Special thanks to: https://github.com/justmarkham for sharing the dataset and materials.

```
import pandas as pd
import numpy as np
```

⌄ Step 3. Read the following URL and assign it to a variable called chipo.

NOTE: It is a TSV file, not CSV. Find out how to read TSV using read_csv in Pandas.

```
url = 'https://raw.githubusercontent.com/justmarkham/DAT8/master/data/chipotle.tsv'

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

⌄ Show/print the first **20** entries

```
chipo.head(20)
```

	order_id	quantity	item_name	choice_description	item_price
0	1	1	Chips and Fresh Tomato Salsa	NaN	$2.39
1	1	1	Izze	[Clementine]	$3.39
2	1	1	Nantucket Nectar	[Apple]	$3.39
3	1	1	Chips and Tomatillo-Green Chili Salsa	NaN	$2.39
4	2	2	Chicken Bowl	[Tomatillo-Red Chili Salsa (Hot), [Black Beans...	$16.98
5	3	1	Chicken Bowl	[Fresh Tomato Salsa (Mild), [Rice, Cheese, Sou...	$10.98
6	3	1	Side of Chips	NaN	$1.69
7	4	1	Steak Burrito	[Tomatillo Red Chili Salsa, [Fajita Vegetables...	$11.75
8	4	1	Steak Soft Tacos	[Tomatillo Green Chili Salsa, [Pinto Beans, Ch...	$9.25
9	5	1	Steak Burrito	[Fresh Tomato Salsa, [Rice, Black Beans, Pinto...	$9.25
10	5	1	Chips and Guacamole	NaN	$4.45
11	6	1	Chicken Crispy Tacos	[Roasted Chili Corn Salsa, [Fajita Vegetables,...	$8.75
12	6	1	Chicken Soft Tacos	[Roasted Chili Corn Salsa, [Rice, Black Beans,...	$8.75
13	7	1	Chicken Bowl	[Fresh Tomato Salsa, [Fajita Vegetables, Rice,...	$11.25

What is the number of observations in the dataset?

```
chipo.shape[0]
```

⇥ 4622

What is the number of columns in the dataset? Names of the columns in the dataset?

```
chipo.columns
```

⇥ Index(['order_id', 'quantity', 'item_name', 'choice_description',
           'item_price'],
         dtype='object')

What was the most-ordered item? In how much quantity in total was it ordered?

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

⇥ 'Chicken Bowl'

```
most_ordered_item = chipo.groupby('item_name')['quantity'].sum().idxmax()
chipo.groupby('item_name')['quantity'].sum().max() #or
chipo.groupby('item_name')['quantity'].sum()[most_ordered_item]
```

⇥ 761

What was the most ordered item in the choice_description column? How many were ordered?

```python
most_ordered_choice = chipo.groupby('choice_description')['quantity'].sum().idxma
most_ordered_choice_quantity = chipo.groupby('choice_description')['quantity'].su

print("Most ordered item in choice_description:", most_ordered_choice)
print("Quantity ordered:", most_ordered_choice_quantity)
```

```
Most ordered item in choice_description: [Diet Coke]
Quantity ordered: 159
```

∨ How many items were orderd in total?

```python
chipo['quantity'].sum()
```

```
4972
```

∨ Provide a list of unique items offered for sale to eat at Chipotle.

```python
chipo['item_name'].unique()
```

```
array(['Chips and Fresh Tomato Salsa', 'Izze', 'Nantucket Nectar',
       'Chips and Tomatillo-Green Chili Salsa', 'Chicken Bowl',
       'Side of Chips', 'Steak Burrito', 'Steak Soft Tacos',
       'Chips and Guacamole', 'Chicken Crispy Tacos',
       'Chicken Soft Tacos', 'Chicken Burrito', 'Canned Soda',
       'Barbacoa Burrito', 'Carnitas Burrito', 'Carnitas Bowl',
       'Bottled Water', 'Chips and Tomatillo Green Chili Salsa',
       'Barbacoa Bowl', 'Chips', 'Chicken Salad Bowl', 'Steak Bowl',
       'Barbacoa Soft Tacos', 'Veggie Burrito', 'Veggie Bowl',
       'Steak Crispy Tacos', 'Chips and Tomatillo Red Chili Salsa',
       'Barbacoa Crispy Tacos', 'Veggie Salad Bowl',
       'Chips and Roasted Chili-Corn Salsa',
       'Chips and Roasted Chili Corn Salsa', 'Carnitas Soft Tacos',
       'Chicken Salad', 'Canned Soft Drink', 'Steak Salad Bowl',
       '6 Pack Soft Drink', 'Chips and Tomatillo-Red Chili Salsa', 'Bowl',
       'Burrito', 'Crispy Tacos', 'Carnitas Crispy Tacos', 'Steak Salad',
       'Chips and Mild Fresh Tomato Salsa', 'Veggie Soft Tacos',
       'Carnitas Salad Bowl', 'Barbacoa Salad Bowl', 'Salad',
       'Veggie Crispy Tacos', 'Veggie Salad', 'Carnitas Salad'],
      dtype=object)
```

⌄ How many different items are sold?

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

⊋ 50

⌄ How much revenue was generated for the period in the dataset?

```
chipo['item_price'] = chipo['item_price'].str.replace('$', '').astype(float)
revenue = (chipo['quantity'] * chipo['item_price']).sum()
print(revenue)
```

⊋ 39237.02

⌄ What is the average revenue amount per order?

```
# Calculate total revenue
# The 'item_price' column is likely already a float due to previous operations.
# If not, uncomment the line below to convert it.
#chipo['item_price'] = chipo['item_price'].str.replace('$', '', regex=False).asty

total_revenue = (chipo['quantity'] * chipo['item_price']).sum()

# Calculate the number of unique orders
num_orders = chipo['order_id'].nunique()

# Calculate average revenue per order
average_revenue_per_order = total_revenue / num_orders
print(average_revenue_per_order)
```

⊋ 21.39423118865867

⌄ How many orders were made in the period?

```
num_orders = chipo['order_id'].nunique()
print(num_orders)
```

⤓ 1834

How much revenue was generated selling the second most popular item in the menu?

```
# Group by item name and sum quantity to find most popular items
item_quantity = chipo.groupby('item_name')['quantity'].sum()

# Find the second most popular item
second_most_popular = item_quantity.sort_values(ascending=False).index[1]

# Filter the DataFrame for the second most popular item
filtered_chipo = chipo[chipo['item_name'] == second_most_popular]

# Calculate revenue for the second most popular item
second_most_popular_revenue = (filtered_chipo['quantity'] * filtered_chipo['item_

print("Revenue from the second most popular item:", second_most_popular_revenue)
```

⤓ Revenue from the second most popular item: 6387.0599999999995