
MyMagento

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README

1	MyMagento - Python Magento 2 REST API Wrapper	1
1.1	About MyMagento	1
1.1.1	Main Components	2
1.1.2	Available Endpoints	2
1.2	Installation	2
1.3	QuickStart: Login with MyMagento	3
1.3.1	Setting the Login Credentials	3
1.3.2	Getting a Client	3
1.3.3	Getting an ACCESS_TOKEN	4
2	Interacting with the API	5
2.1	Performing a search()	5
2.2	Search Results: The Model Classes	6
2.3	Building Custom Search Queries	7
2.4	Making Authorized Requests	8
2.4.1	Example: Making a get() Request	8
2.4.2	Example: Making a post() Request	8
3	The magento Package	11
3.1	The clients module	11
3.2	The search module	17
3.2.1	Available Endpoints	17
3.3	The exceptions module	30
3.4	The utils module	31
4	The magento.models subpackage	37
4.1	The model module	37
4.2	The product module	41
4.3	The category module	49
4.4	The order module	51
4.5	The invoice module	54
5	Get a Magento 2 REST API Token With MyMagento	57
5.1	Setting the Login Credentials	57
5.2	Getting a Client	57
5.3	Setting Environment Variables	58
6	Add discount on each product based on product price	59
6.1	Solution Using MyMagento	59
7	Changelog	61

7.1 v2.1.0	61
8 Indices and tables	63
Python Module Index	65
Index	67

MYMAGENTO - PYTHON MAGENTO 2 REST API WRAPPER



A Python package that wraps and extends the Magento 2 REST API

[Explore the docs »](#)

1.1 About MyMagento

What's MyMagento?

MyMagento is a highly interconnected package that wraps and extends the Magento 2 REST API, providing a more intuitive and user-friendly interface to access and update your store.

MyMagento simplifies interaction with the Magento 2 REST API

If you've worked with the Magento 2 API, you'll know that not all endpoints are created equally.

MyMagento aims to streamline your workflow by simplifying a variety of commonly needed API operations.

1.1.1 Main Components

The Client

- Handles all API interactions
 - Supports multiple store views
 - Provides access to all other package components
-

The SearchQuery and Subclasses

- `execute()` a search query on any endpoint
 - Intuitive interface for [Building Custom Search Queries](#)
 - All predefined methods retrieve data using only 1-2 API requests
-

The Model Subclasses

- Wrap all API responses in the package
 - Provide additional endpoint-specific methods to retrieve and update data
-

1.1.2 Available Endpoints

MyMagento is compatible with every [API endpoint](#)

Endpoints are wrapped with a [Model](#) and [SearchQuery](#) subclass as follows:

Endpoint	Client Shortcut	SearchQuery Subclass	Model Subclass
orders	<code>Client.orders</code>	<code>OrderSearch</code>	<code>Order</code>
orders/items	<code>Client.order_items</code>	<code>OrderItemSearch</code>	<code>OrderItem</code>
invoices	<code>Client.invoices</code>	<code>InvoiceSearch</code>	<code>Invoice</code>
products	<code>Client.products</code>	<code>ProductSearch</code>	<code>Product</code>
products/attributes	<code>Client.product_attributes</code>	<code>ProductAttributeSearch</code>	<code>ProductAttribute</code>
categories	<code>Client.categories</code>	<code>CategorySearch</code>	<code>Category</code>
endpoint	<code>Client.search("endpoint")</code>	<code>SearchQuery</code>	<code>APIResponse</code>

...

1.2 Installation

Installing MyMagento

To install using pip:

```
pip install my-magento
```

Please note that MyMagento requires Python \geq 3.10

...

1.3 QuickStart: Login with MyMagento

MyMagento uses the `Client` class to handle all interactions with the API.

Tip: See *Get a Magento 2 REST API Token With MyMagento* for full details on generating an access token

1.3.1 Setting the Login Credentials

To generate an `ACCESS_TOKEN` you'll need to `authenticate()` your `USER_CREDENTIALS`.

Creating a `Client` requires a domain, username, and password at minimum.

```
>> domain = 'website.com'
>> username = 'username'
>> password = 'password'
```

If you're using a local installation of Magento you'll need to set `local=True`. Your domain should look like this:

```
>> domain = '127.0.0.1/path/to/magento'
```

...

1.3.2 Getting a Client

Option 1: Initialize a Client Directly

```
from magento import Client

>>> api = Client(domain, username, password, **kwargs)
```

Option 2: Call `get_api()`

```
import magento

>>> api = magento.get_api(**kwargs)
```

`get_api()` takes the same keyword arguments as the `Client`, but if the domain, username, or password are missing, it will attempt to use the following environment variables:

```
import os

os.environ['MAGENTO_DOMAIN'] = domain
os.environ['MAGENTO_USERNAME'] = username
os.environ['MAGENTO_PASSWORD'] = password
```

...

1.3.3 Getting an ACCESS_TOKEN

Unless you specify `login=False`, the `Client` will automatically call `authenticate()` once initialized:

```
>> api.authenticate()

[| MyMagento | website_username ]|: Authenticating username on website.com...
[| MyMagento | website_username ]|: Logged in to username
```


INTERACTING WITH THE API

Did you *Get a Magento 2 REST API Token With MyMagento?* Then let's start using the API!

2.1 Performing a search()

The `Client.search()` method lets you `execute()` a query on any API endpoint. It creates a `SearchQuery` for the endpoint, allowing you to retrieve data about

- An individual item (ex. `by_id()`)
- A list of items (ex. `by_list()`)
- Any search criteria you desire (see *Building Custom Search Queries*)

From the Docs...

`Client.search(endpoint)`

Initializes and returns a `SearchQuery` corresponding to the specified endpoint

Note: Several endpoints have predefined `SearchQuery` and `Model` subclasses

If a subclass hasn't been defined for the endpoint yet, a general `SearchQuery` will be returned, which wraps the `result` with `APIResponse`

Parameters

endpoint (`str`) – a valid Magento API search endpoint

Return type

`SearchQuery`

Example: search() an endpoint by_id()

```
# Query the "invoices" endpoint (also: api.invoices)
>>> api.search("invoices").by_id(1)

<Magento Invoice: "#000000001"> for <Magento Order: "#000000001" placed on 2022-11-01_
↪03:27:33>
```

Example: search() an endpoint by_list()

```
# Retrieve invoices from a list of invoice ids
>>> ids = list(range(1,101))
>>> api.invoices.by_list("entity_id", ids)

[<Magento Invoice: "#000000001"> for <Magento Order: "#000000001" placed on 2022-11-01_
↪03:27:33>, ...]
```

...

