# Scraping Websites

In [1]:
```
#Python Imports
import os
import sys
import csv
import json
import time
import itertools
import numpy as np
import pandas as pd
from fuzzywuzzy import fuzz
from fuzzywuzzy import process
from selenium import webdriver
from IPython.display import Image
from selenium.webdriver.common.by import By
from selenium.webdriver.chrome.options import Options
from selenium.webdriver.chrome.service import Service
from selenium.webdriver.common.keys import Keys
from selenium.webdriver.support.ui import WebDriverWait
from selenium.webdriver.common.by import By
from selenium.webdriver.support import expected_conditions as EC


#Selenium Imports
chrome_options = Options()
#chrome_options.add_argument("--headless") # Ensure GUI is off
#chrome_options.add_argument("--no-sandbox")
browser = webdriver.Chrome(options=chrome_options)
browser.implicitly_wait(15) # seconds
```

- First pags of DuckDuckGo (can scrape more)
- First page Mojeek, not always results for all zip codes
- First page Yahoo
- First page of Bing
- First page of Yellow Pages
- First page of Brave Search
- First page of StartPage
- 2 pages of Google

# Set Parameters & Scraping

In [2]:
```
#######
search_term_raw = 'le specs'
brand_url = 'https://lespecs.com/pages/stockists'
########
```

```
search_term = search_term_raw + " in "
pages = 2
zipcodes = pd.read_json('OnePager/top_500_zipcodes.json')['zip'].apply(lambd

rep_zips = [
    '94110', '90210', '10001', '20001', '98101',
    '60601', '77002', '30303', '02108', '33131',
    '80202', '92101', '85004', '98104', '75201',
    '60611', '75205', '19104', '30363', '98109'
]

zipcodesSample = rep_zips#['94123', '19104', '77494']
```

# DuckDuckGo

In [3]:

```
duckduckGo = []

#Get Starting Webpage
url = "https://duckduckgo.com/?q=ulla+johnson&va=u&t=he&ia=web"
browser.get(url)

for zipcode in zipcodesSample:
    try:
        #Submit & Search
        search_form = browser.find_element(By.CLASS_NAME, 'js-search-input')
        search_form.clear()
        search_form.send_keys(search_term+zipcode)

        submit = browser.find_element(By.CLASS_NAME, 'search__button')
        #submit = WebDriverWait(browser, 10).until(EC.element_to_be_clickabl
        #browser.execute_script("arguments[0].scrollIntoView();", submit)
        time.sleep(1)
        submit.click()
        time.sleep(1)



        #Load/Click Load More Results
        #more_results_button = browser.find_element(By.CLASS_NAME, 'result--

        #UNCOMMENT TO GET MORE RESULTS BUTTON & CLICK
        #more_results_button = WebDriverWait(browser, 10).until(EC.element_t
        #more_results_button.click()

        #Collect Results
        results_box = browser.find_element(By.ID, 'links')
        results = results_box.find_elements(By.CLASS_NAME, 'nrn-react-div')


        #Scraping Through the Results
        for idx, store in enumerate(results, start=1):
            resultsInfo = {}
            resultsInfo['Title'] = store.find_element(By.CLASS_NAME, 'ikg2IX
            resultsInfo['RankNumber'] = idx
```

```
            resultsInfo['ZipCode'] = zipcode
            resultsInfo['searchTerm'] = search_term+zipcode

            duckduckGo.append(resultsInfo)
        print(zipcode, ' - ', len(results))
    except Exception as e:
        print('ERROR', str(e)[0:75]+"...")

    browser.get(url)
```

```
94110  -  10
90210  -  10
10001  -  10
20001  -  10
98101  -  10
60601  -  10
77002  -  10
30303  -  10
02108  -  10
33131  -  10
80202  -  10
92101  -  10
85004  -  10
98104  -  10
75201  -  10
60611  -  10
75205  -  10
19104  -  10
30363  -  10
98109  -  10
```

In [4]:
```
pd.DataFrame(duckduckGo).head()#.to_csv("pbrDoubles.csv")
```

Out[4]:

| | Title | RankNumber | ZipCode | searchTerm |
|---|---|---|---|---|
| **0** | Store Locator - Le Specs | 1 | 94110 | le specs in 94110 |
| **1** | Le Specs | 2 | 94110 | le specs in 94110 |
| **2** | Le Specs \| Designer \| NET-A-PORTER | 3 | 94110 | le specs in 94110 |
| **3** | Shop Le Specs Online \| Nordstrom | 4 | 94110 | le specs in 94110 |
| **4** | Shop Le Specs Online \| Shopbop | 5 | 94110 | le specs in 94110 |

# StartPage

In [5]:
```
startPage = []

#Get Starting Webpage
url = 'https://www.startpage.com/en/'
browser.get(url)

for zipcode in zipcodesSample:
    #Submit & Search
    browser.get(url)
```

```
    submit=browser.find_element(By.ID, 'search-btn')
    search_form = browser.find_element(By.ID, 'q')
    search_form.clear()
    search_form.send_keys(search_term+zipcode)
    submit.click()
    time.sleep(2)

    #Collect Results
    results_box = browser.find_element(By.CLASS_NAME, 'w-gl')
    results = results_box.find_elements(By.CLASS_NAME, 'w-gl__result')

    #Scraping Through the Results
    for idx, store in enumerate(results, start=1):
        resultsInfo = {}
        resultsInfo['Title'] = store.find_element(By.TAG_NAME, 'h3').text
        resultsInfo['RankNumber'] = idx
        resultsInfo['ZipCode'] = zipcode
        resultsInfo['searchTerm'] = search_term+zipcode
        resultsInfo['link'] = store.find_element(By.CLASS_NAME, 'result-link
        startPage.append(resultsInfo)

    print(zipcode, ' - ', len(results))
```

```
94110  -  10
90210  -  10
10001  -  10
20001  -  8
98101  -  10
60601  -  8
77002  -  9
30303  -  10
02108  -  8
33131  -  8
80202  -  8
92101  -  10
85004  -  10
98104  -  8
75201  -  10
60611  -  9
75205  -  8
19104  -  8
30363  -  8
98109  -  8
```

In [6]:
```
pd.DataFrame(startPage).head()#.to_csv("pbrDoubles.csv")
```

Out[6]:

| | Title | RankNumber | ZipCode | searchTerm | link |
|---|---|---|---|---|---|
| 0 | Stockists - Le Specs | 1 | 94110 | le specs in 94110 | https://lespecs.com/pages/stockists |
| 1 | Le Specs | 2 | 94110 | le specs in 94110 | https://lespecs.com/ |
| 2 | HANKERING \| BLACK - Le Specs | 3 | 94110 | le specs in 94110 | https://lespecs.com/products/hankering-black-l... |
| 3 | Outta Love \| Black Sunglasses - Le Specs | 4 | 94110 | le specs in 94110 | https://lespecs.com/products/outta-love-black-... |
| 4 | FANPLASTICO \| ORCHID - Le Specs | 5 | 94110 | le specs in 94110 | https://lespecs.com/products/fanplastico-orchi... |

# Brave Search

In [17]:

```
braveSearch = []

#Get Starting Webpage
url = 'https://search.brave.com/'
browser.get(url)

for zipcode in zipcodesSample:
    #Submit & Search
    browser.get(url)
    submit=browser.find_element(By.ID, 'submit-button')
    search_form = browser.find_element(By.ID, 'searchbox')
    search_form.clear()
    search_form.send_keys(search_term+zipcode)
    submit.click()
    time.sleep(2)

    #Collect Results
    results_box = browser.find_element(By.ID, 'results')
    results = results_box.find_elements(By.CLASS_NAME, 'fdb')

    #Scraping Through the Results
    for idx, store in enumerate(results, start=1):
        resultsInfo = {}
        resultsInfo['Title'] = store.find_element(By.CLASS_NAME, 'snippet-ti
        resultsInfo['RankNumber'] = idx
        resultsInfo['ZipCode'] = zipcode
        resultsInfo['searchTerm'] = search_term+zipcode

        braveSearch.append(resultsInfo)

    print(zipcode, ' - ', len(results))

    browser.quit()
```

```
    browser = webdriver.Chrome(options=chrome_options)
    #browser.get("https://www.espn.com/")
    time.sleep(3)
```

```
94110  -  18
```

```
---------------------------------------------------------------------------
NoSuchElementException                Traceback (most recent call last)
Cell In[17], line 18
     15 time.sleep(2)
     17 #Collect Results
---> 18 results_box = browser.find_element(By.ID, 'results')
     19 results = results_box.find_elements(By.CLASS_NAME, 'fdb')
     21 #Scraping Through the Results

File ~/seleniumTesting/venv/lib/python3.11/site-packages/selenium/webdrive
r/remote/webdriver.py:830, in WebDriver.find_element(self, by, value)
    827     by = By.CSS_SELECTOR
    828     value = f'[name="{value}"]'
--> 830 return self.execute(Command.FIND_ELEMENT, {"using": by, "value": va
lue})["value"]

File ~/seleniumTesting/venv/lib/python3.11/site-packages/selenium/webdrive
r/remote/webdriver.py:440, in WebDriver.execute(self, driver_command, param
s)
    438 response = self.command_executor.execute(driver_command, params)
    439 if response:
--> 440     self.error_handler.check_response(response)
    441     response["value"] = self._unwrap_value(response.get("value", No
ne))
    442     return response

File ~/seleniumTesting/venv/lib/python3.11/site-packages/selenium/webdrive
r/remote/errorhandler.py:245, in ErrorHandler.check_response(self, respons
e)
    243         alert_text = value["alert"].get("text")
    244     raise exception_class(message, screen, stacktrace, alert_text)
# type: ignore[call-arg]  # mypy is not smart enough here
--> 245 raise exception_class(message, screen, stacktrace)

NoSuchElementException: Message: no such element: Unable to locate element:
{"method":"css selector","selector":"[id="results"]"}
  (Session info: chrome=112.0.5615.49)
Stacktrace:
0   chromedriver                        0x000000010549b428 chromedriver + 4
899880
1   chromedriver                        0x0000000105418a23 chromedriver + 4
364835
2   chromedriver                        0x0000000105062bf6 chromedriver + 4
74102
3   chromedriver                        0x00000001050a64f0 chromedriver + 7
50832
4   chromedriver                        0x00000001050a6751 chromedriver + 7
51441
5   chromedriver                        0x00000001050ea834 chromedriver + 1
030196
6   chromedriver                        0x00000001050cc58d chromedriver + 9
06637
7   chromedriver                        0x00000001050e7b5b chromedriver + 1
018715
8   chromedriver                        0x00000001050cc333 chromedriver + 9
06035
```

```
9   chromedriver                        0x000000010509655f chromedriver + 6
85407
10  chromedriver                        0x0000000105097a7e chromedriver + 6
90814
11  chromedriver                        0x000000010546879e chromedriver + 4
691870
12  chromedriver                        0x000000010546d961 chromedriver + 4
712801
13  chromedriver                        0x00000001054742ff chromedriver + 4
739839
14  chromedriver                        0x000000010546e85a chromedriver + 4
716634
15  chromedriver                        0x0000000105440fce chromedriver + 4
530126
16  chromedriver                        0x000000010548e5c8 chromedriver + 4
847048
17  chromedriver                        0x000000010548e747 chromedriver + 4
847431
18  chromedriver                        0x00000001054a387f chromedriver + 4
933759
19  libsystem_pthread.dylib             0x00007ff814e0b259 _pthread_start +
125
20  libsystem_pthread.dylib             0x00007ff814e06c7b thread_start + 1
5
```

