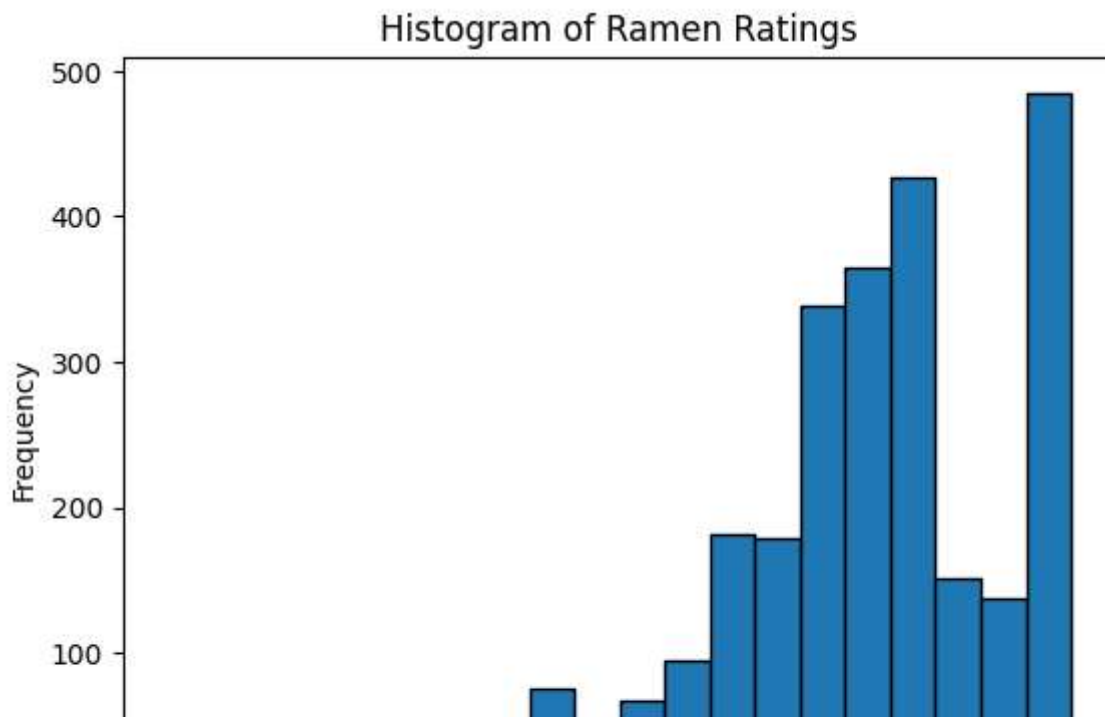
# Show the plot
plt.show()

# Make a list high_volume containing the first 10 countries in country_count
high_volume = list(country_count.keys())[:10]

# Filter only the ramen ratings from countries in `high_volume`
high_volume_ratings = ramen_data[ramen_data['country'].isin(high_volume)]

# Use the `pandas` methods `groupby()` and `mean()` to summarize dataframe with average rating
average_ratings = high_volume_ratings.groupby('country')['rating'].mean().reset_index()

# Print out average ratings by country, sorted in descending order by rating
print(average_ratings.sort_values(by='rating', ascending=False))
```



## ▼ Top ramen brands

It looks like Malaysia wins the ramen olympics! It's the country with the highest average ramen rating, at least out of the 10 countries reviewed the most. But which brand is ramen is best?

Take the provided code (from the `pandas` way to count, subset, and average ratings by *country* above) and alter it so that it counts, subsets, and averages ramen ratings by *brand* instead.

---

This is the all-important data science skill of finding, copying, pasting, and tweaking existing code to fit your needs. It's part of the hacker ethic -- don't reinvent the wheel but instead spend your time inventing new kinds of wheels! It's also a great way to begin to figure out how new objects, methods, and functions work. After all, most of the code that you copy, paste, and tweak, rather than write from scratch yourself, will contain at least *something* that's new to you. See if you can make this code work for your current purpose.