2.2 Search Results: The Model Classes

The result of any `SearchQuery` will be parsed and wrapped by a `Model` class in the `magento.models` subpackage, making the API response data easier to work with.

These classes also provide endpoint-specific methods to search for related items and update store data.

Example: Retrieving every Order containing a Product

Let's retrieve a `Product` using `by_sku()`

```
>>> product = api.products.by_sku("24-MB01")
```

We can search for orders containing this product as follows:

```
# Using the Product itself
>>> product.get_orders()

[<Magento Order: "#000000003" placed on 2022-12-21 08:09:33>, ... ]

# Using an OrderSearch
>>> api.orders.by_product(product)
>>> api.orders.by_product_id(product.id)
>>> api.orders.by_sku(product.sku)

[<Magento Order: "#000000003" placed on 2022-12-21 08:09:33>, ... ]
```

Example: Retrieving some items related to a Category

```
# Get Category data
>>> category = api.categories.by_name("Watches")
>>> category.get_products()
>>> category.get_invoices()

[<Magento Product: 24-MG04>, <Magento Product: 24-MG01>, <Magento Product: 24-MG03>, ... ]
[<Magento Invoice: "#000000004"> for <Magento Order: "#000000004" placed on 2022-11-14_
↳03:27:33>, ... ]
```

Example: Updating the Thumbnail MediaEntry of a Product

```
# Update product thumbnail label on specific store view
>>> product.thumbnail.set_alt_text("bonjour", scope="FR")
>>> print(product.thumbnail)

<MediaEntry 3417 for <Magento Product: 24-MB01>: bonjour>
```

...

Tip: If you have multiple store views, a `store_code` can be specified when retrieving/updating data

- The `Client.scope` is used by default - simply change it to switch store views
- Passing the scope keyword argument to `Client.url_for()`, `Model.refresh()`, and some Model update methods will temporarily override the Client scope

...

2.3 Building Custom Search Queries

In addition to the predefined methods, you can also build your own queries

- Simply `add_criteria()`, `restrict_fields()`, and `execute()` the search
- The `since()` and `until()` methods allow you to further filter your query by date

Example

```
# Retrieve orders over $50 placed since the start of 2023
>>> api.orders.add_criteria(
...     field="grand_total",
...     value="50",
...     condition="gt"
... ).since("2023-01-01").execute()

[<Magento Order: "#000000012" placed on 2023-01-02 05:19:55>, <Magento Order: "#000000013"
↳placed on 2023-01-05 09:24:13>]
```

...

2.4 Making Authorized Requests

The `Client` can be used to generate the `url_for()` any API endpoint, including a store `scope`.

You can use this URL to make an authorized `get()`, `post()`, `put()`, or `delete()` request.

2.4.1 Example: Making a `get()` Request

```
# Request the data for credit memo with id 7
>>> url = api.url_for('creditmemo/7')
>>> response = api.get(url)
>>> print(response.json())

{'adjustment': 1.5, 'adjustment_negative': 0, 'adjustment_positive': 1.5, 'base_adjustment': 1.5, ... }
```

Note: A `search()` is simpler than making `get()` requests, as the result will be wrapped by `APIResponse` or other `Model`

```
# Retrieve credit memo with id 7 using a search
>>> memo = api.search("creditmemo").by_id(7)
>>> print(memo.data)
>>> print(memo)

{'adjustment': 1.5, 'adjustment_negative': 0, 'adjustment_positive': 1.5, 'base_adjustment': 1.5, ... }
<magento.models.model.APIResponse object at 0x000001BA42FD0FD1>
```

2.4.2 Example: Making a `post()` Request

```
# Add a comment to credit memo with id 7
>>> url = api.url_for("creditmemo/7/comments")
>>> payload = {
    "entity": {
        "comment": "this is a comment",
        "is_customer_notified": 0,
        "is_visible_on_front": 0,
        "parent_id": 20
    }
}
>>> response = api.post(url, payload)
```

Tip: The `Model.data_endpoint()` will usually be close to the url to `post()` to

```
# The same as above, but using a search
>>> memo = api.search("creditmemo").by_id(7)
>>> url = memo.data_endpoint() + '/comments'
>>> response = api.post(url, payload)
```


THE MAGENTO PACKAGE

The magento package provides various tools to help simplify interaction with the Magento 2 API.

magento.`get_api(**kwargs)`

Initialize a `Client` using credentials stored in environment variables

Any valid `Client` kwargs can be used in addition to and/or instead of environment variables

Usage:

```
import magento

api = magento.get_api()
```

Parameters

`kwargs` – any valid kwargs for `Client`

Raises

`ValueError` – if login credentials are missing

Return type

`Client`

...

3.1 The clients module

```
class magento.clients.Client(domain, username, password, scope="", local=False, user_agent=None,
                             token=None, log_level='INFO', login=True, **kwargs)
```

Bases: `object`

The class that handles all interaction with the API

```
__init__(domain, username, password, scope="", local=False, user_agent=None, token=None,
         log_level='INFO', login=True, **kwargs)
```

Initialize a `Client`

Important!

The Magento account you use to log in must be assigned a **User Role** that has the appropriate API resources included in its **Resource Access** settings

This can be verified in Magento Admin by going to:

System -> Permissions -> User Roles -> {Role} -> Role Resources -> Resource Access

and ensuring that Sales, Catalog, Customers, and any other desired resources are included

Parameters

- **domain** (*str*) – domain name of the Magento store (ex. domain.com or 127.0.0.1/magento24)
- **username** (*str*) – username of the Magento Admin account
- **password** (*str*) – password of the Magento Admin account
- **scope** (*Optional[str]*) – the store view scope to `search()` and make requests on
- **local** (*bool*) – whether the Magento store is hosted locally
- **user_agent** (*Optional[str]*) – the user agent to use in requests
- **token** (*Optional[str]*) – an existing access token
- **log_level** (*str*) – the logging level for logging to stdout
- **login** (*bool*) – if True, calls `authenticate()` upon initialization
- **kwargs** – see below

...