In [20]:
```
pd.DataFrame(braveSearch)#.sample(5)
```

Out[20]:

| | Title | RankNumber | ZipCode | searchTerm |
|---|---|---|---|---|
| 0 | Store Locator – Le Specs | 1 | 94110 | le specs in 94110 |
| 1 | Le Specs | 2 | 94110 | le specs in 94110 |
| 2 | Le Specs \| Designer \| NET-A-PORTER | 3 | 94110 | le specs in 94110 |
| 3 | Amazon.com: Le Specs | 4 | 94110 | le specs in 94110 |
| 4 | Shop Le Specs Online \| Nordstrom | 5 | 94110 | le specs in 94110 |
| 5 | Le Specs Sunglasses Review - Must Read This Be... | 6 | 94110 | le specs in 94110 |
| 6 | Shop Le Specs Online \| Shopbop | 7 | 94110 | le specs in 94110 |
| 7 | Home – Le Specs | 8 | 94110 | le specs in 94110 |
| 8 | Our Story – Le Specs | 9 | 94110 | le specs in 94110 |
| 9 | Le Specs \| Selfridges | 10 | 94110 | le specs in 94110 |
| 10 | Best Sellers – Le Specs | 11 | 94110 | le specs in 94110 |
| 11 | Le Specs Sunglasses for Women \| Nordstrom | 12 | 94110 | le specs in 94110 |
| 12 | ZIP Code 94110 Map, Demographics, More for San... | 13 | 94110 | le specs in 94110 |
| 13 | Tudor Submariner: 94110 Snowflake and 94010 Lo... | 14 | 94110 | le specs in 94110 |
| 14 | Public Works Standards \| The City of Boardman ... | 15 | 94110 | le specs in 94110 |
| 15 | 2023 iGO Electric Yorkville LE - Specs, Review... | 16 | 94110 | le specs in 94110 |
| 16 | Lee Boardman - Area Sales Manager - Robert Bos... | 17 | 94110 | le specs in 94110 |
| 17 | 2023 iGO Electric Rosemont LS - Specs, Reviews... | 18 | 94110 | le specs in 94110 |

# Yellow Pages

In [21]:
```
yellowPages = []

#Get Starting Webpage
url = 'https://www.yellowpages.com/'
browser.get(url)
```

```
for zipcode in zipcodesSample:
    #Submit & Search
    submit=browser.find_element(By.TAG_NAME, 'button')
    search_form = browser.find_element(By.ID, 'query')
    location_form = browser.find_element(By.ID, 'location')
    search_form.clear()
    search_form.send_keys(search_term_raw)
    location_form.clear()
    location_form.send_keys(zipcode)
    submit.click()
    time.sleep(2)

    try:
        #Collect Results
        results_box = browser.find_element(By.CLASS_NAME, 'organic')
        results = results_box.find_elements(By.CLASS_NAME, 'result')

        #Scraping Through the Results
        for idx, store in enumerate(results, start=1):
            resultsInfo = {}
            resultsInfo['Title'] = store.find_element(By.CLASS_NAME, 'busine
            resultsInfo['RankNumber'] = idx
            resultsInfo['ZipCode'] = zipcode
            resultsInfo['searchTerm'] = search_term_raw+zipcode
            yellowPages.append(resultsInfo)
        print(zipcode, ' - ', len(results))
    except Exception as e:
        print('ERROR', str(e)[0:75]+"...")

    browser.get(url)
```

```
94110  -  30
90210  -  30
10001  -  30
20001  -  30
98101  -  30
60601  -  30
77002  -  30
30303  -  30
02108  -  30
33131  -  30
80202  -  30
92101  -  28
85004  -  30
98104  -  30
75201  -  30
60611  -  30
75205  -  30
19104  -  30
30363  -  30
98109  -  30
```

In [22]:
```
pd.DataFrame(yellowPages)#.to_csv("pbrDoubles.csv")
```

Out[22]:

| | Title | RankNumber | ZipCode | searchTerm |
|---|---|---|---|---|
| **0** | Specs in The City & Cheaters Too | 1 | 94110 | le specs94110 |
| **1** | Spec Ceramics | 2 | 94110 | le specs94110 |
| **2** | Classic Specs Shop - Hayes Valley | 3 | 94110 | le specs94110 |
| **3** | Topflight Specs | 4 | 94110 | le specs94110 |
| **4** | Specs' Twelve Adler Museum Cafe | 5 | 94110 | le specs94110 |
| **...** | ... | ... | ... | ... |
| **593** | Top Spec Auto Care & Sales | 26 | 98109 | le specs98109 |
| **594** | AmeriSpec | 27 | 98109 | le specs98109 |
| **595** | Osborne Spec Fe | 28 | 98109 | le specs98109 |
| **596** | Hoover Investigation Spec | 29 | 98109 | le specs98109 |
| **597** | AmeriSpec | 30 | 98109 | le specs98109 |

598 rows × 4 columns

# Mojeek

In [23]:

```
mojeek = []

#Get Starting Webpage
url = 'https://www.mojeek.com/'
browser.get(url)

for zipcode in zipcodesSample:
    #Submit & Search
    browser.get(url)
    submit=browser.find_element(By.CLASS_NAME, 'search')
    search_form = browser.find_element(By.CLASS_NAME, 'js-search-input')
    search_form.clear()
    search_form.send_keys(search_term+zipcode)
    submit.click()
    time.sleep(2)

    try:
        #Collect Results
        results_box = browser.find_element(By.CLASS_NAME, 'results-standard'
        results = results_box.find_elements(By.TAG_NAME, 'li')

        #Scraping Through the Results
        for idx, store in enumerate(results, start=1):
            resultsInfo = {}
            resultsInfo['Title'] = store.find_element(By.CLASS_NAME, 'title'
            resultsInfo['RankNumber'] = idx
            resultsInfo['ZipCode'] = zipcode
            resultsInfo['searchTerm'] = search_term+zipcode

            mojeek.append(resultsInfo)
```

```
    except:
        print("no results/error")
        results = []


    print(zipcode, ' - ', len(results))
```

```
94110  -  10
90210  -  10
10001  -  10
20001  -  10
98101  -  10
60601  -  10
77002  -  10
30303  -  10
02108  -  7
33131  -  10
80202  -  10
92101  -  10
85004  -  10
98104  -  10
75201  -  10
60611  -  10
75205  -  10
19104  -  10
30363  -  8
98109  -  10
```

In [24]:
```
pd.DataFrame(mojeek)
```

Out[24]:

| | Title | RankNumber | ZipCode | searchTerm |
|---|---|---|---|---|
| **0** | Precita Eyes Muralists Association \| San Franc... | 1 | 94110 | le specs in 94110 |
| **1** | Commercial & Industrial Architects in California | 2 | 94110 | le specs in 94110 |
| **2** | Events in the past - MATIZ FLAMENCO | 3 | 94110 | le specs in 94110 |
| **3** | 04211-38014 Genuine Toyota CARBURETOR Kit | 4 | 94110 | le specs in 94110 |
| **4** | Vintage \| Uncrate Supply | 5 | 94110 | le specs in 94110 |
| **...** | ... | ... | ... | ... |
| **190** | Amazon Basics HDMI to DVI Adapter Cable, Black... | 6 | 98109 | le specs in 98109 |
| **191** | Vancouver Shipyards 60 Patrol Boat Yacht Conve... | 7 | 98109 | le specs in 98109 |
| **192** | Racecanam.com Site | 8 | 98109 | le specs in 98109 |
| **193** | 43' 2022 Tiara - ALEXANDER MARINE USA™ | 9 | 98109 | le specs in 98109 |
| **194** | Stockists \| Harry Lary's | 10 | 98109 | le specs in 98109 |