```
import pandas as pd
import csv
import matplotlib.pyplot as plt
import numpy as np

path = "/content/drive/MyDrive/Colab Notebooks/"
ramen_file_path = "/content/drive/MyDrive/Colab Notebooks/ramen_ratings.csv"

# Read the CSV file into a pandas DataFrame
ramen_data = pd.read_csv(ramen_file_path)

# Convert the "rating" column to numeric, coerce errors to NaN
```

```
ramen_data['rating'] = pd.to_numeric(ramen_data['rating'], errors='coerce')

# Remove rows with NaN values in the "rating" column
ramen_data = ramen_data.dropna(subset=['rating'])

# Create a histogram based on ratings with a suitable number of bins
plt.hist(ramen_data['rating'], bins=20, edgecolor='k') # You can adjust the number of bins as needed

# Add labels and title
plt.xlabel('Ramen Ratings')
plt.ylabel('Frequency')
plt.title('Histogram of Ramen Ratings')

# Show the plot
plt.show()

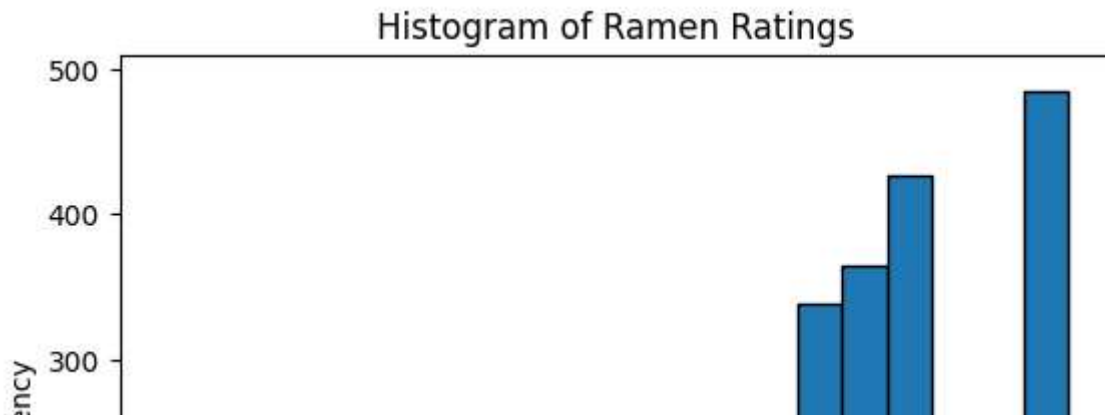
# Make a list of the first 10 brands by count
top_brands = ramen_data['brand'].value_counts().head(10).index.tolist()

# Filter only the ramen ratings from the top brands
top_brand_ratings = ramen_data[ramen_data['brand'].isin(top_brands)]

# Use the `pandas` methods `groupby()` and `mean()` to summarize dataframe with average rating by brand
average_ratings_by_brand = top_brand_ratings.groupby('brand')['rating'].mean().reset_index()

# Print out average ratings by brand, sorted in descending order by rating
print(average_ratings_by_brand.sort_values(by='rating', ascending=False))
```





## ▼ Ranking ramen styles

Indome, Samyang Foods, and Nongshim are neck and neck! Must be some great ramen. The Ramen Rater has also included information on the *style* of ramen (pack, bowl, cup, tray, box, etc.). Which style does The Ramen Rater prefer?

As in the previous task, take existing code and tweak it to find whether ramen in a pack, a bowl, a cup, or a tray is the most highly rated on average. (We're focusing on those four styles because the others only appear a small number of times in comparison, some only once.)

- Don't change the definition of `key_styles`. It's already ready for you.
- Watch the `.isin()` method. Since we defined `key_styles` as a list, you don't need the first 10 keys of a sorted dataframe. You just need the list `key_styles`.
- Change anything else (besides `key_styles`) that you need to in order to make the code do what you want it to do.

```
1          Mama  3.628873

import pandas as pd
import csv
import matplotlib.pyplot as plt
import numpy as np

path = "/content/drive/MyDrive/Colab Notebooks/"
ramen_file_path = "/content/drive/MyDrive/Colab Notebooks/ramen_ratings.csv"

# Read the CSV file into a pandas DataFrame
ramen_data = pd.read_csv(ramen_file_path)

# Convert the "rating" column to numeric, coerce errors to NaN
ramen_data['rating'] = pd.to_numeric(ramen_data['rating'], errors='coerce')

# Remove rows with NaN values in the "rating" column
ramen_data = ramen_data.dropna(subset=['rating'])

# Create a histogram based on ratings with a suitable number of bins
plt.hist(ramen_data['rating'], bins=20, edgecolor='k') # You can adjust the number of bins a
```

```
# Add labels and title
plt.xlabel('Ramen Ratings')
plt.ylabel('Frequency')
plt.title('Histogram of Ramen Ratings')

