

# Selenium Playground

## Set up

```
In [1]: import time
import os
import json
import sys
import csv
from selenium import webdriver
from selenium.webdriver.chrome.service import Service
from selenium.webdriver.common.by import By
from selenium.webdriver.chrome.options import Options

#sys.version
```

```
In [2]: chrome_options = Options()
#chrome_options.add_argument("--headless") # Ensure GUI is off
#chrome_options.add_argument("--no-sandbox")

# setup webdriver (how Chrome is automated)
##webdriver_service = Service("/usr/bin/chromedriver")

browser = webdriver.Chrome(options=chrome_options) #Chrome() Safari
## service=webdriver_service
```

```
In [8]: browser.get('https://ullajohnson.com/pages/store-locator')
```

## Pop up protection

```
In [4]: ### RUN THE URL AGAIN

browser.get('https://ullajohnson.com/pages/store-locator')

### Find the "x" to click out of

"""
#close_dialogue = browser.find_element(By.ID, "input0input")
body = browser.find_element(By.CLASS_NAME, "header__actions")
body.click()
"""
```

```
Out[4]: '\n#close_dialogue = browser.find_element(By.ID, "input0input")\nbody = browser.find_element(By.CLASS_NAME, "header__actions")\nbody.click()\n'
```

## Find the Elements & Results

```
In [ ]: ## SAMPLE CODE
```

```

"""
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-button').f

zipcode = '94123'

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

search_results = browser.find_element(By.CLASS_NAME, 'stockist-result-list')
res=search_results.find_elements(By.CLASS_NAME,'stockist-result')
print("results:", len(res))
res[0].get_attribute("textContent").split()

"""

```

## Looping Through Ulla

```

In [5]: top500zips = [
    77494,77449,75034,90011,75070,79936,11368,77084,60629,11385,11211,90650,
    92335,37013,11236,92336,94565,11373,11226,77479,90250,90805,90280,60618,
    29483,77573,11207,92683,11220,77429,91710,10456,11214,11234,10314,92154,
    11206,11230,75217,92376,60632,93307,92592,92704,10458,93722,11746,33027,
    60647,11221,94112,93033,93727,95076,78613,92345,91744,79938,92126,91709,
    78666,99301,60804,11355,27610,91335,95823,78542,37042,30024,11223,75035,
    28269,10453,60625,76244,10468,47906,78577,94533,78641,94544,77083,75211,
    76063,91706,78245,90706,96706,92105,11204,77450,33311,33024, 94080,84015
    30349,93550,60634,93257,10462,95035,75228,89108,37211,93274,94587,63376,
    33012,92805,33411,94536,10466,90255,10452,10002,93306,80013,19120,97701,
    75002,84095,85364,27587,11218,85032,33025,22191,30040,94110,34953,11375,
    93065,97007,19124,80219,30041,78046,30127,60505,97229,92563,60085,91766,
    60641,30281,98012,95123,11215,32828,92114,7055,85204,85225,87114,60640,2
    85301,77036,20002,30022,95687,76179,89031,78596,93230,60620,77845,90631,
    11209,37075,75243,83646,7087,10472,78045,23462,33015,92407,30135,90026,1
    92703,89115,89121,94541,99654,90022,30331,95758,78251,32218,85308,20019,
    23322,94015,92562,7002,17603,77072,60628,92201,38401,29681,11201,10027,1
    84404,14850,29072,33463,7093,46307,32822,28078,2301,30062,20147,30188,91
    60651,78664,94806,20878,95020,44256,43026,85326,40475,92346,78745, 60657
    91977,92404,95127,44035,91770,11372,85008,89123,78574,78250,33313,19143,
    75043,42101,92707,11434,90660,32210,92627,92504,11210,77373,79928,95608,
    75150,60073,74012,80634,78249,93905,19134,75040,95014,92647,91702,78228,
    34711,95111,78504,7047,37167,48180,78254,10312,90004,91732,53215,32818,3
    2148,77521,75227,34744, 29445,95051,93312,92057,28314,95828,33458,72401,
    956,60609,2155,37129,90042,33414,32808,83709,29485,92570,33125,78501,100
    77375,72712,85122,6010,37128,78753,76137,95112,33064,96818,44060,43230,9
    22192,21122,21117,60016,92324,10473,92507,11216
]

zipcode_list = [
    '94123',
    '19104',
    '77494',
    '77449',

