```
In [ ]:  # Packages imports
         import pandas as pd
         import numpy as np
         import datetime as dt
         from functools import reduce
         import matplotlib.pyplot as plt
```

```
In [2]:  # Import the dataset named "airbnb_price.csv" as a DataFrame called prices

         prices = pd.read_csv('airbnb_price.csv')

         # Display top few rows, the dataframe names as "prices"

         prices.head()
```

Out[2]:

	listing_id	price	nbhood_full
0	2595	225 dollars	Manhattan, Midtown
1	3831	89 dollars	Brooklyn, Clinton Hill
2	5099	200 dollars	Manhattan, Murray Hill
3	5178	79 dollars	Manhattan, Hell's Kitchen
4	5238	150 dollars	Manhattan, Chinatown

```
In [3]:  import pandas as pd

         # Import the dataset named "airbnb_room_type.xlsx" as a DataFrame called xls
         xls = pd.read_excel('airbnb_room_type.xlsx',sheet_name = 0)

         # Access the first sheet from xls as a DataFrame
         room_types = pd.DataFrame(xls)

         # Display the room_types DataFrame
         room_types.head()
```

Out[3]:

	listing_id	description	room_type
0	2595	Skylit Midtown Castle	Entire home/apt
1	3831	Cozy Entire Floor of Brownstone	Entire home/apt
2	5099	Large Cozy 1 BR Apartment In Midtown East	Entire home/apt
3	5178	Large Furnished Room Near B'way	private room
4	5238	Cute & Cozy Lower East Side 1 bdrm	Entire home/apt

```
In [4]:  # Import the dataset named "airbnb_last_review.tsv" as a DataFrame called reviews

         reviews = pd.read_table('airbnb_last_review.tsv',sep="\t")

         # Display top few rows, the dataframe names as "reviews"

         reviews.head()
```

Out[4]:

	listing_id	host_name	last_review
0	2595	Jennifer	May 21 2019
1	3831	LisaRoxanne	July 05 2019

2	5099	Chris	June 22 2019
3	5178	Shunichi	June 24 2019
4	5238	Ben	June 09 2019

In [5]:
```python
# Get datatypes of column of prices df

prices.dtypes
```

Out[5]:
```
listing_id      int64
price          object
nbhood_full    object
dtype: object
```

In [6]:
```python
# Get DataFrame information

prices.info()
```
```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 25209 entries, 0 to 25208
Data columns (total 3 columns):
 #   Column       Non-Null Count  Dtype
---  ------       --------------  -----
 0   listing_id   25209 non-null  int64
 1   price        25209 non-null  object
 2   nbhood_full  25209 non-null  object
dtypes: int64(1), object(2)
memory usage: 591.0+ KB
```

In [7]:
```python
# Get null values

prices.isnull().sum()
```

Out[7]:
```
listing_id     0
price          0
nbhood_full    0
dtype: int64
```

In [8]:
```python
# # Remove whitespace and string characters from prices column and change it to the inte
prices['price'] = prices['price'].str.replace(' dollars', '')

prices['price'] = prices['price'].astype('int')
```

In [9]:
```python
# Verify that Revenue is now an integer
assert prices['price'].dtype == 'int'
```

In [10]:
```python
prices[prices['price'] == 0]
```

Out[10]:

	listing_id	price	nbhood_full
10861	20333471	0	Bronx, East Morrisania
10958	20523843	0	Brooklyn, Bushwick
11023	20639628	0	Brooklyn, Bedford-Stuyvesant
11024	20639792	0	Brooklyn, Bedford-Stuyvesant
11025	20639914	0	Brooklyn, Bedford-Stuyvesant
11577	21291569	0	Brooklyn, Bushwick
11589	21304320	0	Brooklyn, Bushwick

```
In [11]:   # analyze descriptive statistics of prices df
           prices.describe()
```

Out[11]:

	listing_id	price
count	2.520900e+04	25209.000000
mean	2.068922e+07	141.777936
std	1.102928e+07	147.349137
min	2.595000e+03	0.000000
25%	1.202273e+07	69.000000
50%	2.234391e+07	105.000000
75%	3.037669e+07	175.000000
max	3.645581e+07	7500.000000

```
In [12]:   # Drop zero-price values using .drop()
           prices.drop(prices[prices['price'] == 0].index, inplace = True)
           prices.shape
```

Out[12]:   (25202, 3)

```
In [13]:   # Assert results
           assert prices['price'].min() > 0
```