Extra Keyword Arguments

- **log_file** (*str*) – log file to use for the client's `logger`
- **log_requests** (*bool*) - if True, the logs from `requests` will be added to the client's `log_file`

BASE_URL: *str*

The base API URL

USER_CREDENTIALS: *Dict[str, str]*

The user credentials

ACCESS_TOKEN: *str*

The API access token

domain: *str*

The Magento store domain

scope: *str*

The store view code to request/update data on

user_agent: *str*

The user agent to use in requests

logger: *MagentoLogger*

The `MagentoLogger` for the domain/username combination

store: *Store*

An initialized `Store` object

classmethod `new()`

Prompts for input to log in to the Magento API

Return type

`Client`

classmethod `load(pickle_bytes)`

Initialize a `Client` using a pickle bytestring from `to_pickle()`

Return type

`Client`

classmethod `from_json(json_str)`

Initialize a `Client` from a JSON string of settings

Return type

`Client`

classmethod `from_dict(d)`

Initialize a `Client` from a dictionary of settings

Return type

`Client`

url_for(endpoint, scope=None)

Returns the appropriate request url for the given API endpoint and store scope

Example

```
# Generate the url for credit memo with id 7
>> api=Client("domain.com", "user", "password")
>> api.url_for('creditmemo/7')
"https://domain.com/rest/V1/creditmemo/7"

# Generate the same url on the "en" store view
>> api.url_for('creditmemo/7', scope='en')
"https://domain.com/rest/en/V1/creditmemo/7"
```

Parameters

- **endpoint** (`str`) – the API endpoint
- **scope** (`Optional[str]`) – the scope to generate the url for; uses the `Client.scope` if not provided

Return type

`str`

search(endpoint)

Initializes and returns a `SearchQuery` corresponding to the specified endpoint

Note: Several endpoints have predefined `SearchQuery` and `Model` subclasses

If a subclass hasn't been defined for the endpoint yet, a general `SearchQuery` will be returned, which wraps the `result` with `APIResponse`

Parameters

endpoint (*str*) – a valid Magento API search endpoint

Return type

SearchQuery

property orders: **OrderSearch**

Initializes an *OrderSearch*

property order_items: **OrderItemSearch**

Initializes an *OrderItemSearch*

property invoices: **InvoiceSearch**

Initializes an *InvoiceSearch*

property categories: **CategorySearch**

Initializes a *CategorySearch*

property products: **ProductSearch**

Initializes a *ProductSearch*

property product_attributes: **ProductAttributeSearch**

Initializes a *ProductAttributeSearch*

get(*url*)

Sends an authorized GET request

Parameters

url (*str*) – the URL to make the request on

Return type

Response

post(*url, payload*)

Sends an authorized POST request

Parameters

- **url** (*str*) – the URL to make the request on
- **payload** (*dict*) – the JSON payload for the request

Return type

Response

put(*url, payload*)

Sends an authorized PUT request

Parameters

- **url** (*str*) – the URL to make the request on
- **payload** (*dict*) – the JSON payload for the request

Return type

Response

delete(*url*)

Sends an authorized DELETE request

Parameters

url (*str*) – the URL to make the request on

Return type*Response***authenticate()**Authenticates the `USER_CREDENTIALS` and retrieves an access token**Return type***bool***validate()**Validates the `token` by sending an authorized request to a standard API endpoint**Raises**`AuthenticationError` if the token is invalid**Return type***bool***request(*method*, *url*, *payload=None*)**

Sends an authorized API request. Used for all internal requests

Tip: Use `get()`, `post()`, `put()` or `delete()` instead

Parameters

- **method** (*str*) – the request method
- **url** (*str*) – the url to send the request to
- **payload** (*Optional[dict]*) – the JSON payload for the request (if the method is POST or PUT)

Return type*Response***get_logger(*log_file=None*, *stdout_level='INFO'*, *log_requests=True*)**Retrieve a `MagentoLogger` for the current username/domain combination. Log files are `DEBUG`.**Parameters**

- **log_file** (*Optional[str]*) – the file to log to
- **stdout_level** (*str*) – the logging level for stdout logging
- **log_requests** (*bool*) – if `True`, adds the `FileHandler` to the `connectionpool` logger

Return type`MagentoLogger`**property headers: dict**

Authorization headers for API requests

Automatically generates a `token` if needed**property token: str**Returns or generates an `ACCES_TOKEN`**to_pickle(*validate=False*)**Serializes the `Client` to a pickle bytestring

Parameters

validate (*bool*) – if True, validates the `token/USER_CREDENTIALS` before serializing

Return type

bytes

`to_json(validate=False)`

Serializes the Client to a JSON string

Parameters

validate (*bool*) – if True, validates the `token/USER_CREDENTIALS` before serializing

Return type

str

`to_dict(validate=False)`

Serializes the Client to a dictionary

Parameters

validate (*bool*) – if True, validates the `token/USER_CREDENTIALS` before serializing

Return type

Dict[str, str]

`view_config()`

Prints the Client configuration settings

class `magento.clients.Store(client)`

Bases: `object`

Class containing store configurations and cached attribute lists

`__init__(client)`

Initialize a Store object

Parameters

client (`Client`) – an initialized `Client` object

property `is_single_store`: `bool`

Whether the store has a single store view (default) or multiple store views

property `active`: `APIResponse`

Returns the store config corresponding to the current `scope` of the `Client`

property `configs`: `Optional[Union[APIResponse, List[APIResponse]]]`

Returns a list of all store configurations

property `views`: `Optional[Union[APIResponse, List[APIResponse]]]`

Returns a list of all store views

property `all_product_attributes`: `List[ProductAttribute]`

A cached list of all product attributes

property `store_view_product_attributes`: `List[ProductAttribute]`

A cached list of all product attributes with the Store View scope

property `website_product_attributes`: `List[ProductAttribute]`

A cached list of all product attributes with the Web Site scope

property global_product_attributes: `List[ProductAttribute]`

A cached list of all product attributes with the Global scope

property website_attribute_codes: `List[str]`

The attribute codes of the `website_product_attributes`

filter_website_attrs(*attribute_data*)

Filters a product attribute dict and returns a new one that contains only the website scope attributes

Website scoped attributes must be updated on the admin by making a second request on the all scope

- This method is called by `update_attributes()` and `update_custom_attributes()` to see if the second request is needed

Example

The price attribute is Website scope and the meta_title attribute is Store View scope

```
>> attribute_data = {'price': 12, 'meta_title': 'My Product'}
>> store.filter_website_attrs(attribute_data)
{'price': 12}
```

Parameters

attribute_data (*dict*) – a dict of product attributes

Return type

dict

refresh()

