

In [35]:

```
import pandas as pd
data1 = pd.read_csv("/Users/valentinvermes/Desktop/Python_THP/19octobre/museesdata.csv", encoding='latin-1', sep = ';')
```

data1

Out[35]:

	osm_id	name	number	street	postal_code	city	country	cou
0	4540234591	3 bis f	109	Avenue du Petit Barthélémy	13617.0	Aix-en-Provence	France	
1	4388745689	A casa di Losari	NaN	T 30	20226.0	Belgodère	France	
2	4426176194	À l'homme volant	35	Grande Rue	72300.0	Sablé-sur-Sarthe	France	
3	7652598615	Abbadiale - Maison des arts	NaN	Rue du Gabizos	65400.0	Arras-en-Lavedan	France	
4	121580330	Abbaye	NaN	Rue de l'Abbaye	39210.0	Château-Chalon	France	
...
3779	1348524503	Vivarium du Moulin	NaN	Rue Principale	68610.0	Thann-Guebwiller	France	
3780	577287841	Voyage au Temps des impressionnistes	NaN	Rue de Léry	95430.0	Auvers-sur-Oise	France	
3781	145062184	Wines and Spirits Museum	NaN	Corniche Bonaparte	83150.0	Bandol	France	
3782	82988725	Xanxotea	NaN	La Place	64240.0	Isturits	France	
3783	277107550	Xylotheque - Kiosque Pedagogique	NaN	Impasse de la Haie Vive	45590.0	Saint-Cyr-en-Val	France	

3784 rows × 18 columns

In [71]:

```
totalmusee = len(data1)
```

In [72]:

totalmusee

Out[72]:

3784

In [38]:

```
import numpy as np
```

In [39]:

```
data1['city'].value_counts().idxmax()
```

Out[39]:

'Paris'

In [43]:

```
nombreville = data1['city'].nunique()
```

In [45]:

```
nombreville
```

Out[45]:

2295

In [73]:

```
nombremoyen = totalmusee / nombreville
```

In [74]:

```
nombremoyen
```

Out[74]:

1.64880174291939

In [50]:

```
data1['city'].value_counts().median()
```

Out[50]:

1.0

In [53]:

```
data1.describe
```

Out[53]:

```

<bound method NDFrame.describe of                                osm_id
name number \
0      4540234591                                     3 bis f      109
1      4388745689                                     A casa di Losari      NaN
2      4426176194                                     À l'homme volant      35
3      7652598615                Abbadiale - Maison des arts      NaN
4      121580330                                     Abbaye      NaN
...      ...
3779   1348524503                Vivarium du Moulin      NaN
3780   577287841   Voyage au Temps des impressionnistes      NaN
3781   145062184                Wines and Spirits Museum      NaN
3782   82988725                Xanxotea      NaN
3783   277107550                Xylotheque - Kiosque Pedagogique      NaN

                                street  postal_code                city coun
try \
0      Avenue du Petit Barthélémy      13617.0   Aix-en-Provence  Fra
nce
1                                T 30      20226.0                Belgodère  Fra
nce
2                                Grande Rue      72300.0   Sablé-sur-Sarthe  Fra
nce
3                                Rue du Gabizos      65400.0   Arras-en-Lavedan  Fra
nce
4                                Rue de l'Abbaye      39210.0   Château-Chalon  Fra
nce
...                                ...
...                                ...
3779                Rue Principale      68610.0   Thann-Guebwiller  Fra
nce
3780                Rue de Léry      95430.0   Auvers-sur-Oise  Fra
nce
3781                Corniche Bonaparte      83150.0                Bandol  Fra
nce
3782                La Place      64240.0                Isturits  Fra
nce
3783                Impasse de la Haie Vive      45590.0   Saint-Cyr-en-Val  Fra
nce

country_code      lat      lon      website \
0      fr  43.521207  5.439875      http://www.3bisf.com
1      fr  42.638732  9.007660      NaN
2      fr  47.839656 -0.334043      NaN
3      fr  42.990826 -0.128057      https://www.abbadiale.fr/
4      fr  46.753866  5.624296      NaN
...      ...
3779   fr  47.942258  7.149613      NaN
3780   fr  49.072057  2.166167      NaN
3781   fr  43.128031  5.749484      NaN
3782   fr  43.364834 -1.203580      http://www.xanxotea.com/
3783   fr  47.825888  1.967795      NaN

                                email      phone  fax \
0      contact@3bisf.com  3.344216e+10  NaN
1                                NaN      NaN  NaN
2                                NaN  3.324395e+10  NaN
3                                NaN  3.363317e+10  NaN
4                                NaN      NaN  NaN
...                                ...

