Problem **1**

## Look at an overview of your data.

```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
```

```
reviews=pd.read_csv('winemag-data-130k-v2.csv',index_col=0)
reviews.head()
```

| | country | description | designation | points | price | province | region_1 | region_2 |
|---|---|---|---|---|---|---|---|---|
| **0** | Italy | Aromas include tropical fruit, broom, brimston... | Vulkà Bianco | 87 | NaN | Sicily & Sardinia | Etna | NaN |
| **1** | Portugal | This is ripe and fruity, a wine that is smooth... | Avidagos | 87 | 15.0 | Douro | NaN | NaN |
| **2** | US | Tart and snappy, the flavors of lime flesh and... | NaN | 87 | 14.0 | Oregon | Willamette Valley | Willamette Valley |

Problem **2**

## Select the `description` column from `reviews` and assign the result to the variable `desc`.

```
desc =reviews['description']
desc
```

```
0         Aromas include tropical fruit, broom, brimston...
1         This is ripe and fruity, a wine that is smooth...
2         Tart and snappy, the flavors of lime flesh and...
3         Pineapple rind, lemon pith and orange blossom ...
4         Much like the regular bottling from 2012, this...
                              ...
129966    Notes of honeysuckle and cantaloupe sweeten th...
129967    Citation is given as much as a decade of bottl...
129968    Well-drained gravel soil gives this wine its c...
129969    A dry style of Pinot Gris, this is crisp with ...
129970    Big, rich and off-dry, this is powered by inte...
```

```
Name: description, Length: 129971, dtype: object
```

Problem **3**

Select the first value from the description column of `reviews`, assigning it to variable `first_description`.

```
first_description=reviews.loc[0,'description']
first_description
```

```
'Aromas include tropical fruit, broom, brimstone and dried herb. The palate isn't
overly expressive, offering unripened apple, citrus and dried sage alongside bris
```

Problem **4**

Select the first row of data (the first record) from `reviews`, assigning it to the variable `first_row`.

```
first_row=reviews.loc[0]
first_row
```

```
country                                                    Italy
description             Aromas include tropical fruit, broom, brimston...
designation                                          Vulkà Bianco
points                                                       87
price                                                       NaN
province                                          Sicily & Sardinia
region_1                                                   Etna
region_2                                                    NaN
taster_name                                        Kerin O’Keefe
taster_twitter_handle                                 @kerinokeefe
title                                 Nicosia 2013 Vulkà Bianco  (Etna)
variety                                             White Blend
winery                                                  Nicosia
Name: 0, dtype: object
```

Problem **5**

Select the first 10 values from the `description` column in `reviews`, assigning the result to variable `first_descriptions`.

```
first_descriptions=reviews.loc[0:9,'description']
first_descriptions
```

```
0    Aromas include tropical fruit, broom, brimston...
1    This is ripe and fruity, a wine that is smooth...
2    Tart and snappy, the flavors of lime flesh and...
3    Pineapple rind, lemon pith and orange blossom ...
4    Much like the regular bottling from 2012, this...
5    Blackberry and raspberry aromas show a typical...
```

```
6    Here's a bright, informal red that opens with ...
7    This dry and restrained wine offers spice in p...
8    Savory dried thyme notes accent sunnier flavor...
9    This has great depth of flavor with its fresh ...
Name: description, dtype: object
```

Problem **6**

Select the records with index labels `1`, `2`, `3`, `5`, and `8`, assigning the result to the variable `sample_reviews`.

```
sample_reviews=reviews.loc[[1,2,3,5,8]]
sample_reviews
```

| | country | description | designation | points | price | province | region_1 | regio |
|---|---|---|---|---|---|---|---|---|
| **1** | Portugal | This is ripe and fruity, a wine that is smooth... | Avidagos | 87 | 15.0 | Douro | NaN | |
| **2** | US | Tart and snappy, the flavors of lime flesh and... | NaN | 87 | 14.0 | Oregon | Willamette Valley | Willam Va |
| **3** | US | Pineapple rind, lemon pith and orange blossom ... | Reserve Late Harvest | 87 | 13.0 | Michigan | Lake Michigan Shore | |
| **5** | Spain | Blackberry and raspberry | Ars In Vitro | 87 | 15.0 | Northern | Navarra | |

Problem **7**

Create a variable `df` containing the `country`, `province`, `region_1`, and `region_2` columns of the records with the index labels `0`, `1`, `10`, and `100`. In other words, generate the following DataFrame:

```
df=reviews.loc[[0,1,10,100],['country','province','region_1','region_2']]

df
```

| | country | province | region_1 | region_2 |
|---|---|---|---|---|
| **0** | Italy | Sicily & Sardinia | Etna | NaN |
| **1** | Portugal | Douro | NaN | NaN |
| **10** | US | California | Napa Valley | Napa |
| **100** | US | New York | Finger Lakes | Finger Lakes |

Problem **8**

Create a variable `df` containing the `country` and `variety` columns of the first 100 records.

```
df=reviews.loc[0:99,['country','variety']]
df
```

| | country | variety |
|---|---|---|
| **0** | Italy | White Blend |
| **1** | Portugal | Portuguese Red |
| **2** | US | Pinot Gris |
| **3** | US | Riesling |
| **4** | US | Pinot Noir |
| **...** | ... | ... |
| **95** | France | Gamay |
| **96** | France | Gamay |
| **97** | US | Riesling |
| **98** | Italy | Sangiovese |
| **99** | US | Bordeaux-style Red Blend |

100 rows × 2 columns

```

```

Problem **9**

Create a DataFrame `italian_wines` containing reviews of wines made in `Italy`.

```
italian_wines=(reviews['country']=='Italy')
reviews[italian_wines]
```

| | country | description | designation | points | price | province | region_1 | region |
|---|---|---|---|---|---|---|---|---|
| **0** | Italy | Aromas include tropical fruit, broom, brimston... | Vulkà Bianco | 87 | NaN | Sicily & Sardinia | Etna | N |
| **6** | Italy | Here's a bright, informal red that opens with ... | Belsito | 87 | 16.0 | Sicily & Sardinia | Vittoria | N |
| **13** | Italy | This is dominated by oak and oak-driven aromas... | Rosso | 87 | NaN | Sicily & Sardinia | Etna | N |
| **22** | Italy | Delicate aromas recall white flower and citrus... | Ficiligno | 87 | 19.0 | Sicily & Sardinia | Sicilia | N |
| **24** | Italy | Aromas of prune, blackcurrant, toast and oak c... | Aynat | 87 | 35.0 | Sicily & Sardinia | Sicilia | N |
| **...** | ... | ... | ... | ... | ... | ... | ... | |
| **129929** | Italy | This luminous sparkler has a sweet, fruit-forw... | NaN | 91 | 38.0 | Veneto | Prosecco Superiore di Cartizze | N |