195 rows × 4 columns

# Yahoo Search

In [25]:
```
yahoo = []

#Get Starting Webpage
url = "https://search.yahoo.com/search;_ylt=AwrEo_2emiRknKkNCTxDDWVH;_ylc=X1
browser.get(url)

for zipcode in zipcodesSample:
    browser.get(url)
    #Submit & Search
    submit=browser.find_element(By.ID, 'sbq-submit')
    search_form = browser.find_element(By.ID, 'yschsp')
    search_form.clear()
    search_form.send_keys(search_term+zipcode)
    submit.click()
    time.sleep(2)

    #Collect Results
    results_box = browser.find_element(By.CLASS_NAME, 'searchCenterMiddle')
    results = results_box.find_elements(By.CLASS_NAME, 'algo')

    #Scraping Through the Results
```

```
    '''
    for page in range(pages):
        if page == 1:
            #Load/Click Load More Results
            more_results_button = browser.find_element(By.CLASS_NAME, 'next'
            more_results_button.click()
        time.sleep(2)
    '''
    for idx, store in enumerate(results, start=1):
        resultsInfo = {}
        resultsInfo['Title'] = store.find_element(By.CLASS_NAME, 'd-ib').get
        resultsInfo['RankNumber'] = idx
        #resultsInfo['PageNumber'] = page+1
        resultsInfo['ZipCode'] = zipcode
        resultsInfo['searchTerm'] = search_term+zipcode
        yahoo.append(resultsInfo)

    print(zipcode, ' - ', len(results))
```

```
94110  -  12
90210  -  13
10001  -  13
20001  -  13
98101  -  12
60601  -  12
77002  -  12
30303  -  12
02108  -  13
33131  -  13
80202  -  13
92101  -  12
85004  -  12
98104  -  13
75201  -  13
60611  -  12
75205  -  12
19104  -  12
30363  -  12
98109  -  13
```

In [26]:
```
pd.DataFrame(yahoo).sample(5)#.to_csv("pbrDoubles.csv")
```

Out[26]:

| | Title | RankNumber | ZipCode | searchTerm |
|---|---|---|---|---|
| **74** | Technical data - B. Braun | 12 | 60601 | le specs in 60601 |
| **101** | Shop Le Specs Online \| Nordstrom | 3 | 02108 | le specs in 02108 |
| **35** | Sartorius LE10001 Top-loading Balance \| Discon... | 11 | 10001 | le specs in 10001 |
| **6** | Le Specs \| Selfridges | 7 | 94110 | le specs in 94110 |
| **70** | NVIDIA GeForce 6600 LE Specs \| TechPowerUp GPU... | 8 | 60601 | le specs in 60601 |

# Bing

In [27]:
```
bing = []

#Get Starting Webpage
url = "https://www.bing.com/search?q=ulla+johnson+19104&form=QBLH&sp=-1&ghc=
browser.get(url)

for zipcode in zipcodesSample:
    browser.get(url)
    #Submit & Search
    submit=browser.find_element(By.ID, 'sb_go_par')
    search_form = browser.find_element(By.ID, 'sb_form_q')
    search_form.clear()
    search_form.send_keys(search_term+zipcode)
    submit.click()
    time.sleep(2)

    #PAGE 1
    results_box = browser.find_element(By.ID, 'b_results')
    results = results_box.find_elements(By.CLASS_NAME, 'b_algo')

    #Scraping Through the Results
    for idx, store in enumerate(results, start=1):
        resultsInfo = {}
        resultsInfo['Title'] = store.find_element(By.TAG_NAME, 'a').get_attr
        resultsInfo['RankNumber'] = idx
        resultsInfo['ZipCode'] = zipcode
        resultsInfo['searchTerm'] = search_term+zipcode
        bing.append(resultsInfo)
    print(zipcode, ' - ', len(results))
```

```
94110  -  8
90210  -  4
10001  -  4
20001  -  4
98101  -  4
60601  -  7
77002  -  4
30303  -  4
02108  -  4
33131  -  4
80202  -  4
92101  -  4
85004  -  4
98104  -  4
75201  -  4
60611  -  4
75205  -  4
19104  -  4
30363  -  4
98109  -  4
```

In [28]:
```
pd.DataFrame(bing)#.to_csv("pbrDoubles.csv")
```

Out[28]:

| | Title | RankNumber | ZipCode | searchTerm |
|---|---|---|---|---|
| **0** | Store Locator – Le Specs | 1 | 94110 | le specs in 94110 |
| **1** | Le Specs \| Designer \| NET-A-PORTER | 2 | 94110 | le specs in 94110 |
| **2** | Le Specs | 3 | 94110 | le specs in 94110 |
| **3** | 94010 + 94110 — Tudor Sub | 4 | 94110 | le specs in 94110 |
| **4** | 94010 + 94110 — Tudor Sub | 5 | 94110 | le specs in 94110 |
| **...** | ... | ... | ... | ... |
| **82** | Shop Le Specs Online \| Nordstrom | 4 | 30363 | le specs in 30363 |
| **83** | Store Locator – Le Specs | 1 | 98109 | le specs in 98109 |
| **84** | Le Specs \| Designer \| NET-A-PORTER | 2 | 98109 | le specs in 98109 |
| **85** | Shop Le Specs Online \| Nordstrom | 3 | 98109 | le specs in 98109 |
| **86** | Le Specs | 4 | 98109 | le specs in 98109 |

87 rows × 4 columns

# Google

In [29]:
```
google = []

url = 'https://www.google.com/search?q=google'
browser.get(url)

for zipcode in zipcodesSample:
    base_url = 'https://www.google.com/search?q=' + search_term_raw.replace(
    browser.get(base_url)

    for i in range(0,2):
        browser.execute_script("window.scrollTo(0,document.body.scrollHeight
        time.sleep(3)
        #print('scrolling...')
        try:
            more = browser.find_element(By.CLASS_NAME, 'RVQdVd')
            more.click()
            #print('load more click!')
        except:
            pass
            #print('pass', current_combo, ' - ', i)

    print("~done scrolling~")
    results = browser.find_elements(By.CLASS_NAME, 'yuRUbf')
    print(search_term_raw + ' - ', str(len(results)))

    for idx, blueLink in enumerate(results, 1):
        resultInfo = {}
```

```
        resultInfo['Title'] = blueLink.find_element(By.TAG_NAME, 'a').find_e
        resultInfo['RankNumber'] = idx
        resultInfo['ZipCode'] = zipcode
        resultsInfo['base_url'] = base_url
        resultInfo['link'] = blueLink.find_element(By.TAG_NAME, 'a').get_att
        try:
            resultInfo['link_website'] = blueLink.find_element(By.TAG_NAME,
        except:
            pass
        google.append(resultInfo)

    browser.quit()
    browser = webdriver.Chrome(options=chrome_options)

    time.sleep(2)
```

```
~done scrolling~
le specs -  28
~done scrolling~
le specs -  31
~done scrolling~
le specs -  33
~done scrolling~
le specs -  32
~done scrolling~
le specs -  22
~done scrolling~
le specs -  22
~done scrolling~
le specs -  19
~done scrolling~
le specs -  21
~done scrolling~
le specs -  12
~done scrolling~
le specs -  17
~done scrolling~
le specs -  18
~done scrolling~
le specs -  18
~done scrolling~
le specs -  23
~done scrolling~
le specs -  19
~done scrolling~
le specs -  42
~done scrolling~
le specs -  28
~done scrolling~
le specs -  10
~done scrolling~
le specs -  24
~done scrolling~
le specs -  20
~done scrolling~
le specs -  19
```

In [30]:
```
pd.DataFrame(google)
```

Out[30]:

| | Title | RankNumber | ZipCode | link | link_website |
|---|---|---|---|---|---|
| **0** | Stockists | 1 | 94110 | https://lespecs.com/pages/stockists | Le Specs |
| **1** | Le Specs | 2 | 94110 | https://lespecs.com/ | NaN |
| **2** | Shops with Le Specs in San Francisco | 3 | 94110 | https://www.thelabelfinder.com/san-francisco/l... | TheLabelFinder |
| **3** | Specs' Twelve Adler Museum Cafe | 4 | 94110 | https://www.specsbarsf.com/ | Specs' Twelve Adler Museum Cafe |
| **4** | Self Edge is Denim | 5 | 94110 | https://www.selfedge.com/ | Self Edge |
| **...** | ... | ... | ... | ... | ... |
| **453** | Aaa fire protection - 2023 | 15 | 98109 | https://cypko.com/777724-aaa-fire-protection | cypko.com |
| **454** | The 13 Best Shows to Watch on Discovery Plus R... | 16 | 98109 | https://kossfund.online/98109-the-13-best-show... | kossfund.online |
| **455** | hobie cat dealers near me | 17 | 98109 | https://d-rally.cfd/hobie-cat-dealers-near-me.... | d-rally.cfd |
| **456** | 2020 lagoon 46 - 2023 | 18 | 98109 | https://didnt.sbs/1213424-2020-lagoon-46 | didnt.sbs |
| **457** | houseboats for sale sausalito ca | 19 | 98109 | https://d-abbey.cfd/houseboats-for-sale-sausal... | d-abbey.cfd |

458 rows × 5 columns

# Google Shopping

In [31]:
```
def get_storeInfo(store, zipcode_here, current_rank_here):
    data = {}
    data['Title'] = store.find_element(By.CLASS_NAME, 'MxVeme').text
    data['RankNumber'] = current_rank_here
    data['ZipCode'] = zipcode_here
    data['google_maps_link'] = store.find_element(By.CLASS_NAME, 'k7eIUb').f
    data['address'] = store.find_element(By.CLASS_NAME, 'lSS0Af').text
    return data
```

In [35]:
```
google_shopping = []

url_base = 'https://www.google.com/search?q=*&tbm=shop'
browser.get(url)

for zipcode in zipcodesSample:
    try:
        current_combo = url_base.replace("*", search_term_raw.replace(" ", "
        print(current_combo)
        browser.get(current_combo) #Get the link
        morePlaces = True

        results = browser.find_element(By.XPATH, '//div[@jscontroller="lcX38
        stores = results.find_elements(By.CLASS_NAME, 'FFnM0')
        print("LEN:", len(stores))

        while morePlaces == True:
            #for length in range(len(stores)-3): #How many times to click th
            try:
                button = results.find_element(By.CLASS_NAME, 't6JUTe')
                button.click()
                time.sleep(1)
            except:
                pass
                #print("no more 'more places' button")
                morePlaces = False

        for idx, store in enumerate(stores):
            google_shopping.append(get_storeInfo(store, zipcode, idx))

        #time.sleep(1)

    except Exception as e:
        print('ERROR', str(e)[0:75]+"...")

    browser.quit()
    browser = webdriver.Chrome(options=chrome_options)
```

```
https://www.google.com/search?q=le+specs+in+94110&tbm=shop
LEN: 33
no more 'more places' button
https://www.google.com/search?q=le+specs+in+90210&tbm=shop
ERROR Message: no such element: Unable to locate element: {"method":"xpat
h","sele...
https://www.google.com/search?q=le+specs+in+10001&tbm=shop
LEN: 35
no more 'more places' button
https://www.google.com/search?q=le+specs+in+20001&tbm=shop
ERROR Message: no such element: Unable to locate element: {"method":"xpat
h","sele...
https://www.google.com/search?q=le+specs+in+98101&tbm=shop
LEN: 25
no more 'more places' button
https://www.google.com/search?q=le+specs+in+60601&tbm=shop
LEN: 37
no more 'more places' button
https://www.google.com/search?q=le+specs+in+77002&tbm=shop
LEN: 67
no more 'more places' button
https://www.google.com/search?q=le+specs+in+30303&tbm=shop
LEN: 39
no more 'more places' button
https://www.google.com/search?q=le+specs+in+02108&tbm=shop
LEN: 28
no more 'more places' button
https://www.google.com/search?q=le+specs+in+33131&tbm=shop
LEN: 25
no more 'more places' button
https://www.google.com/search?q=le+specs+in+80202&tbm=shop
LEN: 28
no more 'more places' button
https://www.google.com/search?q=le+specs+in+92101&tbm=shop
LEN: 27
no more 'more places' button
https://www.google.com/search?q=le+specs+in+85004&tbm=shop
LEN: 22
no more 'more places' button
https://www.google.com/search?q=le+specs+in+98104&tbm=shop
LEN: 22
no more 'more places' button
https://www.google.com/search?q=le+specs+in+75201&tbm=shop
LEN: 43
no more 'more places' button
https://www.google.com/search?q=le+specs+in+60611&tbm=shop
LEN: 33
no more 'more places' button
https://www.google.com/search?q=le+specs+in+75205&tbm=shop
LEN: 39
no more 'more places' button
https://www.google.com/search?q=le+specs+in+19104&tbm=shop
LEN: 28
no more 'more places' button
https://www.google.com/search?q=le+specs+in+30363&tbm=shop
LEN: 36
```

```
no more 'more places' button
https://www.google.com/search?q=le+specs+in+98109&tbm=shop
LEN: 19
no more 'more places' button
```

In [36]:
```
pd.DataFrame(google_shopping)
```

Out[36]:

| | Title | RankNumber | ZipCode | google_maps_link | address |
|---|---|---|---|---|---|
| **0** | Nordstrom | 0 | 94110 | https://maps.google.com/maps?daddr=1870+Redwoo... | 1870 Redwood Hwy, Corte Madera·13.7 miles |
| **1** | Neiman Marcus | 1 | 94110 | https://maps.google.com/maps?daddr=150+Stockto... | 150 Stockton Street, San Francisco·2.8 miles |
| **2** | Sunglass Hut | 2 | 94110 | https://maps.google.com/maps?daddr=2485+Sand+C... | 2485 Sand Creek Rd, #108, Spc# G-7, Brentwood |
| **3** | Nordstrom | 3 | 94110 | https://maps.google.com/maps?daddr=865+Market+... | 865 Market St, San Francisco·2.5 miles |
| **4** | Nordstrom | 4 | 94110 | https://maps.google.com/maps?daddr=1200+Broadw... | 1200 Broadway Plaza, Walnut Creek·22.0 miles |
| **...** | ... | ... | ... | ... | ... |
| **581** | Kohl's | 14 | 98109 | https://maps.google.com/maps?daddr=2909+Bickfo... | 2909 Bickford Ave, Snohomish·24.1 miles |
| **582** | Macy's | 15 | 98109 | https://maps.google.com/maps?daddr=400+Bellevu... | 400 Bellevue Square, Bellevue·6.6 miles |
| **583** | Sportsman's Warehouse | 16 | 98109 | https://maps.google.com/maps?daddr=505+SE+Ever... | 505 SE Everett Mall Way, Ste 1, Everett·19.8 m... |
| **584** | West Marine | 17 | 98109 | https://maps.google.com/maps?daddr=1400+NW+45t... | 1400 NW 45th St, Seattle·2.5 miles |
| **585** | Grainger Industrial Supply | 18 | 98109 | https://maps.google.com/maps?daddr=6725+S.+Tod... | 6725 S. Todd Blvd., Tukwila·14.3 miles |