Clears all cached properties

Return type

bool

3.2 The search module

3.2.1 Available Endpoints

The following endpoints are currently wrapped with a `Model` and `SearchQuery` subclass

Endpoint	Client Attribute	SearchQuery Subclass	Model Subclass
orders	<code>Client.orders</code>	<code>OrderSearch</code>	<code>Order</code>
orders/items	<code>Client.order_items</code>	<code>OrderItemSearch</code>	<code>OrderItem</code>
invoices	<code>Client.invoices</code>	<code>InvoiceSearch</code>	<code>Invoice</code>
products	<code>Client.products</code>	<code>ProductSearch</code>	<code>Product</code>
products/ attributes	<code>Client.product_attributes</code>	<code>ProductAttributeSearch</code>	<code>ProductAttribute</code>
categories	<code>Client.categories</code>	<code>CategorySearch</code>	<code>Category</code>

class magento.search.**SearchQuery**(*endpoint, client, model=<class 'magento.models.model.APIResponse'>*)

Bases: `object`

Queries any endpoint that invokes the `searchCriteria` interface. Parent of all endpoint-specific search classes

Tip: See <https://developer.adobe.com/commerce/webapi/rest/use-rest/performing-searches/> for official docs

__init__(*endpoint, client, model=<class 'magento.models.model.APIResponse'>*)

Initialize a `SearchQuery` object

Parameters

- **endpoint** (`str`) – the base search API endpoint (for example, `orders`)
- **client** (`Client`) – an initialized `Client` object
- **model** (`Type[Model]`) – the `Model` to parse the response data with; uses `APIResponse` if not specified

client

The `Client` to send the search request with

endpoint

The endpoint being queried

Model

The *magento.models* subpackage class to wrap the response with

query

The current url for the search request

fields

Restricted fields, from `restrict_fields()`

add_criteria(*field, value, condition='eq', **kwargs*)

Add criteria to the search query

Parameters

- **field** – the API response field to search by
- **value** – the value of the field to compare
- **condition** – the comparison condition
- **kwargs** – additional search option arguments (group and filter)

Returns

the calling `SearchQuery` object

Return type

`Self`

Keyword Argument Options: Condition

The `condition` argument specifies the condition used to evaluate the attribute value

- "eq" (default): matches items for which field=value
- "gt": matches items for which field>value
- "lt": matches items for which field<value
- "gteq": matches items for which field>=value
- "lteq": matches items for which field<=value
- "in": matches items for which field in value.split(",")
 - Tip: for in, use `by_list()` if not building a complex query

Example

```
# Search for Orders created in 2023
>>> orders = api.orders.add_criteria(
...     field="created_at",
...     value="2023-01-01",
...     condition='gteq'
... ).execute()
```

Keyword Argument Options: Using Filter Groups

group - filter group number

filter - filter number (within the specified filter group)

Using Filter Groups

Filter groups are filter criteria in the form of { field: value }

Group 0 Filter 0 -> Filter 0 Group 0 Filter 0 + Group 0 Filter 1 -> Filter 0 OR
Filter 1 Group 0 Filter 0 + Group 1 Filter 0 -> Filter 0 AND Filter 0

`restrict_fields(fields)`

Constrain the API response data to only contain the specified fields

Parameters

fields (Iterable[str]) – an iterable or comma separated string of fields to include in the response

Returns

the calling SearchQuery object

Return type

Self

`execute()`

Sends the search request using the current `scope` of the `client`

Tip: Change the `Client.scope` to retrieve `result` data from different store `views`

Returns

the search query `result`

Return type*Optional[Union[Model, List[Model]]]***by_id**(*item_id*)

Retrieve data for an individual item by its id

Note: The id field used is different depending on the endpoint being queried

- Most endpoints use an `entity_id` or `id`
- The `orders/items` endpoint uses `item_id`
- The `products` endpoint uses `product_id`, but can also be queried `by_sku()`

The `IDENTIFIER` attribute of each `Model` contains the appropriate field

Parameters`item_id` (*Union[int, str]*) – id of the item to retrieve**Return type***Optional[Model]***by_list**(*field, values*)

Search for multiple items using an iterable or comma-separated string of field values

ExamplesRetrieve `Product` with ids from 1 to 10:

```
# Values can be a list/tuple/iterable
>> api.products.by_list('entity_id', range(1,11))
```

Search for `Order` that are processing, pending, or completed:

```
# Values can be a comma-separated string
>> api.orders.by_list('status', 'processing,pending,completed')
```

Parameters

- **field** (*str*) – the API response field to search for matches in
- **values** (*Iterable*) – an iterable or comma separated string of values

Return type*Optional[Model, List[Model]]***since**(*sinceDate=None*)Retrieve items for which `created_at` `>=` `sinceDate`**Example:**

```
# Retrieve products created in 2023
>> api.products.since('2023-01-01').execute()
```

Tip: Calling with no arguments retrieves all items

```
# Retrieve all products
>> api.products.since().execute()
```

Parameters

sinceDate (*str*) – the date for response data to start from

Returns

the calling *SearchQuery*

Return type

Self

until(*toDate*)

Retrieve items for which `created_at <= toDate`

Parameters

toDate (*str*) – the date for response data to end at (inclusive)

Returns

the calling *SearchQuery*

Return type

Self

property result: `Optional[Union[Model, List[Model]]]`

The result of the search query, wrapped by the *Model* corresponding to the endpoint

Returns

the API response as either an individual or list of *Model* objects

validate_result()

Parses the response and returns the actual result data, regardless of search approach

Return type

`Optional[Union[Dict, List[Dict]]]`

parse(*data*)

Parses the API response with the corresponding *Model* object

Parameters

data (*dict*) – API response data of a single item

Return type

Model

reset()

Resets the query and result, allowing the object to be reused

property result_count: `int`

Number of items that matched the search criteria

property result_type: `Type`

The type of the result

property `last_group`: `int`

The most recent filter group on the query

Returns

the most recent filter group, or -1 if no criteria has been added

class `magento.search.OrderSearch`(*client*)

Bases: `SearchQuery`

`SearchQuery` subclass for the orders endpoint

`__init__`(*client*)

Initialize an `OrderSearch`

Parameters

`client` (`Client`) – an initialized `Client` object

`by_number`(*order_number*)

Retrieve an `Order` by number

Parameters

`order_number` (`Union[int, str]`) – the order number (`increment_id`)

Return type

`Optional[Order]`

`by_product`(*product*)