```

3779	NaN	NaN	NaN
3780	NaN	NaN	NaN
3781	NaN	NaN	NaN
3782	NaN	NaN	NaN
3783	NaN	NaN	NaN

	tags \
0	osm:museum;art:art contemporain
1	osm:museum
2	osm:museum;type:centre d'interpretation
3	osm:museum
4	osm:museum;art:architecture
...	...
3779	osm:museum
3780	osm:museum
3781	osm:museum
3782	osm:museum
3783	osm:museum

	description	date_
added \		
0	NaN	44116,00763
88889		
1	NaN	43338,93939
81481		
2	NaN	42644,46365
74074		
3	NaN	44120,04667
82407		
4	NaN	43102,54918
98148		
...	...	
...		
3779	NaN	40747,87174
76852		
3780	NaN	41141,72722
22222		
3781	NaN	42367,71350
69444		
3782	Musée ethnographique Xanxotea pour découvrir l...	44129,5807
75463		
3783	NaN	43331,47584
49074		

	wikidata
0	NaN
1	NaN
2	NaN
3	NaN
4	NaN
...	...
3779	NaN
3780	NaN
3781	NaN
3782	NaN
3783	NaN

[3784 rows x 18 columns]>

In [59]:

```
data1['tags'].value_counts(Normalize=True)*100
```

```
-----
-----
TypeError                                Traceback (most recent call
1 last)
<ipython-input-59-6b093e70a345> in <module>
----> 1 data1['tags'].value_counts(Normalize=True)*100

TypeError: value_counts() got an unexpected keyword argument 'Normal
ize'
```

In [60]:

```
typemusee = data1['tags']
```

In [61]:

```
counts = typemusee.value_counts()
```

In [62]:

```
counts
```

Out[62]:

```
osm:museum                                2175
osm:museum;type:ecomusee                  387
osm:museum;type:musee technique et industriel  194
osm:museum;type:musee d'histoire           132
osm:museum;art:architecture               121
...
osm:museum;art:renaissance                 1
osm:museum;art:art medieval;type:centre d'interpretation  1
osm:museum;gender:musee d'homme;type:musee de beaux-arts  1
osm:museum:gender:musee de femme           1
osm:museum;type:maison d'artiste;gender:musee de femme  1
Name: tags, Length: 119, dtype: int64
```

In [77]:

```
pourcentage = typemusee.value_counts(normalize=True)
pourcentage
```

Out[77]:

```
osm:museum                                0.575093
osm:museum;type:ecomusee                  0.102327
osm:museum;type:musee technique et industriel  0.051296
osm:museum;type:musee d'histoire           0.034902
osm:museum;art:architecture               0.031994
...
osm:museum;art:renaissance                 0.000264
osm:museum;art:art medieval;type:centre d'interpretation  0.000264
osm:museum;gender:musee d'homme;type:musee de beaux-arts  0.000264
osm:museum:gender:musee de femme           0.000264
osm:museum;type:maison d'artiste;gender:musee de femme  0.000264
Name: tags, Length: 119, dtype: float64
```

In [76]:

```
pourcentage100 = typemusee.value_counts(normalize=True).mul(100).round(2).astype
(str)+'%'
pourcentage100
```

Out[76]:

```
osm:museum                                57.51%
osm:museum;type:ecomusee                  10.23%
osm:museum;type:musee technique et industriel  5.13%
osm:museum;type:musee d'histoire            3.49%
osm:museum;art:architecture                3.2%
...
osm:museum;art:renaissance                 0.03%
osm:museum;art:art medieval;type:centre d'interpretation 0.03%
osm:museum;gender:musee d'homme;type:musee de beaux-arts 0.03%
osm:museum;gender:musee de femme           0.03%
osm:museum;type:maison d'artiste;gender:musee de femme  0.03%
Name: tags, Length: 119, dtype: object
```

In [65]:

```
nombremuseeavecsite = len(data1['website']) - data1['website'].isnull().sum().sum()
nombremuseeavecsite
```

Out[65]:

1636

In [66]:

```
data1['city'].str[:2].value_counts().idxmax()
```

Out[66]:

'Sa'

In [79]:

```
data1['name'].str.startswith('Château').value_counts()
```

Out[79]:

```
False    3727
True       57
Name: name, dtype: int64
```

In [81]:

```
data1['name'].str.contains('Napoléon').value_counts()
```

Out[81]:

```
False    3780
True       4
Name: name, dtype: int64
```

In [84]:

```
data1["departement"] = data1['postal_code'].astype(str).str[0:2]  
data1["departement"].value_counts()
```

Out[84]:

```
75    180  
59     97  
33     94  
71     91  
13     90  
...  
28     14  
23     11  
90     10  
48      9  
98      8  
Name: departement, Length: 88, dtype: int64
```

Nombre d'entrées payantes et gratuites

<https://data.culture.gouv.fr/explore/dataset/frequentation-des-musees-de-france/table/>
(<https://data.culture.gouv.fr/explore/dataset/frequentation-des-musees-de-france/table/>).

Periode d'ouverture / Date de fermeture annuelle

<https://data.culture.gouv.fr/explore/dataset/liste-et-localisation-des-musees-de-france/table/>
(<https://data.culture.gouv.fr/explore/dataset/liste-et-localisation-des-musees-de-france/table/>).

In []: