1922 lines (1922 sloc)   106 KB          <> 📄   Raw   Blame   ✏ ▾ 📋 🗑

CO Open in Colab

```
In [21]:   #import library
           import pandas as pd
           import matplotlib.pyplot as plt
           import numpy as np
           %matplotlib inline
           from matplotlib import style
           import seaborn as sns
```

```
In [ ]:    #imported data
           df = pd.read_csv('https://raw.githubusercontent.com/Sweetpea007/Projects/main/starbucks-.csv')
```

```
In [ ]:    #data preview 1
           df.head()
```

Out[ ]:

| | Brand | Store Number | Store Name | Ownership Type | Street Address | City | State/Province | Country | Postcode | Phone Number | Timezone | Longitude | Latitude |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | Starbucks | 47370-257954 | Meritxell, 96 | Licensed | Av. Meritxell, 96 | Andorra la Vella | 7 | AD | AD500 | 376818720 | GMT+1:00 Europe/Andorra | 1.53 | 42.51 |
| 1 | Starbucks | 22331-212325 | Ajman Drive Thru | Licensed | 1 Street 69, Al Jarf | Ajman | AJ | AE | NaN | NaN | GMT+04:00 Asia/Dubai | 55.47 | 25.42 |
| 2 | Starbucks | 47089-256771 | Dana Mall | Licensed | Sheikh Khalifa Bin Zayed St. | Ajman | AJ | AE | NaN | NaN | GMT+04:00 Asia/Dubai | 55.47 | 25.39 |
| 3 | Starbucks | 22126-218024 | Twofour 54 | Licensed | Al Salam Street | Abu Dhabi | AZ | AE | NaN | NaN | GMT+04:00 Asia/Dubai | 54.38 | 24.48 |
| 4 | Starbucks | 17127-178586 | Al Ain Tower | Licensed | Khaldiya Area, Abu Dhabi Island | Abu Dhabi | AZ | AE | NaN | NaN | GMT+04:00 Asia/Dubai | 54.54 | 24.51 |

```
In [ ]:    #data preview 2
           df.tail()
```

Out[ ]:

| | Brand | Store Number | Store Name | Ownership Type | Street Address | City | State/Province | Country | Postcode | Phone Number | Timezone | Longitude | Latitude |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 25595 | Starbucks | 21401-212072 | Rex | Licensed | 141 Nguyễn Huệ, Quận 1, Góc đường Pasteur và L... | Thành Phố Hồ Chí Minh | SG | VN | 70000 | 08 3824 4668 | GMT+000000 Asia/Saigon | 106.70 | 10.78 |
| 25596 | Starbucks | 24010-226985 | Panorama | Licensed | SN-44, Tòa Nhà Panorama, 208 Trần Văn Trà, Quận 7 | Thành Phố Hồ Chí Minh | SG | VN | 70000 | 08 5413 8292 | GMT+000000 Asia/Saigon | 106.71 | 10.72 |
| 25597 | Starbucks | 47608-253804 | Rosebank Mall | Licensed | Cnr Tyrwhitt and Cradock Avenue, Rosebank | Johannesburg | GT | ZA | 2194 | 27873500159 | GMT+000000 Africa/Johannesburg | 28.04 | -26.15 |
| 25598 | Starbucks | 47640-253809 | Menlyn Maine | Licensed | Shop 61B, Central Square, Cnr Aramist & Coroba... | Menlyn | GT | ZA | 181 | NaN | GMT+000000 Africa/Johannesburg | 28.28 | -25.79 |
| 25599 | Starbucks | 47609-253286 | Mall of Africa | Licensed | Shop 2077, Upper Level, Waterfall City | Midrand | GT | ZA | 1682 | 27873500215 | GMT+000000 Africa/Johannesburg | 28.11 | -26.02 |

```
In [ ]:    #Data types
           df.dtypes

Out[ ]:    Brand            object
           Store Number     object
           Store Name       object
           Ownership Type   object
           Street Address   object
           City             object
           State/Province   object
           Country          object
           Postcode         object
           Phone Number     object
           Timezone         object
           Longitude        float64
           Latitude         float64
           dtype: object
```

```
In [ ]:    #confirming if data is missing
           df.isnull().sum()

Out[ ]:    Brand              0
           Store Number       0
           Store Name         0
           Ownership Type     0
           Street Address     2
           City              15
           State/Province     0
           Country            0
           Postcode        1522
           Phone Number    6861
           Timezone           0
           Longitude          1
           Latitude           1
           dtype: int64
```

```
In [ ]:    # of rows and columns
           df.shape

Out[ ]:    (25600, 13)
```

```
In [ ]:    # How many Starbucks locations worldwide?
           df.shape [0]

Out[ ]:    25600
```