Search for all `Order` s of a `Product`

Parameters

`product` (`Product`) – the `Product` to search for in orders

Return type

`Optional[Union[Order, List[Order]]]`

`by_sku`(*sku*)

Search for `Order` by product sku

Note: Like `OrderItemSearch.by_sku()`, the sku will need to be an exact match to the sku of a simple product, including a custom option if applicable

- Use `by_product()` or `by_product_id()` to find orders containing any of the `option_skus` and/or all `children` of a configurable product

Parameters

`sku` (`str`) – the exact product sku to search for in orders

Return type

`Optional[Union[Order, List[Order]]]`

`by_product_id`(*product_id*)

Search for `Order` s by `product_id`

Parameters

`product_id` (`Union[int, str]`) – the id (`product_id`) of the product to search for in orders

Return type*Optional[Union[Order, List[Order]]]***by_category_id**(*category_id*, *search_subcategories=False*)Search for `Order` s by `category_id`**Parameters**

- **category_id** (`Union[int, str]`) – id of the category to search for in orders
- **search_subcategories** (`bool`) – if `True`, also searches for orders from `all_subcategories`

Returnsany `Order` containing a `Product` in the corresponding `Category`**Return type***Optional[Union[Order, List[Order]]]***by_category**(*category*, *search_subcategories=False*)Search for `Order` s that contain any of the category's `products`**Parameters**

- **category** (`Category`) – the `Category` to use in the search
- **search_subcategories** (`bool`) – if `True`, also searches for orders from `all_subcategories`

Returnsany `Order` that contains a product in the provided category**Return type***Optional[Union[Order, List[Order]]]***by_skulist**(*skulist*)Search for `Order` s using a list or comma separated string of product SKUs**Parameters****skulist** (`Union[str, Iterable[str]]`) – an iterable or comma separated string of product SKUs**Return type***Optional[Union[Order, List[Order]]]***from_items**(*items*)Retrieve unique `Order` objects from `OrderItem` entries using a single request**Parameters****items** (`Optional[OrderItem | List[OrderItem]]`) – an individual/list of order items**Return type***Optional[Order, List[Order]]***class** magento.search.**OrderItemSearch**(*client*)Bases: `SearchQuery``SearchQuery` subclass for the `orders/items` endpoint

`__init__(client)`

Initialize an `OrderItemSearch`

Parameters

`client` (`Client`) – an initialized `Client` object

property result: `Optional[Union[OrderItem, List[OrderItem]]]`

The result of the search query, wrapped by the `Model` corresponding to the endpoint

Returns

the API response as either an individual or list of `Model` objects

`parse(data)`

Overrides `SearchQuery.parse()` to fully hydrate `OrderItem` objects

Extra validation is required for `OrderItems`, as duplicated and/or incomplete data is returned when the child of a configurable product is searched `by_sku()` or `by_product()`

Parameters

`data` – API response data

Return type

`Optional[OrderItem]`

`by_product(product)`

Search for `OrderItem` entries by `Product`

Note: This will match `OrderItems` that contain

- Any of the child products of a configurable product
 - Any of the `option_skus` of a product with custom options
-

Parameters

`product` (`Product`) – the `Product` to search for in order items

Return type

`Optional[Union[OrderItem, List[OrderItem]]]`

`by_sku(sku)`

Search for `OrderItem` entries by product sku.

The SKU must be an exact match to the OrderItem SKU

`OrderItems` always use the SKU of a simple product, including any custom options. This means that:

- Searching the SKU of a configurable product returns nothing
- If a product has custom options, the search will only find `OrderItems` that contain the specific option sku (or base sku) that's provided

To search for `OrderItems` containing all children of a configurable product and/or all possible `option_skus`, use `by_product()` or `by_product_id()`

Parameters

`sku` (`str`) – the exact product sku to search for in order items

Return type*Optional[Union[OrderItem, List[OrderItem]]]***by_product_id**(*product_id*)Search for `OrderItem` entries by product id.**Parameters****product_id** (`Union[int, str]`) – the id (`product_id`) of the `Product` to search for in order items**Return type***Optional[Union[OrderItem, List[OrderItem]]]***by_category_id**(*category_id*, *search_subcategories=False*)Search for `OrderItem` entries by `category_id`**Parameters**

- **category_id** (`Union[int, str]`) – id of the `Category` to search for in order items
- **search_subcategories** (`bool`) – if `True`, also searches for order items from `all_subcategories`

Returnsany `OrderItem` containing a `Product` in the corresponding `Category`**Return type***Optional[Union[OrderItem, List[OrderItem]]]***by_category**(*category*, *search_subcategories=False*)Search for `OrderItem` entries that contain any of the category's products**Parameters**

- **category** (`Category`) – the `Category` to use in the search
- **search_subcategories** (`bool`) – if `True`, also searches for order items from `all_subcategories`

Return type*Optional[Union[OrderItem, List[OrderItem]]]***by_skulist**(*skulist*)Search for `:class:`~.OrderItem`s` using a list or comma-separated string of product SKUs**Parameters****skulist** (`Union[str, Iterable[str]]`) – an iterable or comma separated string of product SKUs**Return type***Optional[Union[OrderItem, List[OrderItem]]]***class** `magento.search.InvoiceSearch`(*client*)Bases: `SearchQuery``SearchQuery` subclass for the invoices endpoint**__init__**(*client*)Initialize an `InvoiceSearch`

Parameters

client (*Client*) – an initialized *Client* object

by_number(*invoice_number*)

Retrieve an *Invoice* by number

Parameters

invoice_number (*Union[int, str]*) – the invoice number (*increment_id*)

Return type

Optional[Invoice]

by_order_number(*order_number*)

Retrieve an *Invoice* by order number

Parameters

order_number (*Union[int, str]*) – the order number (*increment_id*)

Return type

Optional[Invoice]

by_order(*order*)

Retrieve the *Invoice* for an *Order*

Parameters

order (*Order*) – the *Order* object to retrieve an invoice for

Return type

Optional[Invoice]

by_order_id(*order_id*)

Retrieve an *Invoice* by *order_id*

Parameters

order_id (*Union[int, str]*) – the *order_id* of the order to retrieve an invoice for

Return type

Optional[Invoice]

by_product(*product*)

Search for all *Invoice* s of a *Product*

Parameters

product (*Product*) – the *Product* to search for in invoices

Return type

Optional[Union[Invoice, List[Invoice]]]

by_sku(*sku*)