586 rows × 5 columns

# Official

In [3]:
```
resultsList = []
url = brand_url

browser.get(url)
time.sleep(2)

for i, zipcode in enumerate(zipcodesSample, start=1):
    browser.get(url)

    query_entry=browser.find_element(By.CLASS_NAME, 'stockist-query-entry')
    input_field = query_entry.find_element(By.TAG_NAME, 'input')
    submit = query_entry.find_element(By.CLASS_NAME, 'stockist-search-buttor

    input_field.clear()
    input_field.send_keys(zipcode)
    submit.click()

    time.sleep(2)
    search_results = browser.find_element(By.CLASS_NAME, 'stockist-result-li
    res=search_results.find_elements(By.CLASS_NAME,'stockist-result')

    for idx, store in enumerate(res):
        storeInfo = {}
        storeInfo['store_name'] = store.find_element(By.CLASS_NAME, 'stockis
        storeInfo['RankNumber'] = idx
        storeInfo['ZipCode'] = zipcode
        address = [line.get_attribute("textContent") for line in
                   store.find_element(By.CLASS_NAME, 'stockist-result-address
        storeInfo['address'] = ", ".join(address)
        storeInfo['distance'] = store.find_element(By.CLASS_NAME, 'stockist-
        storeInfo['google_maps'] = store.find_element(By.CLASS_NAME, 'stocki
        storeInfo['starting_url(brand)'] = url
        #If website link in results
        '''
        try:
            storeInfo['website_link'] = store.find_element(By.CLASS_NAME, 's
            print(storeInfo['website_link'])
        except:
            pass
            #print('...no weblink', storeInfo['name'], zipcode)
        '''
        resultsList.append(storeInfo)
    print(zipcode, " results:", len(res), ' -', i)

    #except Exception as e:
    #    print("ERROR", zipcode, i, str(e)[0:75]+"...")
    #    time.sleep(2)
print("===Done===")
```

```
94110  results: 9  - 1
90210  results: 3  - 2
10001  results: 3  - 3
20001  results: 3  - 4
98101  results: 3  - 5
60601  results: 3  - 6
77002  results: 3  - 7
30303  results: 0  - 8
02108  results: 0  - 9
33131  results: 0  - 10
80202  results: 0  - 11
92101  results: 0  - 12
85004  results: 0  - 13
98104  results: 0  - 14
75201  results: 8  - 15
60611  results: 3  - 16
75205  results: 3  - 17
```

```
---------------------------------------------------------------------------
KeyboardInterrupt                         Traceback (most recent call last)
Cell In[3], line 8
      5 time.sleep(2)
      7 for i, zipcode in enumerate(zipcodesSample, start=1):
----> 8     browser.get(url)
     10     query_entry=browser.find_element(By.CLASS_NAME, 'stockist-query
-entry')
     11     input_field = query_entry.find_element(By.TAG_NAME, 'input')

File ~/seleniumTesting/venv/lib/python3.11/site-packages/selenium/webdrive
r/remote/webdriver.py:449, in WebDriver.get(self, url)
    447 def get(self, url: str) -> None:
    448     """Loads a web page in the current browser session."""
--> 449     self.execute(Command.GET, {"url": url})

File ~/seleniumTesting/venv/lib/python3.11/site-packages/selenium/webdrive
r/remote/webdriver.py:438, in WebDriver.execute(self, driver_command, param
s)
    435     elif "sessionId" not in params:
    436         params["sessionId"] = self.session_id
--> 438 response = self.command_executor.execute(driver_command, params)
    439 if response:
    440     self.error_handler.check_response(response)

File ~/seleniumTesting/venv/lib/python3.11/site-packages/selenium/webdrive
r/remote/remote_connection.py:290, in RemoteConnection.execute(self, comman
d, params)
    288 data = utils.dump_json(params)
    289 url = f"{self._url}{path}"
--> 290 return self._request(command_info[0], url, body=data)

File ~/seleniumTesting/venv/lib/python3.11/site-packages/selenium/webdrive
r/remote/remote_connection.py:311, in RemoteConnection._request(self, metho
d, url, body)
    308     body = None
    310 if self.keep_alive:
--> 311     response = self._conn.request(method, url, body=body, headers=h
eaders)
    312     statuscode = response.status
    313 else:

File ~/seleniumTesting/venv/lib/python3.11/site-packages/urllib3/request.p
y:78, in RequestMethods.request(self, method, url, fields, headers, **urlop
en_kw)
     74     return self.request_encode_url(
     75         method, url, fields=fields, headers=headers, **urlopen_kw
     76     )
     77 else:
---> 78     return self.request_encode_body(
     79         method, url, fields=fields, headers=headers, **urlopen_kw
     80     )

File ~/seleniumTesting/venv/lib/python3.11/site-packages/urllib3/request.p
y:170, in RequestMethods.request_encode_body(self, method, url, fields, hea
ders, encode_multipart, multipart_boundary, **urlopen_kw)
```

```
    167 extra_kw["headers"].update(headers)
    168 extra_kw.update(urlopen_kw)
--> 170 return self.urlopen(method, url, **extra_kw)

File ~/seleniumTesting/venv/lib/python3.11/site-packages/urllib3/poolmanage
r.py:376, in PoolManager.urlopen(self, method, url, redirect, **kw)
    374     response = conn.urlopen(method, url, **kw)
    375 else:
--> 376     response = conn.urlopen(method, u.request_uri, **kw)
    378 redirect_location = redirect and response.get_redirect_location()
    379 if not redirect_location:

File ~/seleniumTesting/venv/lib/python3.11/site-packages/urllib3/connection
pool.py:703, in HTTPConnectionPool.urlopen(self, method, url, body, header
s, retries, redirect, assert_same_host, timeout, pool_timeout, release_con
n, chunked, body_pos, **response_kw)
    700     self._prepare_proxy(conn)
    702 # Make the request on the httplib connection object.
--> 703 httplib_response = self._make_request(
    704     conn,
    705     method,
    706     url,
    707     timeout=timeout_obj,
    708     body=body,
    709     headers=headers,
    710     chunked=chunked,
    711 )
    713 # If we're going to release the connection in ``finally:``, then
    714 # the response doesn't need to know about the connection. Otherwise
    715 # it will also try to release it and we'll have a double-release
    716 # mess.
    717 response_conn = conn if not release_conn else None

File ~/seleniumTesting/venv/lib/python3.11/site-packages/urllib3/connection
pool.py:449, in HTTPConnectionPool._make_request(self, conn, method, url, t
imeout, chunked, **httplib_request_kw)
    444             httplib_response = conn.getresponse()
    445         except BaseException as e:
    446             # Remove the TypeError from the exception chain in
    447             # Python 3 (including for exceptions like SystemExit).
    448             # Otherwise it looks like a bug in the code.
--> 449             six.raise_from(e, None)
    450 except (SocketTimeout, BaseSSLError, SocketError) as e:
    451     self._raise_timeout(err=e, url=url, timeout_value=read_timeout)

File <string>:3, in raise_from(value, from_value)

File ~/seleniumTesting/venv/lib/python3.11/site-packages/urllib3/connection
pool.py:444, in HTTPConnectionPool._make_request(self, conn, method, url, t
imeout, chunked, **httplib_request_kw)
    441 except TypeError:
    442     # Python 3
    443     try:
--> 444         httplib_response = conn.getresponse()
    445     except BaseException as e:
    446         # Remove the TypeError from the exception chain in
```

```
    447         # Python 3 (including for exceptions like SystemExit).
    448         # Otherwise it looks like a bug in the code.
    449         six.raise_from(e, None)

File /Library/Frameworks/Python.framework/Versions/3.11/lib/python3.11/htt
p/client.py:1374, in HTTPConnection.getresponse(self)
   1372 try:
   1373     try:
-> 1374         response.begin()
   1375     except ConnectionError:
   1376         self.close()

File /Library/Frameworks/Python.framework/Versions/3.11/lib/python3.11/htt
p/client.py:318, in HTTPResponse.begin(self)
    316 # read until we get a non-100 response
    317 while True:
--> 318     version, status, reason = self._read_status()
    319     if status != CONTINUE:
    320         break

File /Library/Frameworks/Python.framework/Versions/3.11/lib/python3.11/htt
p/client.py:279, in HTTPResponse._read_status(self)
    278 def _read_status(self):
--> 279     line = str(self.fp.readline(_MAXLINE + 1), "iso-8859-1")
    280     if len(line) > _MAXLINE:
    281         raise LineTooLong("status line")

File /Library/Frameworks/Python.framework/Versions/3.11/lib/python3.11/sock
et.py:706, in SocketIO.readinto(self, b)
    704 while True:
    705     try:
--> 706         return self._sock.recv_into(b)
    707     except timeout:
    708         self._timeout_occurred = True

KeyboardInterrupt:
```

In [ ]:
```
pd.DataFrame(resultsList)
```

# Meta Comparison & Fuzzy Wuzzy

## Convert all to df

In [75]:
```
bing_df = pd.DataFrame(bing)
yahoo_df = pd.DataFrame(yahoo)
mojeek_df = pd.DataFrame(mojeek)
startPage_df = pd.DataFrame(startPage)
duckduckGo_df = pd.DataFrame(duckduckGo)
braveSearch_df = pd.DataFrame(braveSearch)
yellowPages_df = pd.DataFrame(yellowPages)
google_df = pd.DataFrame(google)
results_df = pd.DataFrame(resultsList)
google_shopping_df = pd.DataFrame(google_shopping)
```

```
df_list = [duckduckGo_df, startPage_df, braveSearch_df, yellowPages_df,
           mojeek_df, yahoo_df, bing_df, google_df, google_shopping_df]
           #results_df]

df_list_names = ['duckduckGo_df', 'startPage_df', 'braveSearch_df', 'yellowP
                 'mojeek_df', 'yahoo_df', 'bing_df', 'google_df',
                 'google_shopping_df'] #'results_df']
```

In [76]:
```
for df in df_list:
    print(f"Df length: {len(df)}, > {df.isnull().any(axis=1).sum()}")
    for column in df.columns:
        print(column, end="\t")
    print('\n')
    if df.isnull().any(axis=1).sum() > 0:
        nan_rows = df[df.isnull().any(axis=1)]
        print(f"The following rows in the DataFrame have NaN values:\n{nan_r

average_length = sum(len(df) for df in df_list) / len(df_list)
print('\n')
print('\nAverage length', average_length)
```

```
Df length: 200, > 0
Title   RankNumber      ZipCode searchTerm

Df length: 178, > 0
Title   RankNumber      ZipCode searchTerm      link

Df length: 18, > 0
Title   RankNumber      ZipCode searchTerm

Df length: 598, > 0
Title   RankNumber      ZipCode searchTerm

Df length: 195, > 0
Title   RankNumber      ZipCode searchTerm

Df length: 249, > 0
Title   RankNumber      ZipCode searchTerm

Df length: 87, > 86
Title   RankNumber      ZipCode searchTerm      base_url

The following rows in the DataFrame have NaN values:
                                Title  RankNumber ZipCode         searchTe
rm  \
0             Store Locator – Le Specs           1   94110  le specs in 941
10
1   Le Specs | Designer | NET-A-PORTER           2   94110  le specs in 941
10
2                             Le Specs           3   94110  le specs in 941
10
3            94010 + 94110 – Tudor Sub           4   94110  le specs in 941
10
4            94010 + 94110 – Tudor Sub           5   94110  le specs in 941
10
..                                 ...         ...     ...
...
81                            Le Specs           3   30363  le specs in 303
63
82    Shop Le Specs Online | Nordstrom           4   30363  le specs in 303
63
83            Store Locator – Le Specs           1   98109  le specs in 981
09
84  Le Specs | Designer | NET-A-PORTER           2   98109  le specs in 981
09
85    Shop Le Specs Online | Nordstrom           3   98109  le specs in 981
09

   base_url
0       NaN
1       NaN
2       NaN
3       NaN
4       NaN
..      ...
81      NaN
82      NaN
```

```
83      NaN
84      NaN
85      NaN

[86 rows x 5 columns]

Df length: 458, > 15
Title   RankNumber      ZipCode link    link_website

The following rows in the DataFrame have NaN values:
                                                  Title  RankNumber ZipCode  \
1                                             Le Specs           2   94110
30                                            Le Specs           3   90210
61                                           Stockists           3   10001
70                Le Specs Air Heart 51mm Sunglasses           12   10001
122                        1969 john deere 110 parts           31   20001
125                                           Le Specs           2   98101
126                                HANKERING | BLACK           3   98101
160                             FANPLASTICO | ORCHID           15   60601
188                                           Le Specs           2   30303
261  Top 10 Best Eye Glasses Repair in San Diego, CA           7   92101
264    Used Toyota Corolla for Sale in San Diego, CA           10   92101
316                                           Le Specs           2   75201
317                 LAS DALIAS | PETROL TEAL OPTICAL           3   75201
319                     Designer Sunglasses for Rent           5   75201
328                                           Untitled           14   75201

                                                  link link_website
1                                 https://lespecs.com/          NaN
30                                https://lespecs.com/          NaN
61                  https://lespecs.com/pages/stockists          NaN
70   https://www.nordstrom.com/s/le-specs-air-heart...          NaN
122  https://d-arena.cfd/1969-john-deere-110-parts....          NaN
125                               https://lespecs.com/          NaN
126  https://lespecs.com/products/hankering-black-l...          NaN
160  https://lespecs.com/products/fanplastico-orchi...          NaN
188                               https://lespecs.com/          NaN
261  https://www.yelp.com/search?find_desc=Eye+Glas...          NaN
264  https://www.edmunds.com/used-toyota-corolla-sa...          NaN
316                               https://lespecs.com/          NaN
317  https://lespecs.com/products/las-dalias-petrol...          NaN
319  https://www.renttherunway.com/products/accesso...          NaN
328  https://www.lafss.com/?ads_click=1&data=6759-6...          NaN

Df length: 586, > 0
Title   RankNumber      ZipCode google_maps_link        address



Average length 285.44444444444446
```