**25,599 Starbucks locations since data rows include header row

```
In [ ]:    # column names
           df.columns

Out[ ]:    Index(['Brand', 'Store Number', 'Store Name', 'Ownership Type',
                  'Street Address', 'City', 'State/Province', 'Country', 'Postcode',
                  'Phone Number', 'Timezone', 'Longitude', 'Latitude'],
                 dtype='object')
```

```
In [14]:   #How many counrties have startbuck locationa?
           len(df.Country.unique())

Out[14]:   73
```

```
In [15]:   #What region has the most Starbucks locations?
           df.Country.value_counts().head(1)

Out[15]:   US    13608
           Name: Country, dtype: int64
```

```
In [16]:   #What are the top 10 countries with Starbucks locaions?
           df.Country.value_counts().head(10)

Out[16]:   US    13608
           CN     2734
           CA     1468
           JP     1237
           KR      993
           GB      901
           MX      579
           TW      394
           TR      326
           PH      298
           Name: Country, dtype: int64
```

In [36]:
```
#How many Starbucks Locations in New York?
df[df['State/Province']=='NY']
```

Out[36]:

| | Brand | Store Number | Store Name | Ownership Type | Street Address | City | State/Province | Country | Postcode | Timezone | Longitude | Latitude |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 20858 | Starbucks | 7379-1056 | Wolf Road | Company Owned | 18 Wolf Rd, Crossgates Mall | Albany | NY | US | 122052609 | GMT-05:00 America/New_York | -73.82 | 42.71 |
| 20859 | Starbucks | 11064-103915 | Crossgates Mall | Company Owned | 1 Crossgates Mall Road, B231 | Albany | NY | US | 122035367 | GMT-05:00 America/New_York | -73.85 | 42.69 |
| 20860 | Starbucks | 15207-156777 | Target Colonie T-1268 | Licensed | 1440 Central Ave | Albany | NY | US | 122055118 | GMT-05:00 America/New_York | -73.82 | 42.71 |
| 20861 | Starbucks | 7922-92120 | North Pearl Street | Company Owned | 10 North Pearl St | Albany | NY | US | 122072702 | GMT-05:00 America/New_York | -73.75 | 42.65 |
| 20862 | Starbucks | 75393-105057 | College St. Rose | Licensed | 420 Western Ave, Hilton Garden Inn at Albany M... | Albany | NY | US | 122031400 | GMT-05:00 America/New_York | -73.79 | 42.66 |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 21498 | Teavana | 28235-250120 | Teavana - Westchester Ridge HIll | Company Owned | 117 Market St., Cross County Shopping Center | Yonkers | NY | US | 10710 | GMT-05:00 America/New_York | -73.86 | 40.96 |
| 21499 | Starbucks | 13632-105641 | Cross County Shopping Center | Company Owned | 8000 Mall Walk, Space 7080 | Yonkers | NY | US | 107041006 | GMT-05:00 America/New_York | -73.85 | 40.93 |
| 21500 | Starbucks | 14369-115444 | Yonkers, Bronx River Road | Company Owned | 841-851 Bronx River Road | Yonkers | NY | US | 107087058 | GMT-05:00 America/New_York | -73.84 | 40.93 |
| 21501 | Starbucks | 7901-67260 | Yonkers | Company Owned | 2458 Central Park Avenue | Yonkers | NY | US | 107101125 | GMT-05:00 America/New_York | -73.83 | 40.98 |
| 21502 | Starbucks | 7504-7590 | Yorktown | Company Owned | 1932 Commerce Street, U of Akron Student Union | Yorktown Heights | NY | US | 105984410 | GMT-05:00 America/New_York | -73.78 | 41.27 |

645 rows × 12 columns

In [37]:
```
#How many Starbucks Locations in New York City?
df[df['City']=='New York']
```
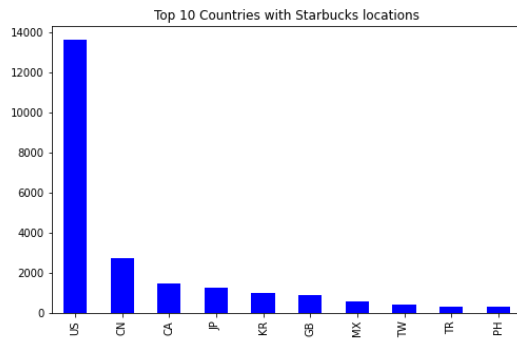
Object `CIty` not found.

Out[37]:

