In [1]:
```
import pandas as pd
```

In [2]:
```
product = pd.read_csv("products.tsv",sep="\t")
```

```
C:\Users\DHRUV\AppData\Local\Temp\ipykernel_27352\1755326969.py:1: DtypeWarni
ng: Columns (0,3,5,19,20,24,25,26,27,28,36,37,38,39,48) have mixed types. Spe
cify dtype option on import or set low_memory=False.
  product = pd.read_csv("products.tsv",sep="\t")
```

In [3]:
```
# top 5 entris wan to see

len(product)
```

Out[3]: 356027

In [4]:
```
product.head()
```

Out[4]:

	code	url	creator	created_t	created_datetime	last_mo
0	3087	http://world-en.openfoodfacts.org/product/0000...	openfoodfacts-contributors	1474103866	2016-09-17T09:17:46Z	147
1	4530	http://world-en.openfoodfacts.org/product/0000...	usda-ndb-import	1489069957	2017-03-09T14:32:37Z	148
2	4559	http://world-en.openfoodfacts.org/product/0000...	usda-ndb-import	1489069957	2017-03-09T14:32:37Z	148
3	16087	http://world-en.openfoodfacts.org/product/0000...	usda-ndb-import	1489055731	2017-03-09T10:35:31Z	148
4	16094	http://world-en.openfoodfacts.org/product/0000...	usda-ndb-import	1489055653	2017-03-09T10:34:13Z	148

5 rows × 163 columns

In [ ]:
```
## what is the number of observation in the dataset?
```

In [5]:
```
product.shape
```

Out[5]: (356027, 163)

In [7]:
```
product.shape[0]
```

Out[7]: 356027

In [ ]:
```
# print all the columns in the dataset
```

In [8]:
```
product.columns
```

Out[8]:
```
Index(['code', 'url', 'creator', 'created_t', 'created_datetime',
       'last_modified_t', 'last_modified_datetime', 'product_name',
       'generic_name', 'quantity',
       ...
       'fruits-vegetables-nuts_100g', 'fruits-vegetables-nuts-estimate_100g',
       'collagen-meat-protein-ratio_100g', 'cocoa_100g', 'chlorophyl_100g',
       'carbon-footprint_100g', 'nutrition-score-fr_100g',
       'nutrition-score-uk_100g', 'glycemic-index_100g',
       'water-hardness_100g'],
      dtype='object', length=163)
```

In [ ]:
```
## what is the name of 85th column?
```

In [9]:
```
product.columns[85]
```

Out[9]:
```
'-eicosapentaenoic-acid_100g'
```

In [10]:
```
product.columns[20]
```

Out[10]:
```
'manufacturing_places_tags'
```

In [13]:
```
## what is the dtype of 20th columns?

product.dtypes["manufacturing_places_tags"]
```

Out[13]:
```
dtype('O')
```

In [14]:
```
product.dtypes
```

Out[14]:
```
code                        object
url                         object
creator                     object
created_t                   object
created_datetime            object
                             ...
carbon-footprint_100g      float64
nutrition-score-fr_100g    float64
nutrition-score-uk_100g    float64
glycemic-index_100g        float64
water-hardness_100g        float64
Length: 163, dtype: object
```

In [22]:
```
## what will be the last 5 records

product.tail(1)
```

Out[22]:

	code	url	creator	created_t	created_datetime
356026	999990026839	http://world-en.openfoodfacts.org/product/9999...	usda-ndb-import	1489072709	2017-03-09T15:18:29Z

1 rows × 163 columns

In [23]:
```
product.index
```

Out[23]:
```
RangeIndex(start=0, stop=356027, step=1)
```

In [27]:
```
product.values[356026][2]
```

Out[27]:
```
'usda-ndb-import'
```

In [ ]:
```

```