1). What is the average price, per night, of an Airbnb listing in NYC?

```
In [14]:   # Calculate the average price, store it as Avg_price
           Avgerage_price = round(prices['price'].mean(),2)

           print('The average price, per night, of an Airbnb listing in NYCAvg_price : $' + str(Avg
```

The average price, per night, of an Airbnb listing in NYCAvg_price : $141.82

2).How does the average price of an Airbnb listing, per month, compare to the private rental market?

```
In [15]:   # Add a new column, price_per_month, to the prices DataFrame, assuming a year consists o

           prices['price_per_month'] = prices["price"] * 365/12
```

```
In [16]:   # Calculate the average price of the price_per_month column and store as a new variable,
           #Average_price_per_month,

           Average_price_per_month = prices['price_per_month'].mean()

           # rounded to two decimal places
           Average_price_per_month = round(Average_price_per_month,2)

           print('The average price, per month, of an Airbnb listing in NYCAvg_price: $' + str(Aver
```

The average price, per month, of an Airbnb listing in NYCAvg_price: $4313.61

```
In [17]:   # Calculate how much more, in dollars, the average cost of an Airbnb listing is versus t
           # and store it as Difference, rounding your final answer to two decimal places.

           # According to Zumper,a 1 bedroom apartment in New York City costs, on average, $3,100 p

           # Therefore benchmark for comparison = $3,100 per month

           Difference = round((Average_price_per_month - 3100),2)
```

```python
print('The difference compare to the private rental market: $' + str(Difference))
```

The difference compare to the private rental market: $1213.61

3).How many adverts are for private rooms?

In [18]:
```python
# Get datatypes of column of room_types df

room_types.dtypes
```

Out[18]:
```
listing_id       int64
description      object
room_type       object
dtype: object
```

In [19]:
```python
# Get DataFrame information

room_types.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 25209 entries, 0 to 25208
Data columns (total 3 columns):
 #   Column       Non-Null Count  Dtype
---  ------       --------------  -----
 0   listing_id   25209 non-null  int64
 1   description  25199 non-null  object
 2   room_type    25209 non-null  object
dtypes: int64(1), object(2)
memory usage: 591.0+ KB
```

In [20]:
```python
# Get null values

room_types.isnull().sum()
```

Out[20]:
```
listing_id       0
description     10
room_type        0
dtype: int64
```

In [21]:
```python
# Convert to categorical
room_types['room_type'] = room_types['room_type'].astype('category')
```

In [22]:
```python
# identify the value Inconsistency fields
room_type_counts = room_types['room_type'].value_counts()
print(room_type_counts)
```

```
Entire home/apt    8458
Private room       7241
entire home/apt    2665
private room       2248
ENTIRE HOME/APT    2143
PRIVATE ROOM       1867
Shared room         380
shared room         110
SHARED ROOM          97
Name: room_type, dtype: int64
```

In [23]:
```python
# Fix the Capitalization
room_types['room_type'] = room_types['room_type'].str.capitalize()
room_types['room_type'].value_counts()
```

Out[23]:
```
Entire home/apt    13266
Private room       11356
Shared room          587
Name: room_type, dtype: int64
```

```
In [24]:  # Strip all spaces
          room_types['room_type'] = room_types['room_type'].str.strip()
          # store the room_types in Room_frequencies
          Room_frequencies = room_types['room_type'].value_counts()


          Room_frequencies
```

```
Out[24]:  Entire home/apt     13266
          Private room        11356
          Shared room           587
          Name: room_type, dtype: int64
```

```
In [25]:  print('The Number of Private rooms are adverted : 11356')
```

```
          The Number of Private rooms are adverted : 11356
```

1. What timeframe are we working with?

```
In [26]:  # Get datatypes of column of reviews df

          reviews.dtypes
```

```
Out[26]:  listing_id      int64
          host_name       object
          last_review     object
          dtype: object
```

```
In [27]:  # Get DataFrame information

          reviews.info()
```

```
          <class 'pandas.core.frame.DataFrame'>
          RangeIndex: 25209 entries, 0 to 25208
          Data columns (total 3 columns):
           #   Column        Non-Null Count   Dtype
          ---  ------        --------------   -----
           0   listing_id    25209 non-null   int64
           1   host_name     25201 non-null   object
           2   last_review   25209 non-null   object
          dtypes: int64(1), object(2)
          memory usage: 591.0+ KB
```

```
In [28]:  # Get null values

          reviews.isnull().sum()
```

```
Out[28]:  listing_id      0
          host_name       8
          last_review     0
          dtype: int64
```

```
In [29]:  #Convert last_review column to date
          reviews['last_review'] = pd.to_datetime(reviews['last_review'])
```

```
In [30]:  # check
          reviews.dtypes
```

```
Out[30]:  listing_id              int64
          host_name               object
          last_review     datetime64[ns]
          dtype: object
```

```
In [31]:  # Create First_reviewed, the earliest review date
          First_reviewed = reviews["last_review"].dt.date.min()
```

```
print("first_reviewed date :",First_reviewed)
```