| | Brand | Store Number | Store Name | Ownership Type | Street Address | City | State/Province | Country | Postcode | Timezone | Longitude | Latitude |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 21129 | Starbucks | 818-227125 | 80th & Second | Company Owned | 245 East 80th St | New York | NY | US | 10075 | GMT-05:00 America/New_York | -73.95 | 40.77 |
| 21130 | Starbucks | 14318-119964 | Nassau & Fulton | Company Owned | 130 Fulton Street | New York | NY | US | 100382504 | GMT-05:00 America/New_York | -74.01 | 40.71 |
| 21131 | Starbucks | 7670-36979 | 49th & 8th | Company Owned | 825 Eighth Avenue, W-9 | New York | NY | US | 100197416 | GMT-05:00 America/New_York | -73.99 | 40.76 |
| 21132 | Starbucks | 7626-33939 | Spring and Varick | Company Owned | 150 Varick Street, The Lyric Building | New York | NY | US | 100131218 | GMT-05:00 America/New_York | -74.01 | 40.73 |
| 21133 | Starbucks | 7699-45959 | 95th & Broadway | Company Owned | 2521 Broadway | New York | NY | US | 100256924 | GMT-05:00 America/New_York | -73.97 | 40.79 |
| ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| 21356 | Starbucks | 7456-3949 | 125th & Lenox | Company Owned | 77-83 West 125th Street | New York | NY | US | 100274512 | GMT-05:00 America/New_York | -73.95 | 40.81 |
| 21357 | Starbucks | 75491-113947 | Limited Brands-NYC | Licensed | 1740 Broadway | New York | NY | US | 100194315 | GMT-05:00 America/New_York | -73.98 | 40.77 |
| 21358 | Starbucks | 7393-1367 | 49th btwn 8th & 9th | Company Owned | 325 W 49th St | New York | NY | US | 100197316 | GMT-05:00 America/New_York | -73.99 | 40.76 |
| 21359 | Starbucks | 7285-1073 | 22nd & 6th | Company Owned | 684 Avenue of the Americas | New York | NY | US | 100105110 | GMT-05:00 America/New_York | -73.99 | 40.74 |
| 21360 | Starbucks | 7444-3689 | Rockefeller Center Subway | Company Owned | 30 Rockefeller Plaza | New York | NY | US | 101120015 | GMT-05:00 America/New_York | -73.98 | 40.76 |

232 rows × 12 columns

```python
fig = plt.figure(figsize=(8,5))
ax = fig.add_subplot(111)
ax.set(title = "Top 10 Countries with Starbucks locations")
df.Country.value_counts().head(10).plot(kind="bar", color = "blue")
```
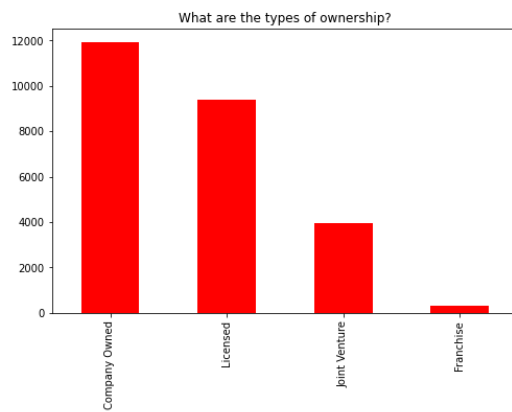
`<matplotlib.axes._subplots.AxesSubplot at 0x7fcce8ed6110>`

```python
#What are the types of ownership?
df['Ownership Type'].value_counts()
```

```
Company Owned    11932
Licensed          9375
Joint Venture     3976
Franchise          317
Name: Ownership Type, dtype: int64
```

```python
fig = plt.figure(figsize=(8,5))
ax = fig.add_subplot(111)
ax.set(title = "What are the types of ownership?")
df['Ownership Type'].value_counts().plot(kind="bar", color = "red")
plt.show()
```

```
#Drop phone number column since some data is missing
df.drop('Phone Number', axis=1, inplace=True)
```

```
#data preview to confirm Phone Number column was dropped
df.head()
```

| | Brand | Store Number | Store Name | Ownership Type | Street Address | City | State/Province | Country | Postcode | Timezone | Longitude | Latitude |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | Starbucks | 47370-257954 | Meritxell, 96 | Licensed | Av. Meritxell, 96 | Andorra la Vella | 7 | AD | AD500 | GMT+1:00 Europe/Andorra | 1.53 | 42.51 |
| 1 | Starbucks | 22331-212325 | Ajman Drive Thru | Licensed | 1 Street 69, Al Jarf | Ajman | AJ | AE | NaN | GMT+04:00 Asia/Dubai | 55.47 | 25.42 |
| 2 | Starbucks | 47089-256771 | Dana Mall | Licensed | Sheikh Khalifa Bin Zayed St. | Ajman | AJ | AE | NaN | GMT+04:00 Asia/Dubai | 55.47 | 25.39 |
| 3 | Starbucks | 22126-218024 | Twofour 54 | Licensed | Al Salam Street | Abu Dhabi | AZ | AE | NaN | GMT+04:00 Asia/Dubai | 54.38 | 24.48 |
| 4 | Starbucks | 17127-178586 | Al Ain Tower | Licensed | Khaldiya Area, Abu Dhabi Island | Abu Dhabi | AZ | AE | NaN | GMT+04:00 Asia/Dubai | 54.54 | 24.51 |

**Conclusion**

1. How many Starbucks loactions are there worldwide?

Based on my analyst, there are 25,599 starbucks locations worldwide.

1. What region has the most Starbucks locations?

The region with the most Starbucks locations is the United States with New York City having the most locations.

1. What are the types of ownership?

The types of ownerships are company owned, joint ventures, licensed and franchise.