Search for *Invoice* s by product sku

Note: Like *OrderItemSearch.by_sku()*, the sku will need to be an exact match to the sku of a simple product, including a custom option if applicable

- Use *by_product()* or *by_product_id()* to find orders containing any of the *option_skus* and/or all *children* of a configurable product

Parameters

sku (*str*) – the exact product sku to search for in invoices

Return type*Optional[Union[Invoice, List[Invoice]]]***by_product_id**(*product_id*)Search for *Invoice* s by *product_id***Parameters****product_id** (*Union[int, str]*) – the id (*product_id*) of the product to search for in invoices**Return type***Optional[Union[Invoice, List[Invoice]]]***by_category_id**(*category_id*, *search_subcategories=False*)Search for *Invoice* s by *category_id***Parameters**

- **category_id** (*Union[int, str]*) – id of the category to search for in orders
- **search_subcategories** (*bool*) – if *True*, also searches for orders from *all_subcategories*

Returnsany *Invoice* containing a *Product* in the corresponding *Category***Return type***Optional[Union[Invoice, List[Invoice]]]***by_category**(*category*, *search_subcategories=False*)Search for *Invoice* s that contain any of the category's products**Parameters**

- **category** (*Category*) – the *Category* to use in the search
- **search_subcategories** (*bool*) – if *True*, also searches for orders from *all_subcategories*

Returnsany *Invoice* that contains a product in the provided category**Return type***Optional[Union[Invoice, List[Invoice]]]***by_skulist**(*skulist*)Search for *Invoice* s using a list or comma separated string of product SKUs**Parameters****skulist** (*Union[str, Iterable[str]]*) – an iterable or comma separated string of product SKUs**Return type***Optional[Union[Invoice, List[Invoice]]]***from_order_items**(*items*)Retrieve unique *Invoice* objects from *OrderItem* entries using a single request

Tip: Since there is no *invoices/items* endpoint, to search for invoices we must first do an *OrderItemSearch*, then retrieve the *order_ids* and search *by_order_id()*

Parameters

items (Optional[OrderItem | List[OrderItem]]) – an individual/list of order items

Return type

Optional[Invoice, List[Invoice]]

class magento.search.ProductSearch(client)

Bases: SearchQuery

SearchQuery subclass for the products endpoint

__init__(client)

Initialize a ProductSearch

Parameters

client (Client) – an initialized Client object

property attributes: ProductAttributeSearch

Alternate way to access the SearchQuery for ProductAttribute data

by_id(item_id)

Retrieve a Product by product_id

Note: Response data from the products endpoint only has an id field, but all other endpoints that return data about products will use product_id

Parameters

item_id (Union[int, str]) – the id (product_id) of the product

Return type

Optional[Product]

by_sku(sku)

Retrieve a Product by sku

Parameters

sku – the product sku

Return type

Optional[Product]

by_skulist(skulist)

Search for :class:`~.Product`'s using a list or comma separated string of SKUs

Parameters

skulist (Union[str, Iterable[str]]) – an iterable or comma separated string of SKUs

Return type

Optional[Union[Product, List[Product]]]

by_category(category, search_subcategories=False)

Search for Product s in a Category

Parameters

- **category** (Category) – the Category to retrieve products from

- **search_subcategories** (bool) – if True, also retrieves products from `all_subcategories`

Return type*Optional[Union[Product, List[Product]]]***by_category_id**(*category_id*, *search_subcategories=False*)Search for `Product`s by `category_id`**Parameters**

- **category_id** (Union[int, str]) – the id of the `Category` to retrieve products from
- **search_subcategories** (bool) – if True, also retrieves products from `all_subcategories`

Return type*Optional[Union[Product, List[Product]]]***get_stock**(*sku*)Retrieve the `stock` of a product by `sku`**Parameters****sku** – the product `sku`**Return type***Optional[int]***class** `magento.search.ProductAttributeSearch`(*client*)Bases: `SearchQuery``SearchQuery` subclass for the `products/attributes` endpoint**__init__**(*client*)Initialize a `ProductAttributeSearch`**Parameters****client** (`Client`) – an initialized `Client` object**get_all**()Retrieve a list of all `:class:`~.ProductAttribute`s`**Return type***Optional[List[ProductAttribute]]***by_code**(*attribute_code*)Retrieve a `ProductAttribute` by its attribute code**Parameters****attribute_code** (str) – the code of the `ProductAttribute`**Return type***Optional[ProductAttribute]***get_types**()Retrieve a list of all available `ProductAttribute` types**Return type***Optional[List[APIResponse]]*

class magento.search.**CategorySearch**(*client*)

Bases: [SearchQuery](#)

[SearchQuery](#) subclass for the categories endpoint

__init__(*client*)

Initialize a [CategorySearch](#)

Parameters

client ([Client](#)) – an initialized [Client](#) object

get_root()

Retrieve the top level/default [Category](#) (every other category is a subcategory)

Return type

[Category](#)

get_all()

Retrieve a list of all categories

Return type

[List](#)[[Category](#)]

by_name(*name*, *exact=True*)

Search for a [Category](#) by name

Parameters

- **name** ([str](#)) – the category name to search for
- **exact** ([bool](#)) – whether the name should be an exact match

Return type

[Optional](#)[[Union](#)[[Category](#), [List](#)[[Category](#)]]]

3.3 The exceptions module

exception magento.exceptions.**MagentoError**(*client*, *msg=None*, *response=None*)

Bases: [Exception](#)

Base exception class for error responses returned by the Magento API

Variables

DEFAULT_MSG – default exception message to use if a message isn't provided

DEFAULT_MSG = 'An error occurred while processing the request.'

__init__(*client*, *msg=None*, *response=None*)

Log and raise a [MagentoError](#)

Parameters

- **client** ([Client](#)) – an initialized [Client](#) object
- **msg** ([Optional](#)[[str](#)]) – optional exception message; prepended to the error message of the response
- **response** ([Optional](#)[[Response](#)]) – optional response to [parse\(\)](#) an error message from

static parse(*response*)

Parses the error message from the response

Parameters

response (Union[Response, Dict]) – a bad response returned by the Magento API

Raises

TypeError if response is not a Response or Dict

Return type

str

exception magento.exceptions.AuthenticationError(*client*, *msg=None*, *response=None*)

Bases: MagentoError

Exception class for errors when trying to `authenticate()` a Client

DEFAULT_MSG = 'Failed to authenticate credentials.'