## Fuzzy Wuzzy Algorithm

In [77]:
```
s1 = "Le Specs | Designer | NET-A-PORTER"
s2 = "Le Specs Stockist"
s3 = "Airstream For Sale In Texas - 2023"

sample = 'Urban Outfitters'
sample1 = 'dress San Francisco'
print("FuzzyWuzzy Ratio: ", fuzz.ratio(sample, sample1))
print("FuzzyWuzzy PartialRatio: ", fuzz.partial_ratio(sample, sample1))
print("FuzzyWuzzy TokenSortRatio: ", fuzz.token_sort_ratio(sample, sample1))
print("FuzzyWuzzy TokenSetRatio: ", fuzz.token_set_ratio(sample, sample1))
print("FuzzyWuzzy WRatio: ", fuzz.WRatio(sample, sample1))
```

```
FuzzyWuzzy Ratio:  34
FuzzyWuzzy PartialRatio:  33
FuzzyWuzzy TokenSortRatio:  34
FuzzyWuzzy TokenSetRatio:  34
FuzzyWuzzy WRatio:  40
```

In [78]:
```
#### Metric
#Average of WRatio & TokenSetRaio

def WTokenRatio(str1, str2):
    wratio = fuzz.WRatio(str1, str2)
    token_set = fuzz.token_set_ratio(str1, str2)
    return (wratio+token_set)/2

def extractTopWTokenRatio(search_result, choices):
    val_list = []

    for choice in choices:
        val_list.append((choice, WTokenRatio(search_result, choice)))

    max_ratio_item = max(val_list, key=lambda x: x[1])

    return max_ratio_item
```

In [79]:
```
print(WTokenRatio(s1, s2))
print(WTokenRatio(s1, s3))
```

```
75.0
34.0
```

## Testing Custom Function

In [80]:
```
stores_with_brand
```

Out[80]:
```
['Seattle Eye',
 'Wayward - Seattle',
 'Verdis',
 'Evereve',
 'Lika Love',
 'Evereve',
 'Evereve',
 'Wayward',
 'Evereve']
```

In [81]:
```
search_result_item_1 = 'Le Specs Sunglasses for Women | Nordstrom'
search_result_item_2 = 'Le Specs Store Locator'

#Turn results into a list
stores_with_brand = results_df.query("ZipCode=='98101'")["store_name"].tolis
print(" - ".join(stores_with_brand), '\n')

print(search_result_item_1)
for choice in stores_with_brand:
    print(choice.ljust(20), WTokenRatio(search_result_item_1, choice))
print("TOP:", extractTopWTokenRatio(search_result_item_1, stores_with_brand)

print('\n')

print(search_result_item_2)
for choice in stores_with_brand:
    print(choice.ljust(20), WTokenRatio(search_result_item_2, choice))
print("TOP:", extractTopWTokenRatio(search_result_item_2, stores_with_brand)
```

```
Seattle Eye - Wayward - Seattle - Verdis - Evereve - Lika Love - Evereve -
Evereve - Wayward - Evereve

Le Specs Sunglasses for Women | Nordstrom
Seattle Eye          27.5
Wayward - Seattle    27.0
Verdis               31.5
Evereve              21.5
Lika Love            25.5
Evereve              21.5
Evereve              21.5
Wayward              17.5
Evereve              21.5
TOP: ('Verdis', 31.5)


Le Specs Store Locator
Seattle Eye          37.0
Wayward - Seattle    31.5
Verdis               25.5
Evereve              28.0
Lika Love            35.0
Evereve              28.0
Evereve              28.0
Wayward              21.0
Evereve              28.0
TOP: ('Seattle Eye', 37.0)
```