first_reviewed date : 2019-01-01

In [32]:
```
# Create Last_reviewed, the most recent review date
Last_reviewed = reviews["last_review"].dt.date.max()

print("last_reviewed date :",Last_reviewed)
```

last_reviewed date : 2019-07-09

5.Joining the DataFrames

In [33]:
```
#merge the three DataFrames to make any future analysis easier to conduct. Once we have
#we will remove any observations with missing values and check for duplicates.
#from functools import reduce

#define list of DataFrames
df1 =pd.DataFrame(prices)
df2 =pd.DataFrame(room_types)
df3 =pd.DataFrame(reviews)

dfs = [df1, df2, df3]
```

In [34]:
```
#merge all DataFrames into one
airbnb_merged = reduce(lambda  left,right: pd.merge(left,right,on=['listing_id'],
                                        how='outer'), dfs)

airbnb_merged
```

Out[34]:

	listing_id	price	nbhood_full	price_per_month	description	room_type	host_name	last_review
0	2595	225.0	Manhattan, Midtown	6843.750000	Skylit Midtown Castle	Entire home/apt	Jennifer	2019-05-21
1	3831	89.0	Brooklyn, Clinton Hill	2707.083333	Cozy Entire Floor of Brownstone	Entire home/apt	LisaRoxanne	2019-07-05
2	5099	200.0	Manhattan, Murray Hill	6083.333333	Large Cozy 1 BR Apartment In Midtown East	Entire home/apt	Chris	2019-06-22
3	5178	79.0	Manhattan, Hell's Kitchen	2402.916667	Large Furnished Room Near B'way	Private room	Shunichi	2019-06-24
4	5238	150.0	Manhattan, Chinatown	4562.500000	Cute & Cozy Lower East Side 1 bdrm	Entire home/apt	Ben	2019-06-09
...	...	...	...	...	...	...	...	...
25204	20639628	NaN	NaN	NaN	Spacious comfortable master bedroom with nice ...	Private room	Adeyemi	2019-06-15
25205	20639792	NaN	NaN	NaN	Contemporary bedroom in brownstone with nice view	Private room	Adeyemi	2019-06-21
25206	20639914	NaN	NaN	NaN	Cozy yet spacious private brownstone bedroom	Private room	Adeyemi	2019-06-23

25207	21291569	NaN	NaN	NaN	Coliving in Brooklyn! Modern design / Shared room	Shared room	Sergii	2019-06-22
25208	21304320	NaN	NaN	NaN	Best Coliving space ever! Shared room.	Shared room	Sergii	2019-05-24

25209 rows × 8 columns

In [35]:
```python
airbnb_merged.dropna(inplace=True)

airbnb_merged
```

Out[35]:

	listing_id	price	nbhood_full	price_per_month	description	room_type	host_name	last_review
0	2595	225.0	Manhattan, Midtown	6843.750000	Skylit Midtown Castle	Entire home/apt	Jennifer	2019-05-21
1	3831	89.0	Brooklyn, Clinton Hill	2707.083333	Cozy Entire Floor of Brownstone	Entire home/apt	LisaRoxanne	2019-07-05
2	5099	200.0	Manhattan, Murray Hill	6083.333333	Large Cozy 1 BR Apartment In Midtown East	Entire home/apt	Chris	2019-06-22
3	5178	79.0	Manhattan, Hell's Kitchen	2402.916667	Large Furnished Room Near B'way	Private room	Shunichi	2019-06-24
4	5238	150.0	Manhattan, Chinatown	4562.500000	Cute & Cozy Lower East Side 1 bdrm	Entire home/apt	Ben	2019-06-09
...	...	...	...	...	...	...	...	...
25197	36425863	129.0	Manhattan, Upper East Side	3923.750000	Lovely Privet Bedroom with Privet Restroom	Private room	Rusaa	2019-07-07
25198	36427429	45.0	Queens, Flushing	1368.750000	No.2 with queen size bed	Private room	H Ai	2019-07-07
25199	36438336	235.0	Staten Island, Great Kills	7147.916667	Seas The Moment	Private room	Ben	2019-07-07
25200	36442252	100.0	Bronx, Mott Haven	3041.666667	1B-1B apartment near by Metro	Entire home/apt	Blaine	2019-07-07
25201	36455809	30.0	Brooklyn, Bushwick	912.500000	Cozy Private Room in Bushwick, Brooklyn	Private room	Christine	2019-07-08