```

```
'75034',
'90011',
'77084',
'60629',
'11211',
]
```

```
In [10]: #browser.get('https://ullajohnson.com/pages/store-locator')
results = {}
for i, zipcode in enumerate(top500zips):
    results[zipcode] = []
    browser.get('https://ullajohnson.com/pages/store-locator')

    try:
        query_entry=browser.find_element(By.CLASS_NAME, 'stockist-query-entr
        input_field = query_entry.find_element(By.TAG_NAME, 'input')
        submit = query_entry.find_element(By.CLASS_NAME, 'stockist-search-bu

        input_field.clear()
        input_field.send_keys(zipcode)
        submit.click()
        time.sleep(2)

        search_results = browser.find_element(By.CLASS_NAME, 'stockist-resul
        res=search_results.find_elements(By.CLASS_NAME,'stockist-result')

        for store in res:
            storeInfo = {}

            storeInfo['name'] = store.find_element(By.CLASS_NAME, 'stockist-
            address = [line.get_attribute("textContent") for line in
                store.find_element(By.CLASS_NAME, 'stockist-result-ado
            storeInfo['address'] = ", ".join(address)
            storeInfo['distance'] = store.find_element(By.CLASS_NAME, 'stock
            storeInfo['google_maps'] = store.find_element(By.CLASS_NAME, 'st
            results[zipcode].append(storeInfo)

        print(zipcode, " results:", len(res), ' -', i)
    except:
        browser.get('https://ullajohnson.com/pages/store-locator')
        print("timeout error")

print("Done")
```

```
77494 results: 5 - 0
77449 results: 5 - 1
75034 results: 7 - 2
90011 results: 42 - 3
75070 results: 7 - 4
79936 results: 1 - 5
11368 results: 55 - 6
77084 results: 5 - 7
60629 results: 11 - 8
11385 results: 55 - 9
11211 results: 55 - 10
90650 results: 44 - 11
8701 results: 0 - 12
91331 results: 38 - 13
11208 results: 55 - 14
78660 results: 8 - 15
10467 results: 55 - 16
90201 results: 42 - 17
90044 results: 41 - 18
92335 results: 42 - 19
37013 results: 4 - 20
11236 results: 55 - 21
92336 results: 42 - 22
94565 results: 24 - 23
11373 results: 55 - 24
77479 results: 5 - 26
90250 results: 41 - 27
90805 results: 43 - 28
90280 results: 42 - 29
60618 results: 11 - 30
91342 results: 38 - 31
77433 results: 5 - 32
75052 results: 8 - 33
30044 results: 8 - 34
92503 results: 42 - 35
10025 results: 55 - 36
77584 results: 5 - 37
29483 results: 5 - 38
77573 results: 5 - 39
11207 results: 55 - 40
92683 results: 43 - 41
11220 results: 55 - 42
77429 results: 5 - 43
91710 results: 43 - 44
10456 results: 55 - 45
11214 results: 55 - 46
11234 results: 55 - 47
10314 results: 53 - 48
92154 results: 14 - 49
78521 results: 0 - 50
926 results: 0 - 51
91911 results: 14 - 52
60639 results: 11 - 53
30043 results: 8 - 54
11219 results: 55 - 56
11206 results: 55 - 57
```

