1. Import the chipotle.txt file, and save it in variable chipo. Hint: To load this file using read_csv() function, you need to provide another parameter: read_csv(‘filename’,sep=’\t’)

In [1]:

```
import numpy as np
import pandas as pd

chipo = pd.read_csv('chipotle.txt', sep='\t')
```

In [ ]:

```
2. Try the following functions and see how they work:
a. chipo.head(10)
b. chipo.info()
c. chipo.shape
d. chipo.columns
e. chipo.index
```

In [2]:

```
# Display the first 10 rows
print(chipo.head(10))

# Display a summary of the DataFrame
print(chipo.info())

# Display the dimensions of the DataFrame
print(chipo.shape)

# Display the column names of the DataFrame
print(chipo.columns)

# Display the index of the DataFrame
print(chipo.index)
```

```
   order_id  quantity                              item_name  \
0         1         1           Chips and Fresh Tomato Salsa   
1         1         1                                   Izze   
2         1         1                       Nantucket Nectar   
3         1         1  Chips and Tomatillo-Green Chili Salsa   
4         2         2                           Chicken Bowl   
5         3         1                           Chicken Bowl   
6         3         1                          Side of Chips   
7         4         1                          Steak Burrito   
8         4         1                       Steak Soft Tacos   
9         5         1                          Steak Burrito   

                                  choice_description item_price  
0                                                NaN     $2.39   
1                                       [Clementine]     $3.39   
2                                            [Apple]     $3.39   
3                                                NaN     $2.39   
4  [Tomatillo-Red Chili Salsa (Hot), [Black Beans...    $16.98   
5  [Fresh Tomato Salsa (Mild), [Rice, Cheese, Sou...    $10.98   
6                                                NaN     $1.69   
7  [Tomatillo Red Chili Salsa, [Fajita Vegetables...    $11.75   
8  [Tomatillo Green Chili Salsa, [Pinto Beans, Ch...     $9.25   
9  [Fresh Tomato Salsa, [Rice, Black Beans, Pinto...     $9.25   
<class 'pandas.core.frame.DataFrame'>
```

```
RangeIndex: 4622 entries, 0 to 4621
Data columns (total 5 columns):
 #   Column              Non-Null Count  Dtype 
---  ------              --------------  ----- 
 0   order_id            4622 non-null   int64 
 1   quantity            4622 non-null   int64 
 2   item_name           4622 non-null   object
 3   choice_description  3376 non-null   object
 4   item_price          4622 non-null   object
dtypes: int64(2), object(3)
memory usage: 180.7+ KB
None
(4622, 5)
Index(['order_id', 'quantity', 'item_name', 'choice_description',
       'item_price'],
      dtype='object')
RangeIndex(start=0, stop=4622, step=1)
```

What is the most ordered item, and what is the quantity?

In [3]:

```
item_qty = chipo.groupby('item_name')['quantity'].sum()

most_ordered = item_qty.sort_values(ascending=False).iloc[0]

print(f"The most ordered item is {item_qty.index[0]}, with a quantity of {most_o
```

```
The most ordered item is 6 Pack Soft Drink, with a quantity of 761.
```

1. What is the most ordered item in the choice_description column?

In [4]:

```
choice_qty = chipo.groupby('choice_description')['quantity'].sum()

most_ordered_choice = choice_qty.sort_values(ascending=False).iloc[0]

print(f"The most ordered item in the 'choice_description' column is {choice_qty.
```

```
The most ordered item in the 'choice_description' column is [Adobo-Marinated and
Grilled Chicken, Pinto Beans, [Sour Cream, Salsa, Cheese, Cilantro-Lime Rice, Gu
acamole]], with a quantity of 159.
```

1. How many items were ordered in total?

In [9]:

```
num_items_ordered = chipo['quantity'].sum()
print(f"A total of {num_items_ordered} items were ordered.")
```

```
A total of 4972 items were ordered.
```

1. What is the revenue?

In [10]:

```
chipo['item_price'] = chipo['item_price'].apply(lambda x: float(x[1:]))  # Conve
revenue = (chipo['quantity'] * chipo['item_price']).sum()
print(f"The revenue was ${revenue:.2f}.")
```

```
The revenue was $39237.02.
```

1. How many orders were made in the period?

In [11]:

```
num_orders = chipo['order_id'].nunique()
print(f"A total of {num_orders} orders were made in the period.")
```

```
A total of 1834 orders were made in the period.
```

1. Average amount per order?

In [12]:

```
avg_amount_per_order = revenue / num_orders
print(f"The average amount per order is ${avg_amount_per_order:.2f}.")
```

```
The average amount per order is $21.39.
```

1. How many different items were sold?

In [13]:

```
num_items_sold = chipo['item_name'].nunique()

print(f"A total of {num_items_sold} different items were sold.")
```

```
A total of 50 different items were sold.
```