25184 rows × 8 columns

In [36]:
```python
#Identify duplicate values
airbnb_merged.duplicated().sum()
```

Out[36]: 0

In [37]:
```python
#merge the three DataFrames to make any future analysis easier to conduct. Once we have
```

```
#we will remove any observations with missing values and check for duplicates.

# Merge prices and room_types to create rooms_and_prices
rooms_and_prices = prices.merge(room_types, how="outer", on="listing_id")
```

In [38]:
```
# Merge rooms_and_prices with the reviews DataFrame to create airbnb_merged
airbnb_merged1 = rooms_and_prices.merge(reviews, how="outer", on="listing_id")
```

In [39]:
```
airbnb_merged1
```

Out[39]:

	listing_id	price	nbhood_full	price_per_month	description	room_type	host_name	last_review
0	2595	225.0	Manhattan, Midtown	6843.750000	Skylit Midtown Castle	Entire home/apt	Jennifer	2019-05-21
1	3831	89.0	Brooklyn, Clinton Hill	2707.083333	Cozy Entire Floor of Brownstone	Entire home/apt	LisaRoxanne	2019-07-05
2	5099	200.0	Manhattan, Murray Hill	6083.333333	Large Cozy 1 BR Apartment In Midtown East	Entire home/apt	Chris	2019-06-22
3	5178	79.0	Manhattan, Hell's Kitchen	2402.916667	Large Furnished Room Near B'way	Private room	Shunichi	2019-06-24
4	5238	150.0	Manhattan, Chinatown	4562.500000	Cute & Cozy Lower East Side 1 bdrm	Entire home/apt	Ben	2019-06-09
...	...	...	...	...	...	...	...	...
25204	20639628	NaN	NaN	NaN	Spacious comfortable master bedroom with nice ...	Private room	Adeyemi	2019-06-15
25205	20639792	NaN	NaN	NaN	Contemporary bedroom in brownstone with nice view	Private room	Adeyemi	2019-06-21
25206	20639914	NaN	NaN	NaN	Cozy yet spacious private brownstone bedroom	Private room	Adeyemi	2019-06-23
25207	21291569	NaN	NaN	NaN	Coliving in Brooklyn! Modern design / Shared room	Shared room	Sergii	2019-06-22
25208	21304320	NaN	NaN	NaN	Best Coliving space ever! Shared room.	Shared room	Sergii	2019-05-24

25209 rows × 8 columns

In [40]:
```
airbnb_merged1.dropna(inplace=True)
```

In [41]:
```
airbnb_merged1
```

Out[41]:

	listing_id	price	nbhood_full	price_per_month	description	room_type	host_name	last_review
0	2595	225.0	Manhattan, Midtown	6843.750000	Skylit Midtown Castle	Entire home/apt	Jennifer	2019-05-21

1	3831	89.0	Brooklyn, Clinton Hill	2707.083333	Cozy Entire Floor of Brownstone	Entire home/apt	LisaRoxanne	2019-07-05
2	5099	200.0	Manhattan, Murray Hill	6083.333333	Large Cozy 1 BR Apartment In Midtown East	Entire home/apt	Chris	2019-06-22
3	5178	79.0	Manhattan, Hell's Kitchen	2402.916667	Large Furnished Room Near B'way	Private room	Shunichi	2019-06-24
4	5238	150.0	Manhattan, Chinatown	4562.500000	Cute & Cozy Lower East Side 1 bdrm	Entire home/apt	Ben	2019-06-09
...	...	...	...	...	...	...	...	...
25197	36425863	129.0	Manhattan, Upper East Side	3923.750000	Lovely Privet Bedroom with Privet Restroom	Private room	Rusaa	2019-07-07
25198	36427429	45.0	Queens, Flushing	1368.750000	No.2 with queen size bed	Private room	H Ai	2019-07-07
25199	36438336	235.0	Staten Island, Great Kills	7147.916667	Seas The Moment	Private room	Ben	2019-07-07
25200	36442252	100.0	Bronx, Mott Haven	3041.666667	1B-1B apartment near by Metro	Entire home/apt	Blaine	2019-07-07
25201	36455809	30.0	Brooklyn, Bushwick	912.500000	Cozy Private Room in Bushwick, Brooklyn	Private room	Christine	2019-07-08