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11230 results: 55 - 58
75217 results: 8 - 59
92376 results: 42 - 60
60632 results: 11 - 61
93307 results: 31 - 62
92704 results: 43 - 64
93722 results: 0 - 66
11746 results: 52 - 67
33027 results: 26 - 68
11435 results: 55 - 69
78520 results: 0 - 70
93117 results: 29 - 72
95355 results: 23 - 73
23320 results: 3 - 74
60647 results: 11 - 75
11221 results: 55 - 76
94112 results: 25 - 77
93033 results: 38 - 78
93727 results: 0 - 79
95076 results: 23 - 80
78613 results: 8 - 81
92345 results: 40 - 82
91744 results: 43 - 83
79938 results: 1 - 84
92126 results: 16 - 85
66062 results: 4 - 87
77379 results: 5 - 88
92509 results: 42 - 89
60617 results: 11 - 90
22193 results: 9 - 91
11377 results: 55 - 92
11229 results: 55 - 93
78666 results: 7 - 94
99301 results: 0 - 95
60804 results: 11 - 96
11355 results: 55 - 97
91335 results: 38 - 99
95823 results: 24 - 100
78542 results: 0 - 101
37042 results: 3 - 102
30024 results: 10 - 103
11223 results: 55 - 104
75035 results: 7 - 105
78572 results: 0 - 106
60608 results: 11 - 107
79912 results: 1 - 108
11233 results: 55 - 109
78130 results: 7 - 110
95630 results: 23 - 111
725 results: 0 - 112
28269 results: 5 - 113
10453 results: 55 - 114
60625 results: 11 - 115
76244 results: 8 - 116
10468 results: 55 - 117
47906 results: 1 - 118
```

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78577 results: 0 - 119
94533 results: 24 - 120
78641 results: 8 - 121
94544 results: 25 - 122
77083 results: 5 - 123
75211 results: 8 - 124
60623 results: 11 - 125
87121 results: 0 - 126
23464 results: 3 - 127
11203 results: 55 - 128
85142 results: 4 - 129
11235 results: 55 - 130
77459 results: 5 - 131
76063 results: 8 - 132
91706 results: 42 - 133
78245 results: 7 - 134
90706 results: 43 - 135
96706 results: 1 - 136
92105 results: 15 - 137
11204 results: 55 - 138
77450 results: 5 - 139
33311 results: 24 - 140
33024 results: 26 - 141
94080 results: 25 - 142
84015 results: 3 - 143
75067 results: 7 - 144
19111 results: 42 - 145
95624 results: 24 - 146
94558 results: 24 - 147
43123 results: 4 - 148
7305 results: 0 - 149
30004 results: 10 - 150
30349 results: 6 - 151
93550 results: 39 - 152
60634 results: 11 - 153
93257 results: 0 - 154
10462 results: 55 - 155
95035 results: 25 - 156
75228 results: 8 - 157
89108 results: 1 - 158
37211 results: 3 - 159
93274 results: 1 - 160
94587 results: 25 - 161
63376 results: 2 - 162
93535 results: 37 - 163
33023 results: 26 - 164
91730 results: 43 - 165
34787 results: 6 - 166
92882 results: 42 - 167
10457 results: 55 - 168
10029 results: 55 - 169
33012 results: 26 - 170
92805 results: 43 - 171
33411 results: 24 - 172
94536 results: 25 - 173
10466 results: 55 - 174
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90255 results: 42 - 175
10452 results: 55 - 176
10002 results: 55 - 177
93306 results: 26 - 178
80013 results: 4 - 179
19120 results: 41 - 180
97701 results: 1 - 181
91910 results: 15 - 182
97006 results: 3 - 183
90003 results: 42 - 184
92553 results: 42 - 185
33647 results: 6 - 186
11212 results: 55 - 187
77095 results: 5 - 188
75002 results: 7 - 189
84095 results: 3 - 190
85364 results: 0 - 191
27587 results: 2 - 192
11218 results: 55 - 193
85032 results: 4 - 194
33025 results: 26 - 195
22191 results: 9 - 196
30040 results: 10 - 197
94110 results: 25 - 198
34953 results: 20 - 199
11375 results: 55 - 200
92880 results: 43 - 201
10469 results: 55 - 202
76028 results: 8 - 203
60614 results: 11 - 204
45011 results: 6 - 205
73099 results: 2 - 206
98052 results: 3 - 207
93065 results: 38 - 208
97007 results: 3 - 209
19124 results: 41 - 210
80219 results: 4 - 211
30041 results: 10 - 212
78046 results: 0 - 213
30127 results: 8 - 214
60505 results: 11 - 215
97229 results: 3 - 216
92563 results: 42 - 217
91766 results: 43 - 219
92021 results: 15 - 220
84118 results: 3 - 221
80134 results: 4 - 222
953 results: 0 - 223
89110 results: 1 - 224
91402 results: 38 - 225
96797 results: 1 - 226
60641 results: 11 - 227
98012 results: 3 - 229
95123 results: 25 - 230
11215 results: 55 - 231
32828 results: 5 - 232
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92114 results: 15 - 233
7055 results: 0 - 234
85204 results: 4 - 235
85225 results: 4 - 236
87114 results: 0 - 237
60640 results: 11 - 238
20011 results: 8 - 239
75068 results: 7 - 240
30052 results: 7 - 241
33186 results: 26 - 242
90262 results: 43 - 243
94509 results: 24 - 244
85281 results: 4 - 245
85301 results: 4 - 246
77036 results: 5 - 247
20002 results: 8 - 248
30022 results: 10 - 249
95687 results: 24 - 250
76179 results: 8 - 251
89031 results: 1 - 252
78596 results: 0 - 253
93230 results: 1 - 254
60620 results: 11 - 255
77845 results: 10 - 256
90631 results: 43 - 257
30047 results: 7 - 258
21234 results: 13 - 259
93536 results: 38 - 260
30096 results: 10 - 261