## One Engine Audit

In [82]:
```
#Correct defined as having a 70 or higher 'WTokenRatio' number
threshold = 70
total_correct = 0
total_incorrect = 0
correct_dict = []
incorrect_dict = []
```

```
for zipcode in zipcodesSample: #Zipcodes
    #Store Locator
    store_locations_df = results_df.query(f"ZipCode=='{zipcode}'") #DataFram
    store_locations = store_locations_df["store_name"].tolist()
    store_locations.append("Stockist Store Locator")

    #Search Engine
    search_results_df = duckduckGo_df.query(f"ZipCode == '{zipcode}'") #####
    search_results = search_results_df['Title'].tolist()

    print(zipcode)
    for idx, result in enumerate(search_results):
        if len(store_locations) > 0:
            extraction = extractTopWTokenRatio(result, store_locations)
            print(idx, result.ljust(70), extraction, '\t')

            if extraction[1] >= threshold:
                total_correct+=1
                entry = search_results_df.iloc[idx].to_dict()
                entry['Search Engine'] = 'duckduckgo' #####
                correct_dict.append(entry)
            else:
                total_incorrect+=1
                entry = search_results_df.iloc[idx].to_dict()
                entry['Search Engine'] = 'duckduckgo' #####
                incorrect_dict.append(entry)
        else:
            total_incorrect+=1
    print('\n')

print(total_correct, total_incorrect, total_correct/(total_correct+total_inc
```

```
94110
0 Store Locator - Le Specs
('Stockist Store Locator', 75.0)
1 Le Specs
('Stockist Store Locator', 38.0)
2 Le Specs | Designer | NET-A-PORTER
('Turner And Co', 43.0)
3 Shop Le Specs Online | Nordstrom
('Stockist Store Locator', 41.5)
4 Shop Le Specs Online | Shopbop
('Stockist Store Locator', 37.0)
5 Le Specs Sunglasses Review - Must Read This Before Buying
('Turner And Co', 32.5)
6 Home - Le Specs
('Stockist Store Locator', 28.5)
7 Our Story - Le Specs
('Stockist Store Locator', 58.5)
8 Le Specs | Selfridges
('Stockist Store Locator', 38.0)
9 94010 + 94110 — Tudor Sub
('Trudy', 38.5)


90210
0 Store Locator - Le Specs
('Stockist Store Locator', 75.0)
1 Shop Le Specs Online | Nordstrom
('Stockist Store Locator', 41.5)
2 Le Specs
('Stockist Store Locator', 38.0)
3 Le Specs Sunglasses Review - Must Read This Before Buying
('Turner And Co', 32.5)
4 Home - Le Specs
('Stockist Store Locator', 28.5)
5 Le Specs | Nordstrom
('Stockist Store Locator', 44.0)
6 Our Story - Le Specs
('Stockist Store Locator', 58.5)
7 2021 Toyota Sienna LE Full Specs, Features and Price | CarBuzz
('Turner And Co', 62.0)
8 2021 Toyota Corolla Sedan LE Full Specs, Features and Price
('Turner And Co', 62.0)
9 2021 Forest River Sunseeker 2250S LE specs and literature guide - RVUSA.c
om ('Turner And Co', 62.0)


10001
0 Le Specs | Designer | NET-A-PORTER
('Turner And Co', 43.0)
1 Le Specs
('Stockist Store Locator', 38.0)
2 Shop Le Specs Online | Nordstrom
('Stockist Store Locator', 41.5)
3 Amazon.com: Le Specs
('Turner And Co', 45.0)
4 Le Specs Sunglasses Review - Must Read This Before Buying
```

```
('Turner And Co', 32.5)
5 Unreal! | Matte Black Sunglasses - Le Specs
('Stockist Store Locator', 39.0)
6 Home - Le Specs
('Stockist Store Locator', 28.5)
7 Le Specs Sunglasses | 1001 Optical
('Stockist Store Locator', 39.5)
8 Our Story - Le Specs
('Stockist Store Locator', 58.5)
9 New 2017 Honda Pioneer 1000 LE Review / Specs - Honda-Pro Kevin
('Turner And Co', 30.0)


20001
0 Store Locator - Le Specs
('Stockist Store Locator', 75.0)
1 2001 Toyota Corolla Specs, Price, MPG & Reviews | Cars.com
('Stockist Store Locator', 33.5)
2 Used 2001 Toyota Corolla LE Specs & Features | Edmunds
('Turner And Co', 37.5)
3 2001 Toyota Camry Review & Ratings | Edmunds
('Stockist Store Locator', 33.5)
4 Le Specs
('Stockist Store Locator', 38.0)
5 Shop Le Specs Online | Nordstrom
('Stockist Store Locator', 41.5)
6 2001 Toyota Corolla LE 4dr Sedan Specs and Prices - Autoblog
('Turner And Co', 62.0)
7 2001-2005 Sea-Doo GTI 720 and GTI LE Specs and Review [Video]
('Turner And Co', 62.0)
8 2001 Toyota Corolla Values & Cars for Sale | Kelley Blue Book - KBB
('Stockist Store Locator', 34.5)
9 Used 2001 Toyota Camry LE Sedan 4D Prices - Kelley Blue Book
('Stockist Store Locator', 35.0)


98101
0 Store Locator - Le Specs
('Stockist Store Locator', 75.0)
1 Le Specs
('Seattle Eye', 42.0)
2 Le Specs | Designer | NET-A-PORTER
('Stockist Store Locator', 37.0)
3 Shop Le Specs Online | Nordstrom
('Stockist Store Locator', 41.5)
4 Amazon.com: Le Specs
('Stockist Store Locator', 33.0)
5 Le Specs Sunglasses Review - Must Read This Before Buying
('Seattle Eye', 33.5)
6 Home - Le Specs
('Seattle Eye', 41.0)
7 Our Story - Le Specs
('Stockist Store Locator', 58.5)
8 Shop Le Specs Online | Nordstrom Rack
('Stockist Store Locator', 41.5)
9 Shop Le Specs Online | Shopbop
```

```
('Stockist Store Locator', 37.0)


60601
0 Store Locator - Le Specs
('Stockist Store Locator', 75.0)
1 IEC 60601 - Wikipedia
('Turner And Co', 26.0)
2 IEC 60601 Testing and Certification | UL Solutions
('Turner And Co', 62.0)
3 Shop Le Specs Online | Nordstrom
('Stockist Store Locator', 41.5)
4 Le Specs
('Stockist Store Locator', 38.0)
5 MOPP vs. MOOP: how to specifiy medical power supplies - Avnet
('Stockist Store Locator', 35.0)
6 IEC 60601-1 Medical Power Supplies | CUI Inc
('Turner And Co', 29.5)
7 What is the IEC 60601 Scope? - Medical Device Academy
('Turner And Co', 35.5)
8 Home - Le Specs
('Stockist Store Locator', 28.5)
9 Our Story - Le Specs
('Stockist Store Locator', 58.5)


77002
0 Store Locator - Le Specs
('Stockist Store Locator', 75.0)
1 Spec's - Downtown - Smith Street - Spec's Wines, Spirits & Finer Foods
('Stockist Store Locator', 41.0)
2 Spec's Locations | Wine & Liquor Stores in Houston, Dallas, Austin, San
... ('Stockist Store Locator', 41.0)
3 Le Specs
('Stockist Store Locator', 38.0)
4 Le Specs | Designer | NET-A-PORTER
('Turner And Co', 43.0)
5 Shop Le Specs Online | Nordstrom
('Stockist Store Locator', 41.5)
6 Shop Le Specs Online | Shopbop
('Stockist Store Locator', 37.0)
7 Home - Le Specs
('Stockist Store Locator', 28.5)
8 PDF Wiremold - legrand.us
('Turner And Co', 43.5)
9 NVIDIA GeForce 7300 LE Specs | TechPowerUp GPU Database
('Stockist Store Locator', 34.5)


30303
0 Store Locator - Le Specs
('Stockist Store Locator', 75.0)
1 Le Specs
('Stockist Store Locator', 38.0)
2 Le Specs | Designer | NET-A-PORTER
('Turner And Co', 43.0)
```

```
3 Shop Le Specs Online | Nordstrom
('Stockist Store Locator', 41.5)
4 Le Specs | Nordstrom
('Stockist Store Locator', 44.0)
5 Our Story – Le Specs
('Stockist Store Locator', 58.5)
6 Used 2003 Toyota Corolla LE Specs & Features | Edmunds
('Turner And Co', 37.5)
7 America SAE J 405 30303 / 30303 Datasheet, chemical composition ...
('Stockist Store Locator', 32.0)
8 Le Specs | Liberty
('Stockist Store Locator', 36.0)
9 30 Le | Tcl Usa
('Stockist Store Locator', 33.0)


02108
0 Store Locator – Le Specs
('Stockist Store Locator', 75.0)
1 Shop Le Specs Online | Nordstrom
('Stockist Store Locator', 41.5)
2 Le Specs
('Stockist Store Locator', 38.0)
3 Shop Le Specs Online | Nordstrom Rack
('Stockist Store Locator', 41.5)
4 Le Specs Sunglasses Review – Must Read This Before Buying
('Turner And Co', 32.5)
5 Home – Le Specs
('Stockist Store Locator', 28.5)
6 Le Specs | Nordstrom
('Stockist Store Locator', 44.0)
7 Le Specs Rocky W 1902108 Blush/Khaki Gradient – Sunglass Culture
('Stockist Store Locator', 32.0)
8 Our Story – Le Specs
('Stockist Store Locator', 58.5)
9 Shop Le Specs Online | Shopbop
('Stockist Store Locator', 37.0)


33131
0 Store Locator – Le Specs
('Stockist Store Locator', 75.0)
1 Stockists – Le Specs
('Stockist Store Locator', 58.5)
2 Le Specs
('Stockist Store Locator', 38.0)
3 Le Specs | Designer | NET-A-PORTER
('Turner And Co', 43.0)
4 Shop Le Specs Online | Nordstrom
('Stockist Store Locator', 41.5)
5 Le Specs Sunglasses Review – Must Read This Before Buying
('Turner And Co', 32.5)
6 Le Specs | Nordstrom
('Stockist Store Locator', 44.0)
7 Home – Le Specs
('Stockist Store Locator', 28.5)
```

```
8 Optical Fiber Product Information Sheets | Corning
('Stockist Store Locator', 36.0)
9 Shop Le Specs Online | Shopbop
('Stockist Store Locator', 37.0)


80202
0 Le Specs
('Stockist Store Locator', 38.0)
1 Shop Le Specs Online | Nordstrom
('Stockist Store Locator', 41.5)
2 Amazon.com: Le Specs
('Turner And Co', 45.0)
3 Le Specs Sunglasses Review – Must Read This Before Buying
('Turner And Co', 32.5)
4 Home – Le Specs
('Stockist Store Locator', 28.5)
5 2022 Toyota Camry LE Specs & Features | Edmunds
('Turner And Co', 37.5)
6 Our Story – Le Specs
('Stockist Store Locator', 58.5)
7 80202 Real Estate – 80202 Homes For Sale | Zillow
('Stockist Store Locator', 35.5)
8 2022 Toyota Camry LE Full Specs, Features and Price | CarBuzz
('Turner And Co', 62.0)
9 80202, Denver, CO Zip Code Map - MapQuest
('Turner And Co', 59.0)


92101
0 Store Locator – Le Specs
('Stockist Store Locator', 75.0)
1 Le Specs
('Stockist Store Locator', 38.0)
2 Specs Optometry
('Stockist Store Locator', 46.0)
3 Le Specs | Designer | NET-A-PORTER
('Turner And Co', 43.0)
4 Shop Le Specs Online | Nordstrom
('Stockist Store Locator', 41.5)
5 Locations – Specs Optometry
('Stockist Store Locator', 53.5)
6 Le Specs Sunglasses Review – Must Read This Before Buying
('Turner And Co', 32.5)
7 Home – Le Specs
('Stockist Store Locator', 28.5)
8 Our Story – Le Specs
('Stockist Store Locator', 58.5)
9 Le Specs | Nordstrom
('Stockist Store Locator', 44.0)


85004
0 Store Locator – Le Specs
('Stockist Store Locator', 75.0)
1 Stockists – Le Specs
```

```
('Stockist Store Locator', 58.5)
2 Le Specs
('Stockist Store Locator', 38.0)
3 Shop Le Specs Online | Nordstrom
('Stockist Store Locator', 41.5)
4 Shop Le Specs Online | Shopbop
('Stockist Store Locator', 37.0)
5 Home - Le Specs
('Stockist Store Locator', 28.5)
6 Clear Microwave, Inc | S85004 - Datasheet PDF & Tech Specs
('Stockist Store Locator', 33.5)
7 ATI Radeon 8500 LE Specs | TechPowerUp GPU Database
('Stockist Store Locator', 34.5)
8 Amazon.com: Le Specs
('Stockist Store Locator', 33.0)
9 Le Specs Sunglasses for Women | Nordstrom
('Stockist Store Locator', 38.5)


98104
0 Store Locator - Le Specs
('Stockist Store Locator', 75.0)
1 Le Specs
('Stockist Store Locator', 38.0)
2 Le Specs | Designer | NET-A-PORTER
('Stockist Store Locator', 37.0)
3 Shop Le Specs Online | Nordstrom
('Stockist Store Locator', 41.5)
4 Le Specs Sunglasses Review - Must Read This Before Buying
('Stockist Store Locator', 31.5)
5 Le Specs | Nordstrom
('Stockist Store Locator', 44.0)
6 Home - Le Specs
('Stockist Store Locator', 28.5)
7 Le Specs x Solid & Striped Jetties Sunglasses | SHOPBOP
('Stockist Store Locator', 39.5)
8 Our Story - Le Specs
('Stockist Store Locator', 58.5)
9 Amazon.com: Le Specs
('Stockist Store Locator', 33.0)


75201
0 Store Locator - Le Specs
('Stockist Store Locator', 75.0)
1 Le Specs
('Stockist Store Locator', 38.0)
2 Shop Le Specs Online | Nordstrom
('Stockist Store Locator', 41.5)
3 Amazon.com: Le Specs
('Stockist Store Locator', 33.0)
4 Le Specs Sunglasses Review - Must Read This Before Buying
('Stockist Store Locator', 31.5)
5 Home - Le Specs
('Stockist Store Locator', 28.5)
6 Our Story - Le Specs
```

```
('Stockist Store Locator', 58.5)
7 2019 Forest River Forester 2351 LE specs and literature guide
('Stockist Store Locator', 34.5)
8 PDF FEATURES & SPECIFICATIONS - Acuity Brands
('Stockist Store Locator', 34.5)
9 2020 Forest River Forester 2251S LE specs and literature guide - RVUSA.co
m ('Stockist Store Locator', 32.0)


60611
0 Store Locator - Le Specs
('Stockist Store Locator', 75.0)
1 Stockists - Le Specs
('Stockist Store Locator', 58.5)
2 Le Specs
('Stockist Store Locator', 38.0)
3 Shop Le Specs Online | Nordstrom
('Stockist Store Locator', 41.5)
4 Le Specs Sunglasses Review - Must Read This Before Buying
('Stockist Store Locator', 31.5)
5 Shop Le Specs Online | Shopbop
('Stockist Store Locator', 37.0)
6 Home - Le Specs
('Stockist Store Locator', 28.5)
7 Shop Le Specs Online | Nordstrom Rack
('Stockist Store Locator', 41.5)
8 Le Specs Sunglasses for Women | Nordstrom
('Stockist Store Locator', 38.5)
9 60611, Chicago, IL Zip Code Map - MapQuest
('Stockist Store Locator', 29.5)


75205
0 Store Locator - Le Specs
('Stockist Store Locator', 75.0)
1 Le Specs
('Stockist Store Locator', 38.0)
2 Shop Le Specs Online | Nordstrom
('Stockist Store Locator', 41.5)
3 Le Specs Sunglasses Review - Must Read This Before Buying
('Stockist Store Locator', 31.5)
4 Home - Le Specs
('Stockist Store Locator', 28.5)
5 Our Story - Le Specs
('Stockist Store Locator', 58.5)
6 2020 Forest River Forester 2251S LE specs and literature guide - RVUSA.co
m ('Stockist Store Locator', 32.0)
7 Le Specs | Selfridges
('Stockist Store Locator', 38.0)
8 Amazon.com: Le Specs
('Stockist Store Locator', 33.0)
9 Le Specs Sunglasses for Women | Nordstrom
('Stockist Store Locator', 38.5)


19104
```

```
0 Store Locator - Le Specs
('Stockist Store Locator', 75.0)
1 Stockists - Le Specs
('Stockist Store Locator', 58.5)
2 Le Specs
('Stockist Store Locator', 38.0)
3 Shop Le Specs Online | Nordstrom
('Stockist Store Locator', 41.5)
4 Amazon.com: Le Specs
('Stockist Store Locator', 33.0)
5 Le Specs Sunglasses for Women | Nordstrom
('Stockist Store Locator', 38.5)
6 Le Specs Sunglasses Review - Must Read This Before Buying
('Stockist Store Locator', 31.5)
7 Home - Le Specs
('Stockist Store Locator', 28.5)
8 1984 Chrysler (USA) Le Baron 2gen 4-Door full range specs
('Stockist Store Locator', 29.0)
9 4241 W Girard Ave, Philadelphia, PA 19104 - Zillow
('Stockist Store Locator', 21.0)


30363
0 Store Locator - Le Specs
('Stockist Store Locator', 75.0)
1 Le Specs
('Stockist Store Locator', 38.0)
2 Le Specs | Designer | NET-A-PORTER
('Stockist Store Locator', 37.0)
3 Shop Le Specs Online | Nordstrom
('Stockist Store Locator', 41.5)
4 Home - Le Specs
('Stockist Store Locator', 28.5)
5 Le Specs
('Stockist Store Locator', 38.0)
6 Our Story - Le Specs
('Stockist Store Locator', 58.5)
7 ZL30363 Short Form Data Sheet - Microsemi
('Stockist Store Locator', 40.5)
8 Shop Le Specs Online | Shopbop
('Stockist Store Locator', 37.0)
9 Collections - Le Specs
('Stockist Store Locator', 37.0)


98109
0 Store Locator - Le Specs
('Stockist Store Locator', 75.0)
1 Shop Le Specs Online | Nordstrom
('Stockist Store Locator', 41.5)
2 Le Specs | Designer | NET-A-PORTER
('Turner And Co', 43.0)
3 Le Specs
('Stockist Store Locator', 38.0)
4 Home - Le Specs
('Stockist Store Locator', 28.5)
```

```
5 Le Specs | Nordstrom
('Stockist Store Locator', 44.0)
6 Our Story – Le Specs
('Stockist Store Locator', 58.5)
7 Le Specs @ Amazon.com:
('Turner And Co', 45.0)
8 Amazon.com: Le Specs
('Turner And Co', 45.0)
9 Shop Le Specs Online | Shopbop
('Stockist Store Locator', 37.0)


18 182 0.09
```