25184 rows × 8 columns

```
In [42]:  #Identify duplicate values
          airbnb_merged1.duplicated().sum()
```

Out[42]: 0

6.Analyzing listing prices by NYC borough

```
In [43]:  # Extract information from the nbhood_full column and store as a new column, borough
          airbnb_merged["borough"] = airbnb_merged["nbhood_full"].str.partition(",")[0]

          airbnb_merged["borough"]
```

```
Out[43]:  0             Manhattan
          1              Brooklyn
          2             Manhattan
          3             Manhattan
          4             Manhattan
                        ...
          25197         Manhattan
          25198            Queens
          25199     Staten Island
          25200             Bronx
          25201          Brooklyn
          Name: borough, Length: 25184, dtype: object
```

```
In [44]:  # Grouping by 'borough' and calculating summary statistics
          borough = airbnb_merged.groupby('borough')['price'].agg(['sum', 'mean', 'median', 'count'

          # Round boroughs to 2 decimal places, and sort by mean in descending orde
          borough = borough.round(2).sort_values('mean',ascending = False).reset_index()

          borough =pd.DataFrame(borough)

          print(borough)
```

```
        borough        sum    mean  median  count
0     Manhattan  1898417.0  184.04   149.0  10315
1      Brooklyn  1275250.0  122.02    95.0  10451
2        Queens   320715.0   92.83    70.0   3455
3  Staten Island    22974.0   86.04    71.0    267
4         Bronx    55156.0   79.25    65.0    696
```

1. Price range by borough

```
In [45]:  #Using cut() - create category ranges and names
          ranges = [0,69,175,350,np.inf]
          group_names = ['Budget', 'Average', 'Expensive','Extravagant']
          # Create Price Range column
          airbnb_merged['Price_Range'] = pd.cut(airbnb_merged['price'], bins=ranges,
          labels=group_names)
          airbnb_merged
```

Out[45]:

	listing_id	price	nbhood_full	price_per_month	description	room_type	host_name	last_review	boroug
0	2595	225.0	Manhattan, Midtown	6843.750000	Skylit Midtown Castle	Entire home/apt	Jennifer	2019-05-21	Manhatta
1	3831	89.0	Brooklyn, Clinton Hill	2707.083333	Cozy Entire Floor of Brownstone	Entire home/apt	LisaRoxanne	2019-07-05	Brookly
2	5099	200.0	Manhattan, Murray Hill	6083.333333	Large Cozy 1 BR Apartment In Midtown East	Entire home/apt	Chris	2019-06-22	Manhatta
3	5178	79.0	Manhattan, Hell's Kitchen	2402.916667	Large Furnished Room Near B'way	Private room	Shunichi	2019-06-24	Manhatta
4	5238	150.0	Manhattan, Chinatown	4562.500000	Cute & Cozy Lower East Side 1 bdrm	Entire home/apt	Ben	2019-06-09	Manhatta
...	...	...	...	...	...	...	...	...	
25197	36425863	129.0	Manhattan, Upper East Side	3923.750000	Lovely Privet Bedroom with Privet Restroom	Private room	Rusaa	2019-07-07	Manhatta
25198	36427429	45.0	Queens, Flushing	1368.750000	No.2 with queen size bed	Private room	H Ai	2019-07-07	Queer
25199	36438336	235.0	Staten Island, Great	7147.916667	Seas The Moment	Private room	Ben	2019-07-07	State Islar

				Kills					
25200	36442252	100.0	Bronx, Mott Haven	3041.666667	1B-1B apartment near by Metro	Entire home/apt	Blaine	2019-07-07	Bron
25201	36455809	30.0	Brooklyn, Bushwick	912.500000	Cozy Private Room in Bushwick, Brooklyn	Private room	Christine	2019-07-08	Brookly

25184 rows × 10 columns

In [58]:
```python
# Calculate occurence frequencies for each label, Prices_by_borough
Prices_by_borough = airbnb_merged.groupby(["borough", "Price_Range"])["Price_Range"].agg
```

In [60]:
```python
Prices_by_borough =pd.DataFrame(Prices_by_borough)

Prices_by_borough
```