28027 results: 5 - 262
95747 results: 21 - 263
11691 results: 55 - 264
11209 results: 55 - 265
37075 results: 3 - 266
75243 results: 8 - 267
7087 results: 0 - 269
10472 results: 55 - 270
78045 results: 0 - 271
23462 results: 3 - 272
33015 results: 26 - 273
92407 results: 41 - 274
30135 results: 7 - 275
90026 results: 41 - 276
11706 results: 50 - 277
84043 results: 3 - 278
11213 results: 55 - 279
90037 results: 41 - 280
48197 results: 4 - 281
94538 results: 25 - 282
33157 results: 26 - 283
92703 results: 43 - 284
89115 results: 1 - 285
89121 results: 1 - 286
94541 results: 25 - 287
99654 results: 0 - 288
90022 results: 42 - 289
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30331 results: 6 - 290
95758 results: 24 - 291
78251 results: 7 - 292
32218 results: 3 - 293
85308 results: 4 - 294
92801 results: 43 - 296
66061 results: 4 - 297
95206 results: 25 - 298
43081 results: 2 - 299
92677 results: 42 - 300
94513 results: 25 - 301
91343 results: 38 - 302
23322 results: 3 - 303
94015 results: 25 - 304
92562 results: 42 - 305
7002 results: 0 - 306
17603 results: 12 - 307
77072 results: 5 - 308
60628 results: 11 - 309
92201 results: 14 - 310
38401 results: 4 - 311
29681 results: 8 - 312
11201 results: 55 - 313
10027 results: 55 - 314
10977 results: 54 - 315
85041 results: 4 - 316
94501 results: 25 - 317
87120 results: 0 - 318
85033 results: 4 - 319
28215 results: 5 - 320
11432 results: 55 - 321
84404 results: 3 - 322
14850 results: 0 - 323
29072 results: 5 - 324
33463 results: 24 - 325
7093 results: 0 - 326
46307 results: 11 - 327
32822 results: 5 - 328
28078 results: 4 - 329
2301 results: 0 - 330
30062 results: 8 - 331
20147 results: 8 - 332
30188 results: 9 - 333
91762 results: 43 - 334
32765 results: 5 - 335
77346 results: 5 - 336
98682 results: 3 - 337
92115 results: 15 - 338
8753 results: 0 - 339
93906 results: 22 - 340
60651 results: 11 - 341
78664 results: 8 - 342
20878 results: 8 - 344
95020 results: 23 - 345
44256 results: 0 - 346
85326 results: 4 - 348
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40475 results: 4 - 349
92346 results: 42 - 350
78745 results: 8 - 351
60657 results: 11 - 352
20906 results: 7 - 353
10463 results: 55 - 354
80015 results: 4 - 355
6902 results: 0 - 356
28277 results: 5 - 357
19720 results: 16 - 358
10024 results: 55 - 359
91977 results: 15 - 360
92404 results: 42 - 361
95127 results: 25 - 362
44035 results: 3 - 363
91770 results: 42 - 364
11372 results: 55 - 365
85008 results: 4 - 366
89123 results: 1 - 367
78250 results: 7 - 369
33313 results: 26 - 370
19143 results: 34 - 371
11717 results: 50 - 372
91950 results: 15 - 375
75071 results: 7 - 376
27406 results: 4 - 377
60402 results: 11 - 378
75043 results: 8 - 379
42101 results: 4 - 380
92707 results: 43 - 381
11434 results: 55 - 382
90660 results: 44 - 383
32210 results: 3 - 384
92627 results: 43 - 385
92504 results: 42 - 386
11210 results: 55 - 387
77373 results: 5 - 388
79928 results: 1 - 389
95608 results: 23 - 390
77396 results: 5 - 391
10023 results: 55 - 392
43055 results: 2 - 393
43130 results: 2 - 394
78640 results: 7 - 395
78240 results: 7 - 396
77077 results: 5 - 397
75150 results: 8 - 398
60073 results: 12 - 399
74012 results: 1 - 400
80634 results: 4 - 401
78249 results: 7 - 402
93905 results: 20 - 403
19134 results: 38 - 404
75040 results: 7 - 405
95014 results: 25 - 406
92647 results: 43 - 407
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91702 results: 41 - 408  
78228 results: 7 - 409  
77407 results: 5 - 410  
60619 results: 11 - 411  
10701 results: 55 - 412  
94122 results: 25 - 413  
30058 results: 6 - 414  
73160 results: 2 - 415  
32244 results: 3 - 416  
34711 results: 6 - 417  
95111 results: 25 - 418  
78504 results: 0 - 419  
7047 results: 0 - 420  
37167 results: 6 - 421  
48180 results: 4 - 422  
78254 results: 7 - 423  
10312 results: 53 - 424  
90004 results: 40 - 425  
91732 results: 43 - 426  
53215 results: 12 - 427  
32818 results: 5 - 428  
37122 results: 3 - 429  
21740 results: 7 - 430  
91761 results: 43 - 431  
90731 results: 43 - 432  
92630 results: 42 - 433  
2360 results: 0 - 434  
30263 results: 6 - 435  
2148 results: 0 - 436  
77521 results: 5 - 437  
75227 results: 8 - 438  
34744 results: 6 - 439  
29445 results: 5 - 440  
95051 results: 25 - 441  
93312 results: 25 - 442  
92057 results: 42 - 443  
28314 results: 4 - 444  
95828 results: 24 - 445  
33458 results: 24 - 446  
72401 results: 1 - 447  
30144 results: 8 - 448  
30083 results: 6 - 449  
33511 results: 6 - 450  
33142 results: 26 - 451  
77840 results: 10 - 452  
75056 results: 7 - 453  
956 results: 0 - 454  
60609 results: 11 - 455  
2155 results: 0 - 456  
37129 results: 6 - 457  
90042 results: 41 - 458  
33414 results: 24 - 459  
32808 results: 5 - 460  
83709 results: 2 - 461  
29485 results: 5 - 462  
92570 results: 42 - 463

