Import

```python
import requests
import pandas as pd
```

Requests and CURL

page 1:

```python
headers = {
    'sec-ch-ua': '"Not.A/Brand";v="8", "Chromium";v="114", "Google Chrome";v="114"',
    'Accept': 'application/json',
    'Referer': 'https://www.target.com/p/ninja-5-5qt-ezview-7-function-air-fryer-max-xl-af171/-/A-86736580',
    'sec-ch-ua-mobile': '?0',
    'User-Agent': 'Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/114.0.0.0 Safari/537.36',
    'sec-ch-ua-platform': '"Windows"',
}

params = {
    'key': '9f36aeafbe60771e321a7cc95a78140772ab3e96',
    'hasOnlyPhotos': 'false',
    'includes': 'reviews,reviewsWithPhotos,entities,metadata,statistics',
    'page': '0',
    'entity': '',
    'reviewedId': '86736580',
    'reviewType': 'PRODUCT',
    'size': '8',
    'sortBy': 'most_recent',
    'verifiedOnly': 'false',
}

response = requests.get('https://r2d2.target.com/ggc/v2/summary', params=params, headers=headers)
```

page 2:

```python
headers = {
    'sec-ch-ua': '"Not.A/Brand";v="8", "Chromium";v="114", "Google Chrome";v="114"',
    'Accept': 'application/json',
    'Referer': 'https://www.target.com/p/ninja-5-5qt-ezview-7-function-air-fryer-max-xl-af171/-/A-86736580',
    'sec-ch-ua-mobile': '?0',
    'User-Agent': 'Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/114.0.0.0 Safari/537.36',
    'sec-ch-ua-platform': '"Windows"',
```

```
}

params = {
    'key': '9f36aeafbe60771e321a7cc95a78140772ab3e96',
    'hasOnlyPhotos': 'false',
    'includes': 'reviews,reviewsWithPhotos,entities,metadata,statistics',
    'page': '1',
    'entity': '',
    'reviewedId': '86736580',
    'reviewType': 'PRODUCT',
    'size': '8',
    'sortBy': 'most_recent',
    'verifiedOnly': 'false',
}

response = requests.get('https://r2d2.target.com/ggc/v2/summary', params=params,
headers=headers)
```

page 3:

```
headers = {
    'sec-ch-ua': '"Not.A/Brand";v="8", "Chromium";v="114", "Google Chrome";v="114"',
    'Accept': 'application/json',
    'Referer': 'https://www.target.com/p/ninja-5-5qt-ezview-7-function-air-fryer-max-
xl-af171/-/A-86736580',
    'sec-ch-ua-mobile': '?0',
    'User-Agent': 'Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36
(KHTML, like Gecko) Chrome/114.0.0.0 Safari/537.36',
    'sec-ch-ua-platform': '"Windows"',
}

params = {
    'key': '9f36aeafbe60771e321a7cc95a78140772ab3e96',
    'hasOnlyPhotos': 'false',
    'includes': 'reviews,reviewsWithPhotos,entities,metadata,statistics',
    'page': '2',
    'entity': '',
    'reviewedId': '86736580',
    'reviewType': 'PRODUCT',
    'size': '8',
    'sortBy': 'most_recent',
    'verifiedOnly': 'false',
}

response = requests.get('https://r2d2.target.com/ggc/v2/summary', params=params,
headers=headers)
```

Step 3: Check Status Code:

```
response
```

```
<Response [200]>
```

Step 4: Create Json Object

```
results_json = response.json()
```

Step 5: Output keys

```
results_json.keys()
```

```
dict_keys(['statistics', 'reviews', 'reviews_with_photos', 'metadata'])
```

```
result_review = results_json['reviews']['results']
```

```
len(result_review)
```

```
8
```

```
results_json['reviews']['total_pages']
```

```
35
```