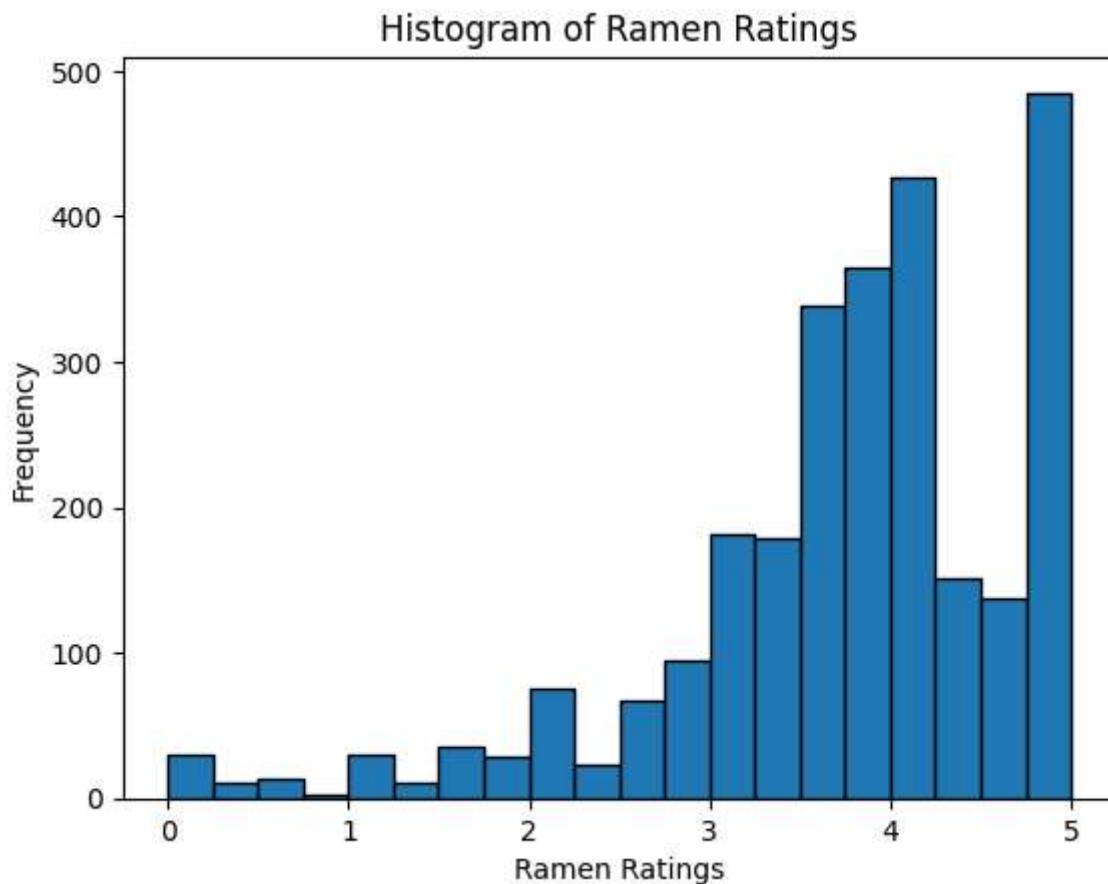
# Show the plot
plt.show()

# Define the key styles to focus on
key_styles = ['Pack', 'Bowl', 'Cup', 'Tray']

# Filter only the ramen ratings from the key styles
key_style_ratings = ramen_data[ramen_data['style'].isin(key_styles)]

# Use the `pandas` methods `groupby()` and `mean()` to summarize dataframe with average rating
average_ratings_by_style = key_style_ratings.groupby('style')['rating'].mean().reset_index()

# Print out average ratings by style, sorted in descending order by rating
print(average_ratings_by_style.sort_values(by='rating', ascending=False))
```



	style	rating
2	Pack	3.709968
0	Bowl	3.691440
3	Tray	3.567045
1	Cup	3.516436

## Conclusion

We have our winners! The best ramen, by country, comes from Malaysia. The best ramen by brand comes from Indomie, Samyang Foods, and Nongshim. And the best ramen style, according to The Ramen Rater, is the pack. (Though without performing proper statistical tests, we can't rule out the bowl either, apparently!) The Ramen Rater did a great service for us by providing these ratings. And now that we've done the data analysis, it's time to go shopping!