```

33125 results: 24 - 464
78501 results: 0 - 465
10031 results: 55 - 466
37064 results: 4 - 467
20874 results: 8 - 468
32825 results: 5 - 469
77386 results: 5 - 470
22030 results: 9 - 471
30906 results: 3 - 472
77375 results: 5 - 473
72712 results: 1 - 474
85122 results: 4 - 475
6010 results: 0 - 476
37128 results: 6 - 477
78753 results: 8 - 478
76137 results: 8 - 479
95112 results: 25 - 480
33064 results: 24 - 481
96818 results: 1 - 482
44060 results: 1 - 483
43230 results: 2 - 484
93030 results: 38 - 485
79924 results: 1 - 486
22407 results: 9 - 487
10032 results: 55 - 488
76010 results: 8 - 489
92571 results: 42 - 490
22192 results: 9 - 491
21122 results: 11 - 492
21117 results: 10 - 493
60016 results: 11 - 494
92324 results: 42 - 495
10473 results: 55 - 496
92507 results: 42 - 497
11216 results: 55 - 498
Done

```

```

In [12]: ##See results:
#results['19104']

##Write to a JSON
with open("top500_results.json", "w") as output:
    output.write(json.dumps(results,indent=4)) #dump string

##Import a JSON
imported_results = json.load(open('top500_results.json'))
len(imported_results)

```

Out[12]: 499

```

In [13]: # open a file for writing
with open("top500_storesWithUlla.csv", "w", newline="") as csvfile:
    # create a CSV writer
    writer = csv.writer(csvfile)

    # write the header row

```

```
writer.writerow(["Zipcode", "Name", "Address", "Distance"])

# write the data rows
for zipcode, restaurants in imported_results.items():
    for restaurant in restaurants:
        name = restaurant["name"]
        address = restaurant["address"]
        distance = restaurant["distance"]
        writer.writerow([zipcode, name, address, distance])
```