```
print(f"Total Sales: {round(total_sales,2)}")
print(avg_sales, std_quantity)
```

```
Total Sales: 2297200.86
229.85800083049833 2.2251096911414
```

```
median_sales = np.median(df['sales'])
print(median_sales)
```

```
54.489999999999995
```

```
# groupby + aggregate
df.groupby('segment')['sales'].agg(['sum', 'mean', 'count', 'min', 'max'])
```

segment	sum	mean	count	min	max
Consumer	1.161401e+06	223.733644	5191	0.444	13999.96
Corporate	7.061464e+05	233.823300	3020	0.556	17499.95
Home Office	4.296531e+05	240.972041	1783	0.990	22638.48

```
result = df.groupby(['state','segment'])[['sales', 'profit']]\
    .agg(['sum','mean'])\
    .reset_index()

result.head()
# result.to_csv("data/request_data_18Nov2022.csv")
```

	state	segment	sales		profit	
			sum	mean	sum	mean
0	Alabama	Consumer	7537.540	301.501600	1711.0939	68.443756
1	Alabama	Corporate	10969.380	391.763571	3648.3846	130.299450
2	Alabama	Home Office	1003.720	125.465000	427.3468	53.418350
3	Arizona	Consumer	16424.422	149.312927	-1423.0527	-12.936843
4	Arizona	Corporate	11736.322	170.091623	-788.9158	-11.433562

```
# OKAY : )
```

API

API => Application Programming Interface

Request-Response cycle

import `requests`

```
import requests
import time
import pandas as pd
```

```
url2 = "https://swapi.dev/api/people/2"
response = requests.get(url2)
response.status_code
```

```
200
```

```
result2=response.json()
result2['height']
```

```
'167'
```

```
names = []
heights = []
masses = []

for i in range(1,11):
    url = f"https://swapi.dev/api/people/{i}"
    resp = requests.get(url)
```

```
    result = resp.json()
    names.append(result['name'])
    heights.append(result['height'])
    masses.append(result['mass'])
    time.sleep(1) # seconds warn not use sever crash

df = pd.DataFrame({
    "name": names, "height": heights, "mass": masses
})

df
```

	name	height	mass
0	Luke Skywalker	172	77
1	C-3PO	167	75
2	R2-D2	96	32
3	Darth Vader	202	136
4	Leia Organa	150	49
5	Owen Lars	178	120
6	Beru Whitesun lars	165	75
7	R5-D4	97	32
8	Biggs Darklighter	183	84
9	Obi-Wan Kenobi	182	77

```
result # dictionary
```


```
{'name': 'Obi-Wan Kenobi',
 'height': '182',
 'mass': '77',
 'hair_color': 'auburn, white',
 'skin_color': 'fair',
 'eye_color': 'blue-gray',
 'birth_year': '57BBY',
 'gender': 'male',
 'homeworld': 'https://swapi.dev/api/planets/20/',
 'films': ['https://swapi.dev/api/films/1/',
  'https://swapi.dev/api/films/2/',
  'https://swapi.dev/api/films/3/',
  'https://swapi.dev/api/films/4/',
  'https://swapi.dev/api/films/5/',
  'https://swapi.dev/api/films/6/'],
 'species': [],
 'vehicles': ['https://swapi.dev/api/vehicles/38/'],
 'starships': ['https://swapi.dev/api/starships/48/',
  'https://swapi.dev/api/starships/59/',
  'https://swapi.dev/api/starships/64/',
  'https://swapi.dev/api/starships/65/',
  'https://swapi.dev/api/starships/74/'],
 'created': '2014-12-10T16:16:29.192000Z',
 'edited': '2014-12-20T21:17:50.325000Z',
 'url': 'https://swapi.dev/api/people/10/'}
```


Web Scraping

```
!pip install gazpacho
```

```
Looking in indexes: https://pypi.org/simple, https://us-python.pkg.dev/colab-wheels/public/simple/
Requirement already satisfied: gazpacho in /usr/local/lib/python3.8/dist-packages (1.1)
```

```
from gazpacho import Soup
from requests import get

url = "https://www.imdb.com/search/title/?groups=top_100&sort=user_rating,desc"

resp = get(url)
resp.status_code
```

```
200
```