Step 7: Find my data

```
#product review:
result_review[0]['text']
```

```
'We have had ours 2 years, and have enjoyed it so much. We love that it is more
vertical and does not take up too much counter space, but it is also light enough to
lift and store elsewhere. We love that the drawer and drawer components are dishwasher
safe. Clean up is super easy. Sometimes a long soak is needed prior to dishwasher
depending on what was cooked, but otherwise super easy. We cook everything from frozen
chicken nuggets to fresh steak filets. So versatile, and delicious every time. We have
hardly used our oven since purchasing this item. Highly recommend!'
```

```
#product rate for each user:
result_review[0]['Rating']
```

```
5
```

```
#Secondary Rating: Design
result_review[1]['SecondaryRatings']['Design']['Value']
```

```
5
```

```
# Secondary Rating: Quality
result_review[1]['SecondaryRatings']['Quality']['Value']
```

```
5
```

```
# Secondary Rating: Ease of use
result_review[1]['SecondaryRatings']['EaseOfUse']['Value']
```

```
5
```

```
# Secondary Rating: Value
result_review[1]['SecondaryRatings']['Value']['Value']
```

```
5
```

```
# Secondary Rating: Easy to Clean
result_review[1]['SecondaryRatings']['easyToClean_1']['Value']
```

```
5
```

```
# Recommend or not
result_review[1]['is_recommended']
```

```
True
```

Step 7: A loop for one page

```python
review_text = []
rating = []
design = []
quality = []
easy_of_use = []
product_value = []
easy_to_clean = []
recommend = []

for review in result_review:
    #review text:
    try:
        review_text.append(review['text'])
    except:
        review_text.append('')

    #review rating
    try:
        rating.append(review['Rating'])
    except:
```

```
        rating.append('')

    #review design:
    try:
        design.append(review['SecondaryRatings']['Design']['Value'])
    except:
        design.append('')

    #review quality:
    try:
        quality.append(review['SecondaryRatings']['Quality']['Value'])
    except:
        quality.append('')

    # review ease of use:
    try:
        easy_of_use.append(review['SecondaryRatings']['EaseOfUse']['Value'])
    except:
        easy_of_use.append('')

    # review value:
    try:
        product_value.append(review['SecondaryRatings']['Value']['Value'])
    except:
        product_value.append('')

    # review easy to clean:
    try:
        easy_to_clean.append(review['SecondaryRatings']['easyToClean_1']['Value'])
    except:
        easy_to_clean.append('')

    # if recommend:
    try:
        recommend.append(review['is_recommended'])
    except:
        recommend.append('')
```

```
# Create a dataframe:
review_df = pd.DataFrame({'Review': review_text,'Rating':rating,
'Design_rating':design,
'Quality_rating':quality,'Easy_of_use_rating':easy_of_use,'value_rating':product_value,'
```

```
review_df
```

	Review	Rating	Design_rating	Quality_rating	Easy_of_use_rating	va
0	We have had ours 2 years, and have	5				

	enjoyed it ...					
1	This air fryer is easy to operate and works gr...	5	5	5	5	5
2	cooks so fast i love it!	5	5	5	5	5
3	I was mortified I would smell and taste plasti...	4				
4	Love this! Works great and good size! Makes fo...	5	5	5	5	5
5	This is my first time buying an air fryer and ...	5	5	5	5	5
6	Fast, easy to clean! I'm obsessed. Now every m...	5	5	5	5	4
7	[This review was collected as part of a promot...	5				