__init__(*client*, *msg=None*, *response=None*)

Log and raise a MagentoError

Parameters

- **client** (Client) – an initialized Client object
- **msg** (Optional[str]) – optional exception message; prepended to the error message of the response
- **response** (Optional[Response]) – optional response to `parse()` an error message from

3.4 The utils module

class magento.utils.ItemManager(*items=None*)

Bases: object

__init__(*items=None*)

add(*item*)

get_attrs(*attr*)

sum_attrs(*attr*)

class magento.utils.LoggerUtils

Bases: object

Utility class that simplifies access to logger handler info

static **get_handler_names**(*logger*)

Get all handler names

Return type

List[str]

static `get_stream_handlers(logger)`

Get all the StreamHandlers of the current logger (NOTE: StreamHandler subclasses excluded)

Return type

List[Handler]

static `get_file_handlers(logger)`

Get all the FileHandlers of the current logger

Return type

List[FileHandler]

static `get_log_files(logger)`

Get the log file paths from all FileHandlers of a logger

Return type

List[str]

static `get_handler_by_log_file(logger, log_file)`

Returns the FileHandler logging to the specified file, given it exists

Return type

Union[FileHandler, List[FileHandler]]

static `clear_handlers(logger)`

Return type

bool

static `clear_stream_handlers(logger)`

Removes all StreamHandlers from a logger

Return type

bool

static `clear_file_handlers(logger)`

Removes all FileHandlers from a logger

Return type

bool

static `map_handlers_by_name(logger)`

Map the handlers of a logger first by type, and then by their name

FileHandlers are mapped to both their handlers and log file, while StreamHandlers are just mapped to the handler Handlers without a name will be skipped, because look at the method name (:

class `magento.utils.MagentoLogger(name, log_file=None, stdout_level='INFO', log_requests=True)`

Bases: `object`

Logging class used within the package

Variables

- **PREFIX** – hardcoded prefix to use in log messages
- **PACKAGE_LOG_NAME** – the default name for the package logger
- **CLIENT_LOG_NAME** – the default format for the client logger name

- **LOG_MESSAGE** – the default format for the message component of log messages. (Use `magento.logger.LOG_MESSAGE` for easy access)
- **FORMATTER** – the default logging format
- **HANDLER_NAME** – the default format for the names of handlers created by this package

PREFIX = 'MyMagento'

PACKAGE_LOG_NAME = 'my-magento'

CLIENT_LOG_NAME = '{domain}_{username}'

HANDLER_NAME = 'MyMagento_{name}_{stdout_level}'

LOG_MESSAGE = '|[MyMagento | {name}]|: {message}'

FORMATTER = <logging.Formatter object>

__init__(*name*, *log_file=None*, *stdout_level='INFO'*, *log_requests=True*)

Initialize the logger

Each Client object corresponds to a unique username/domain combination, which is used to attach it to its associated MagentoLogger and log file, allowing all activity across all endpoints to be tracked. A package logger exists as well, which logs all activity from the package. All log files have their log level set to DEBUG

Parameters

- **name** (*str*) – logger name
- **log_file** (*Optional[str]*) – log file name; default is {name}.log
- **stdout_level** (*Union[int, str]*) – logging level for stdout logger; default is “INFO” (which is also logging.INFO and 10)
- **log_requests** (*bool*) – set to True to add logging from the requests package logger

setup_logger(*stdout_level='INFO'*, *log_requests=True*)

Configures a logger and assigns it to the *logger* attribute.

Parameters

- **stdout_level** (*Union[int, str]*) – logging level to use for logging to console
- **log_requests** (*bool*) – set to True to add logs from the requests package (ie. API call logging)

Return type

bool

format_msg(*msg*)

Formats the `LOG_MESSAGE` using the specified message

Return type

str

debug(*msg*)

Formats the `LOG_MESSAGE` with the specified message, then logs it with `Logger.debug()`

info(*msg*)

Formats the `LOG_MESSAGE` with the specified message, then logs it with `Logger.info()`

error(*msg*)

Formats the `LOG_MESSAGE` with the specified message, then logs it with `Logger.error()`

warning(*msg*)

Formats the `LOG_MESSAGE` with the specified message, then logs it with `Logger.warning()`

critical(*msg*)

Formats the `LOG_MESSAGE` with the specified message, then logs it with `Logger.critical()`

property handlers

property handler_names

property handler_map

property file_handlers

property stream_handlers

property log_files

property log_path

static get_magento_handlers(*logger*)

static clear_magento_handlers(*logger, handler_type, clear_pkg=False*)

Clear all handlers from a logger that were created by `MagentoLogger`

Parameters

- **logger** (`Logger`) – any logger
- **handler_type** (`Union[Type[FileHandler], Type[StreamHandler]]`) – the logging handler type to check for and remove
- **clear_pkg** (`bool`) – if `True`, will delete the package handler for writing to `my-magento.log` (Default is `False`)

static clear_magento_file_handlers(*logger, clear_pkg=False*)

static clear_magento_stdout_handlers(*logger, clear_pkg=False*)

static owns_handler(*handler*)

Checks if a handler is a `Stream/FileHandler` from this package or not

static get_package_handler()

Returns the `FileHandler` object that writes to the `magento.log` file

Return type

FileHandler

static add_request_logging(*handler*)

Adds the specified handler to the requests package logger, allowing for easier debugging of API calls

`magento.utils.get_agents()`

Scrapes a list of user agents. Returns a default list if the scrape fails.

Return type

list

`magento.utils.get_agent(index=0)`

Returns a single user agent string from the specified index of the AGENTS list

Return type

str

`magento.utils.get_package_file_handler()`

...

The `magento.models` Subpackage

- The `model` module
- The `product` module
- The `category` module
- The `order` module
- The `invoice` module

THE MAGENTO.MODELS SUBPACKAGE

The `magento.models` subpackage contains all of the `Model` API response wrapper classes.

4.1 The `model` module

class `magento.models.model.Model`(*data*, *client*, *endpoint*, *private_keys=True*)

Bases: `ABC`

The abstract base class of all API response wrapper classes

Overview

- A `Model` wraps the response data from an API endpoint
- Several endpoints have subclasses with additional methods to retrieve/update data
- All other endpoints are wrapped using a general `APIResponse`
- The endpoint's corresponding `SearchQuery` can be accessed via `query_endpoint()`

DOCUMENTATION: `str = None`

Link to the Official Magento 2 API documentation for the endpoint wrapped by the `Model`

IDENTIFIER: `str = None`

The API response field that the endpoint's `uid` comes from

__init__(*data*, *client*, *endpoint*, *private_keys=True*)

Initialize a `Model` object from an API response and the endpoint that it came from

...