Out[60]:

		Price_Range
borough	**Price_Range**	
Bronx	**Budget**	381
	Average	285
	Expensive	25
	Extravagant	5
Brooklyn	**Budget**	3194
	Average	5532
	Expensive	1466
	Extravagant	259
Manhattan	**Budget**	1148
	Average	5285
	Expensive	3072
	Extravagant	810
Queens	**Budget**	1631
	Average	1505
	Expensive	291
	Extravagant	28
Staten Island	**Budget**	124
	Average	123
	Expensive	20
	Extravagant	0

8.Export the datasets that you have cleaned.

```
In [48]:  airbnb_analysis = {'Avgerage_price':Avgerage_price,
                             'Average_price_per_month':Average_price_per_month,
                             'Difference':Difference,
                             'Room_frequencies':Room_frequencies,
                             'First_reviewed':First_reviewed,
                             'Last_reviewed':Last_reviewed,
                             'Prices_by_borough':Prices_by_borough}

          print(airbnb_analysis)
```

```
{'Avgerage_price': 141.82, 'Average_price_per_month': 4313.61, 'Difference': 1213.61, 'R
oom_frequencies': Entire home/apt    13266
Private room        11356
Shared room          587
Name: room_type, dtype: int64, 'First_reviewed': datetime.date(2019, 1, 1), 'Last_review
ed': datetime.date(2019, 7, 9), 'Prices_by_borough':                        Price_Ra
nge
borough        Price_Range
Bronx          Budget                381
               Average               285
               Expensive              25
               Extravagant             5
Brooklyn       Budget               3194
               Average              5532
               Expensive            1466
               Extravagant           259
Manhattan      Budget               1148
               Average              5285
               Expensive            3072
               Extravagant           810
Queens         Budget               1631
               Average              1505
               Expensive             291
               Extravagant            28
Staten Island  Budget                124
               Average               123
               Expensive              20
               Extravagant             0}
```

In [49]: `prices.to_csv`

Out[49]:
```
<bound method NDFrame.to_csv of          listing_id  price               nbhood_full  pr
ice_per_month
0             2595    225          Manhattan, Midtown      6843.750000
1             3831     89       Brooklyn, Clinton Hill      2707.083333
2             5099    200       Manhattan, Murray Hill      6083.333333
3             5178     79    Manhattan, Hell's Kitchen      2402.916667
4             5238    150          Manhattan, Chinatown     4562.500000
...            ...     ...                       ...              ...
25204     36425863    129   Manhattan, Upper East Side     3923.750000
25205     36427429     45             Queens, Flushing      1368.750000
25206     36438336    235    Staten Island, Great Kills     7147.916667
25207     36442252    100           Bronx, Mott Haven      3041.666667
25208     36455809     30          Brooklyn, Bushwick       912.500000

[25202 rows x 4 columns]>
```

In [51]: `reviews.to_csv`

Out[51]:
```
<bound method NDFrame.to_csv of          listing_id    host_name last_review
0             2595      Jennifer  2019-05-21
1             3831   LisaRoxanne  2019-07-05
2             5099         Chris  2019-06-22
3             5178      Shunichi  2019-06-24
4             5238           Ben  2019-06-09
```

```
            ...        ...            ...            ...
25204    36425863         Rusaa    2019-07-07
25205    36427429           HAi    2019-07-07
25206    36438336           Ben    2019-07-07
25207    36442252        Blaine    2019-07-07
25208    36455809     Christine    2019-07-08

[25209 rows x 3 columns]>
```

In [52]: `room_types.to_csv`

Out[52]:
```
<bound method NDFrame.to_csv of         listing_id                                          descri
ption          room_type
0              2595                        Skylit Midtown Castle   Entire home/apt
1              3831               Cozy Entire Floor of Brownstone   Entire home/apt
2              5099      Large Cozy 1 BR Apartment In Midtown East   Entire home/apt
3              5178                Large Furnished Room Near B'way       Private room
4              5238               Cute & Cozy Lower East Side 1 bdrm   Entire home/apt
...             ...                                          ...              ...
25204    36425863   Lovely Privet Bedroom with Privet Restroom       Private room
25205    36427429                    No.2 with queen size bed       Private room
25206    36438336                            Seas The Moment       Private room
25207    36442252               1B-1B apartment near by Metro   Entire home/apt
25208    36455809     Cozy Private Room in Bushwick, Brooklyn       Private room

[25209 rows x 3 columns]>
```

In [ ]: