

1. Getting & Knowing Your Data

- Step 1. Import the necessary libraries
- Step 2. Import the dataset from this
<https://raw.githubusercontent.com/justmarkham/DAT8/master/data/chipotle.tsv>
- Step 3. Assign it to a variable called chipo.
- Step 4. See the first 10 entries
- Step 5. What is the number of observations in the dataset?
- Step 6. What is the number of columns in the dataset?
- Step 7. Print the name of all the columns.
- Step 8. How is the dataset indexed?
- Step 9. Which was the most ordered item?
- Step 10. How many items were ordered?
- Step 11. What was the most ordered item in the choice_description column?
- Step 12. How many items were ordered in total?
- Step 13. Turn the item price into a float
- Step 14. How much was the revenue for the period in the dataset?
- Step 15. How many orders were made in the period?
- Step 16. What is the average amount per order?
- Step 17. How many different items are sold?

2. Filtering & Sorting

- Step 1. Import the necessary libraries
- Step 2. Import the dataset from this
<https://raw.githubusercontent.com/justmarkham/DAT8/master/data/chipotle.tsv>
- Step 3. Assign it to a variable called chipo.
- Step 4. How many products cost more than \$10.00?
- Step 5. What is the price of each item?
print a data frame with only two columns item_name and item_price
- Step 6. Sort by the name of the item
- Step 7. What was the quantity of the most expensive item ordered?
- Step 8. How many times were a Veggie Salad Bowl ordered?
- Step 9. How many times people ordered more than one Canned Soda?

3. Grouping

- Step 1. Import the necessary libraries
- Step 2. Import the dataset from this
<https://raw.githubusercontent.com/justmarkham/DAT8/master/data/u.user>
- Step 3. Assign it to a variable called users.
- Step 4. Discover what is the mean age per occupation
- Step 5. Discover the Male ratio per occupation and sort it from the most to the least
- Step 6. For each occupation, calculate the minimum and maximum ages
- Step 7. For each combination of occupation and gender, calculate the mean age
- Step 8. For each occupation present the percentage of women and men

4. Merge

- Step 1. Import the necessary libraries
- Step 2. Create the 3 DataFrames based on the following raw data

```

raw_data_1 = {
    'subject_id': ['1', '2', '3', '4', '5'],
    'first_name': ['Alex', 'Amy', 'Allen', 'Alice', 'Ayoung'],
    'last_name': ['Anderson', 'Ackerman', 'Ali', 'Aoni', 'Atiches']}

raw_data_2 = {
    'subject_id': ['4', '5', '6', '7', '8'],
    'first_name': ['Billy', 'Brian', 'Bran', 'Bryce', 'Betty'],
    'last_name': ['Bonder', 'Black', 'Balwner', 'Brice', 'Btisan']}

raw_data_3 = {
    'subject_id': ['1', '2', '3', '4', '5', '7', '8', '9', '10', '11'],
    'test_id': [51, 15, 15, 61, 16, 14, 15, 1, 61, 16]}

```

Step 3. Assign each to a variable called data1, data2, data3

Step 4. Join the two dataframes along rows and assign all_data

Step 5. Join the two dataframes along columns and assign to all_data_col

Step 6. Print data3

Step 7. Merge all_data and data3 along the subject_id value

Step 8. Merge only the data that has the same 'subject_id' on both data1 and data2

Step 9. Merge all values in data1 and data2, with matching records from both sides where available.

5. Deleting

This exercise may seem a little bit strange, but keep doing it

Step 1. Import the necessary libraries

Step 2. Import the dataset from this

<https://archive.ics.uci.edu/ml/machine-learning-databases/iris/iris.data>

Step 3. Assign it to a variable called iris

Step 4. Create columns for the dataset

1. sepal_length (in cm)

2. sepal_width (in cm)

3. petal_length (in cm)

4. petal_width (in cm)

5. class

Step 5. Is there any missing value in the dataframe?

Step 6. Lets set the values of the rows 10 to 29 of the column 'petal_length' to NaN

Step 7. Good, now lets substitute the NaN values to 1.0

Step 8. Now let's delete the column class

Step 9. Set the first 3 rows as NaN

Step 10. Delete the rows that have NaN

Step 11. Reset the index so it begins with 0 again

Create your own question and answer it.