## **Cheat Sheet: API's and Data Collection**

```
Package/Method Description
                                                                                                       Code Example
                               Syntax:
                                  1. 1
                                  1. attribute = element[(attribute)]
                 Access the
                 value of a
                                Copied!
Accessing
                 specific
                attribute of an Example:
element attribute
                 HTML
                 element.
                                  1. 1
                                  1. href = link_element[(href)]
                                Copied!
                               Syntax:
                 Parse the
                 HTML content
                                  1. soup = BeautifulSoup(html, (html.parser))
                 of a web page
                                 Copied!
                 using
                 BeautifulSoup.
BeautifulSoup()
                               Example:
                 The parser
                 type can vary
                                  1. 1
                 based on the
                 project.
                                  1. html = (https://api.example.com/data) soup = BeautifulSoup(html, (html.parser))
                               Syntax:
                 Send a
                 DELETE
                 request to
                                  1. response = requests.delete(url)
                 remove data or
                 a resource
                                Copied!
                 from the
delete()
                 server.
                               Example:
                 DELETE
                 requests delete
                 a specified
                                  1. response = requests.delete((https://api.example.com/delete))
                 resource on
                 the server.
                                Copied!
                               Syntax:
                                  1. element = soup.find(tag, attrs)
                 Find the first
                 HTML
                                Copied!
                 element that
find()
                 matches the
                               Example:
                 specified tag
                 and attributes.
                                  1. 1
                                  1. first_link = soup.find((a), {(class): (link)})
                                Copied!
                               Syntax:
                                  1. 1
                                  1. elements = soup.find_all(tag, attrs)
                 Find all
                 HTML
                                Copied!
                 elements that
find_all()
                 match the
                               Example:
                 specified tag
                 and attributes.
                                  1. all_links = soup.find_all((a), {(class): (link)})
                                Copied!
                               Syntax:
                                  1. children = element.findChildren()
                 Find all child
                                Copied!
                 elements of an
findChildren()
                 HTML
                               Example:
                 element.
                                  1. 1
                                  1. child_elements = parent_div.findChildren()
                                Copied!
                 Perform a
get()
                               Syntax:
                 GET request
```

```
to retrieve data
                                   1. 1
                  from a
                                   1. response = requests.get(url)
                  specified
                  URL. GET
                                 Copied!
                  requests are
                  typically used Example:
                  for reading
                  data from an
                  API. The
                                   1. response = requests.get((https://api.example.com/data))
                  response
                  variable will
                                 Copied!
                  contain the
                  server's
                  response.
                  which you can
                  process
                  further.
                  Include
                                 Syntax:
                 custom
                                   1. 1
                  headers in the
                  request.
                                   1. headers = {(HeaderName): (Value)}
                  Headers can
                 provide
                                 Copied!
Headers
                  additional
                 information to Example:
                  the server,
                  such as
                 authentication
                                   1. base_url = (https://api.example.com/data) headers = {(Authorization): (Bearer YOUR_TOKEN)} response = requests.ge
                  tokens or
                                  Copied!
                  content types.
                                 Syntax:
                  Import the
                  necessary
                                   1. 1
Import Libraries
                 Python
                                   1. from bs4 import BeautifulSoup
                  libraries for
                  web scraping.
                                Copied!
                  Parse JSON
                  data from the
                 response. This Syntax:
                  extracts and
                                   1. 1
                  works with the
                  data returned
                                   1. data = response.json()
                  by the API.
                                 Copied!
                  The
                 response.json() Example:
json()
                  method
                  converts the
                                   1. 1
2. 2
                  JSON
                  response into a
                                   1. response = requests.get((https://api.example.com/data))
2. data = response.json()
                  Python data
                  structure
                  (usually a
                                  Copied!
                  dictionary or
                  list).
                                Syntax:
                                   1. 1
                                   1. sibling = element.find next sibling()
                 Find the next
                                 Copied!
                  sibling
next_sibling()
                 element in the Example:
                  DOM.
                                   1. next_sibling = current_element.find_next_sibling()
                                 Copied!
                                 Syntax:
                                   1. 1
                                   1. parent = element.parent
                  Access the
                 parent element Copied!
                  in the
parent
                  Document
                                Example:
                  Object Model
                  (DOM).
                                   1. 1
                                   1. parent_div = paragraph.parent
                                 Copied!
post()
                  Send a POST Syntax:
                  request to a
                  specified URL
                  with data.
                                   1. response = requests.post(url, data)
```

Create or

```
update POST
                                    Copied!
                   requests using
                   resources on
                                    Example:
                   the server. The
                                       1. 1
                   data parameter
                   contains the
                                       1. response = requests.post((https://api.example.com/submit), data={(key): (value)})
                   data to send to
                   the server,
                                     Copied!
                   often in JSON
                   format.
                   Send a PUT
                   request to
                   update data on Syntax:
                   the server.
                   PUT requests
                                       1. response = requests.put(url, data)
                   are used to
                   update an
                                    Copied!
                   existing
put()
                   resource on
                                    Example:
                   the server with
                   the data
                   provided in the
                                       1. response = requests.put((https://api.example.com/update), data={(key): (value)})
                   data
                   parameter.
                                     Copied!
                   typically in
                   JSON format.
                                    Syntax:
                   Pass query
                                       1. params = {(param_name): (value)}
                   parameters in
                   the URL to
                                     Copied!
                   filter or
                   customize the Example:
Query parameters request. Query
                   parameters
                                       1. 1
                                       2. 2
                   specify
                                       3.
                                          3
                   conditions or
                   limits for the
                                       1. base_url = "https://api.example.com/data"
2. params = {"page": 1, "per_page": 10}
3. response = requests.get(base_url, params=params)
                   requested data.
                                    Copied!
                                    Syntax:
                                       1. 1
                                       1. element = soup.select(selector)
                   Select HTML
                   elements from Copied!
                   the parsed
select()
                   HTML using a Example:
                   CSS selector.
                                       1. 1
                                       1. titles = soup.select((h1))
                                     Copied!
                   Check the
                                    Syntax:
                   HTTP status
                   code of the
                   response. The

    response.status_code

                   HTTP status
                   code indicates
                                    Copied!
                   the result of
                   the request
                                    Example:
status code
                   (success, error,
                   redirection).
                                       1. 1
                                       2. 2
                   Use the HTTP
                                       3. 3
                   status codeIt
                   can be used for
                                       1. url = "https://api.example.com/data"
                   error handling
                                       2. response = requests.get(url)
3. status_code = response.status_code
                   and decision-
                   making in
                                     Copied!
                   your code.
                   Specify any
tags for find()
                                    Tag Example:
and find_all()
                   valid HTML
                   tag as the tag
                                       2. 2
3. 3
                   parameter to
                   search for
                                          4
                                       5. 5
6. 6
7. 7
                   elements of
                   that type. Here
                   are some
                                       8.8
                   common
                   HTML tags
                   that you can

    - (a): Find anchor () tags.
    - (p): Find paragraph ((p)) tags.
    - (h1), (h2), (h3), (h4), (h5), (h6): Find heading tags from level 1 to 6 ( (h1),n (h2)).

                   use with the
                   tag parameter.
```

```
4. - (table): Find table () tags.
5. - (tr): Find table row () tags.
6. - (td): Find table cell ((td)) tags.
7. - (th): Find table header cell ((td))tags.
8. - (img): Find image ((img)) tags.
9. - (form): Find form ((form)) tags.
10. - (button): Find button ((button)) tags.

Copied!

Syntax:

1. 1

1. text = element.text

Retrieve the text content of an HTML element.

1. 1

1. title_text = title_element.text

Copied!
```



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