multiple pages of reviews:

```python
review_text2 = []
rating2 = []
design2 = []
quality2 = []
easy_of_use2 = []
product_value2 = []
easy_to_clean2 = []
recommend2 = []
for i in range(0,36):
    headers = {
        'sec-ch-ua': '"Not.A/Brand";v="8", "Chromium";v="114", "Google
Chrome";v="114"',
        'Accept': 'application/json',
        'Referer': 'https://www.target.com/p/ninja-5-5qt-ezview-7-function-air-fryer-
max-xl-af171/-/A-86736580',
        'sec-ch-ua-mobile': '?0',
        'User-Agent': 'Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36
(KHTML, like Gecko) Chrome/114.0.0.0 Safari/537.36',
        'sec-ch-ua-platform': '"Windows"',
    }

    params = {
        'key': '9f36aeafbe60771e321a7cc95a78140772ab3e96',
        'hasOnlyPhotos': 'false',
        'includes': 'reviews,reviewsWithPhotos,entities,metadata,statistics',
        'page': str(i),
        'entity': '',
        'reviewedId': '86736580',
        'reviewType': 'PRODUCT',
        'size': '8',
        'sortBy': 'most_recent',
        'verifiedOnly': 'false',
    }

    #response:
    response = requests.get('https://r2d2.target.com/ggc/v2/summary', params=params,
headers=headers)

    #json object:
    results_json = response.json()

    #result item:
    result_review = results_json['reviews']['results']

    for review in result_review:
        #review text:
        try:
            review_text2.append(review['text'])
```

```python
        except:
            review_text2.append('')

        #review rating
        try:
            rating2.append(review['Rating'])
        except:
            rating2.append('')

        #review design:
        try:
            design2.append(review['SecondaryRatings']['Design']['Value'])
        except:
            design2.append('')

        #review quality:
        try:
            quality2.append(review['SecondaryRatings']['Quality']['Value'])
        except:
            quality2.append('')

        # review ease of use:
        try:
            easy_of_use2.append(review['SecondaryRatings']['EaseOfUse']['Value'])
        except:
            easy_of_use2.append('')

        # review value:
        try:
            product_value2.append(review['SecondaryRatings']['Value']['Value'])
        except:
            product_value2.append('')

        # review easy to clean:
        try:
            easy_to_clean2.append(review['SecondaryRatings']['easyToClean_1']
['Value'])
        except:
            easy_to_clean2.append('')

        # if recommend:
        try:
            recommend2.append(review['is_recommended'])
        except:
            recommend2.append('')
```

```python
df = pd.DataFrame({'Review': review_text2,'Rating':rating2, 'Design_rating':design2,
'Quality_rating':quality2,'Easy_of_use_rating':easy_of_use2,'value_rating':product_value
```

```python
df
```

	Review	Rating	Design_rating	Quality_rating	Easy_of_use_rating
0	We have had ours 2 years, and have enjoyed it ...	5			
1	This air fryer is easy to operate and works gr...	5	5	5	5
2	cooks so fast i love it!	5	5	5	5
3	I was mortified I would smell and taste plasti...	4			
4	Love this! Works great and good size! Makes fo...	5	5	5	5
...	...	...	...	...	...
273	All I can say is WOW! Love it, I am very impre...	5			
274	Tonight I made homemade french fries in the ai...	5			
275	Ninja Air Air Fryer Max XL	5			

	AF161 prepared my f...				
276	The Ninja Air Fryer XL is the most awesome way...	5			
277	I couldn't wait to finally get an air fryer! M...	5			

278 rows × 8 columns

product 2

```
headers = {
    'sec-ch-ua': '"Not.A/Brand";v="8", "Chromium";v="114", "Google Chrome";v="114"',
    'Accept': 'application/json',
    'Referer': 'https://www.target.com/p/powerxl-vortex-pro-air-fryer-4qt/-/A-
87831544?preselect=86311154',
    'sec-ch-ua-mobile': '?0',
    'User-Agent': 'Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36
(KHTML, like Gecko) Chrome/114.0.0.0 Safari/537.36',
    'sec-ch-ua-platform': '"Windows"',
}

params = {
    'key': '9f36aeafbe60771e321a7cc95a78140772ab3e96',
    'hasOnlyPhotos': 'false',
    'includes': 'reviews,reviewsWithPhotos,entities,metadata,statistics',
    'page': '0',
    'entity': '',
    'reviewedId': '87831544',
    'reviewType': 'PRODUCT',
    'size': '8',
    'sortBy': 'most_recent',
    'verifiedOnly': 'false',
}

response = requests.get('https://r2d2.target.com/ggc/v2/summary', params=params,
headers=headers)
```