## All Engines

In [83]:
```
df_list_names
```

Out[83]:
```
['duckduckGo_df',
 'startPage_df',
 'braveSearch_df',
 'yellowPages_df',
 'mojeek_df',
 'yahoo_df',
 'bing_df',
 'google_df',
 'google_shopping_df']
```

In [84]:
```
correct_dict, incorrect_dict, threshold = [], [], 70

for df_num, df in enumerate(df_list):
    print(df_num, df_list_names[df_num], " results:")
    for zipcode in zipcodesSample:
        print(zipcode)

        store_locations_df = results_df.query(f"ZipCode=='{zipcode}'") #Data
        store_locations = store_locations_df["store_name"].tolist()
        store_locations.extend(["Stockist Store Locator", "Stockist", "Stock

        #Search Engine
        search_results_df = df.query(f"ZipCode == '{zipcode}'") #####
        search_results = search_results_df['Title'].tolist()

        for idx, result in enumerate(search_results):
            if len(store_locations) > 0 and len(search_results) > 0:
                extraction = extractTopWTokenRatio(result, store_locations)
                #print(idx, result.ljust(70), extraction, '\t')

                if extraction[1] >= threshold:
                    entry = search_results_df.iloc[idx].to_dict()
                    entry['Search Engine'] = df_list_names[df_num] #####
                    entry['Extraction Similarity Name'] = extraction[0]
                    entry['Extraction Similarity Score'] = extraction[1]
                    entry['Met Threshold?'] = 1
                    #print(extraction)
```

```
                    correct_dict.append(entry)
                else:
                    entry = search_results_df.iloc[idx].to_dict()
                    entry['Search Engine'] = df_list_names[df_num] #####
                    entry['Extraction Similarity Name'] = extraction[0]
                    entry['Extraction Similarity Score'] = extraction[1]
                    entry['Met Threshold?'] = 0
                    incorrect_dict.append(entry)
            else:
                print(df_num, "Empty")
```

```
0 duckduckGo_df  results:
94110
90210
10001
20001
98101
60601
77002
30303
02108
33131
80202
92101
85004
98104
75201
60611
75205
19104
30363
98109
1 startPage_df  results:
94110
90210
10001
20001
98101
60601
77002
30303
02108
33131
80202
92101
85004
98104
75201
60611
75205
19104
30363
98109
2 braveSearch_df  results:
94110
90210
10001
20001
98101
60601
77002
30303
02108
33131
80202
92101
85004
```

```
98104
75201
60611
75205
19104
30363
98109
3 yellowPages_df  results:
94110
90210
10001
20001
98101
60601
77002
30303
02108
33131
80202
92101
85004
98104
75201
60611
75205
19104
30363
98109
4 mojeek_df  results:
94110
90210
10001
20001
98101
60601
77002
30303
02108
33131
80202
92101
85004
98104
75201
60611
75205
19104
30363
98109
5 yahoo_df  results:
94110
90210
10001
20001
98101
60601
```

```
77002
30303
02108
33131
80202
92101
85004
98104
75201
60611
75205
19104
30363
98109
6 bing_df  results:
94110
90210
10001
20001
98101
60601
77002
30303
02108
33131
80202
92101
85004
98104
75201
60611
75205
19104
30363
98109
7 google_df  results:
94110
90210
10001
20001
98101
60601
77002
30303
02108
33131
80202
92101
85004
98104
75201
60611
75205
19104
30363
98109
```

```
8 google_shopping_df  results:
94110
90210
10001
20001
98101
60601
77002
30303
02108
33131
80202
92101
85004
98104
75201
60611
75205
19104
30363
98109
```

## Aim → From the top X Google results, how many are on the store list? Use names/addresses

EX:

- 17% on Google
- 5% on Google Shopping
- 22% on DuckDuckGo
- 8% on Bing

In [87]:
```
len(pd.DataFrame(correct_dict))/  (len(pd.DataFrame(incorrect_dict)) + len(p
```

Out[87]:
```
0.04671078240560529
```

In [88]:
```
combined_df = pd.concat([pd.DataFrame(correct_dict), pd.DataFrame(incorrect_
combined_df.to_csv("lespecs.csv")
```

In [90]:
```
combined_df
```

Out[90]:

| | Title | RankNumber | ZipCode | searchTerm | Search Engine | Extraction Similarity Name | Extra Sim |
|---|---|---|---|---|---|---|---|
| **0** | Store Locator - Le Specs | 1 | 94110 | le specs in 94110 | duckduckGo_df | Stockist Store Locator | |
| **1** | Store Locator - Le Specs | 1 | 90210 | le specs in 90210 | duckduckGo_df | Stockist Store Locator | |
| **2** | Store Locator - Le Specs | 1 | 20001 | le specs in 20001 | duckduckGo_df | Stockist Store Locator | |
| **3** | Store Locator - Le Specs | 1 | 98101 | le specs in 98101 | duckduckGo_df | Stockist Store Locator | |
| **4** | Store Locator - Le Specs | 1 | 60601 | le specs in 60601 | duckduckGo_df | Stockist Store Locator | |
| **...** | ... | ... | ... | ... | ... | ... | |
| **2444** | Kohl's | 14 | 98109 | NaN | google_shopping_df | Stockist Store Locator | |
| **2445** | Macy's | 15 | 98109 | NaN | google_shopping_df | Turner And Co | |
| **2446** | Sportsman's Warehouse | 16 | 98109 | NaN | google_shopping_df | Turner And Co | |
| **2447** | West Marine | 17 | 98109 | NaN | google_shopping_df | Stockist Store Locator | |
| **2448** | Grainger Industrial Supply | 18 | 98109 | NaN | google_shopping_df | Turner And Co | |

2569 rows × 13 columns