Tip: The `endpoint` is used to:

- Generate the `url_for()` any requests made by subclass-specific methods
 - Match the `Model` to its corresponding `SearchQuery` object
 - Determine how to `parse()` new `Model` objects from API responses
-

...

Parameters

- **data** (`dict`) – the JSON from an API response to use as source data
- **client** (`Client`) – an initialized `Client`
- **endpoint** (`str`) – the API endpoint that the `Model` wraps
- **private_keys** (`bool`) – if `True`, sets the keys in the `excluded_keys` as private attributes (prefixed with `__`) instead of fully excluding them

set_attrs(`data`, `private_keys=True`)

Initializes object attributes using the JSON from an API response as the data source

Called at the time of object initialization, but can also be used to update the source data and reinitialize the attributes without creating a new object

Parameters

- **data** (`dict`) – the API response JSON to use as the object source data
- **private_keys** (`bool`) – if set to `True`, will set the `excluded_keys` as private attributes (prefixed with `__`) instead of fully excluding them

Private Keys Clarification

Let's say that "status" is in the `excluded_keys`

- No matter what, the status attribute will not be set on the `Model`
 - If `private_keys==True`, the `__status` attribute will be set (using the status data)
 - If `private_keys==False`, the data from status is completely excluded
-

abstract property excluded_keys: `List[str]`

API response keys that shouldn't be set as object attributes by `set_attrs()`

Returns

list of API response keys that shouldn't be set as attributes

property uid: `Union[str, int]`

Unique item identifier; used in the url of the `data_endpoint()`

data_endpoint(`scope=None`)

Endpoint to use when requesting/updating the item's data

Parameters

scope (`Optional[str]`) – the scope to generate the `url_for()`

Return type

`str`

query_endpoint()

Initializes and returns the `SearchQuery` object corresponding to the `Model`'s endpoint

Returns

a `SearchQuery` or subclass, depending on the endpoint

Return type

`SearchQuery`

parse(`response`)

Uses the instance's corresponding `SearchQuery` to parse an API response

Parameters

response (*dict*) – API response dict to use as source data

Returns

a *Model* with the same endpoint as the calling instance

Return type

Model

refresh(*scope=None*)

Updates object attributes in place using current data from the `data_endpoint()`

Hint: `refresh()` can be used to switch the scope of the source data without creating a new object or changing the `Client.scope`

Example

```
# Get product data on 'default' scope
>>> product = client.products.by_sku('sku42')
# Get fresh product data from different scope
>>> product.refresh('all')

Refreshed <Magento Product: sku42> on scope all
```

Parameters

scope (*Optional[str]*) – the scope to send the request on; uses the `Client.scope` if not provided

Return type

bool

static unpack_attributes(*attributes, key='attribute_code'*)

Unpacks a list of attribute dictionaries into a single dictionary

Example

```
>> custom_attrs = [{'attribute_code': 'attr', 'value': 'val'}, {'attribute_code':
↳ 'will_to_live', 'value': '0'}]
>> print(Model.unpack_attributes(custom_attrs))

{'attr': 'val', 'will_to_live': '0'}
```

Parameters

- **attributes** (*List[dict]*) – a list of custom attribute dictionaries
- **key** (*str*) – the key used in the attribute dictionary (ex. `attribute_code` or `label`)

Returns

a single dictionary of all custom attributes formatted as `{"attr": "val"}`

Return type*dict***static pack_attributes**(*attribute_data*, *key*='attribute_code')

Packs a dictionary containing attributes into a list of attribute dictionaries

Example

```
>> attribute_data = {'special_price': 12, 'meta_title': 'My Product'}
>> print(Model.pack_attributes(attribute_data))
>> print(Model.pack_attributes(attribute_data, key='label'))

[{'attribute_code': 'special_price', 'value': 12}, {'attribute_code': 'meta_title',
↪ 'value': 'My Product'}]
[{'label': 'special_price', 'value': 12}, {'label': 'meta_title', 'value': 'My_
↪ Product'}]
```

Parameters

- **attribute_data** (*dict*) – a dictionary containing attribute data
- **key** (*str*) – the key to use when packing the attributes (ex. attribute_code or label)

Returns

a list of dictionaries formatted as {key : "attr", "value": "value"}

Return type*List[dict]***static encode**(*string*)URL-encode with `urllib.parse`; used for requests that could contain special characters**Parameters****string** (*str*) – the string to URL-encode**Return type***str***property cached:** *List[str]*Names of properties that are wrapped with `functools.cached_property()`**clear**(**keys*)Deletes the provided keys from the object's `__dict__`

To clear all cached properties:

```
>> self.clear(*self.cached)
```

Parameters**keys** (*str*) – name of the object attribute(s) to delete**get_scope_name**(*scope*)

Returns the appropriate scope name to use for logging messages

Return type*str*

...

class magento.models.model.**APIResponse**(*data, client, endpoint*)Bases: `Model`**IDENTIFIER:** `str = 'entity_id'`The API response field that the endpoint's `uid` comes from**__init__**(*data, client, endpoint*)A generic `Model` subclassWraps API responses when there isn't a `Model` subclass defined for the endpoint**Parameters**

- **data** (`dict`) – the API response from an API endpoint
- **client** (`Client`) – an initialized `Client` object
- **endpoint** (`str`) – the endpoint that the API response came from

property `excluded_keys:` `List[str]`API response keys that shouldn't be set as object attributes by `set_attrs()`**Returns**

list of API response keys that shouldn't be set as attributes

property `uid:` `Optional[int]`

Unique item identifier

Note: Since the `APIResponse` can wrap any endpoint, the response is checked for commonly used id fields (`entity_id` and `id`)

If the endpoint doesn't use those fields, `None` will be returned**data_endpoint**(*scope=None*)

Endpoint to use when requesting/updating the item's data

Parameters**scope** (`Optional[str]`) – the scope to generate the `url_for()`**Return type**`Optional[str]`

4.2 The product module

class magento.models.product.**Product**(*data, client*)Bases: `Model`

Wrapper for the products endpoint

`STATUS_ENABLED = 1`

`STATUS_DISABLED = 2`

`VISIBILITY_NOT_VISIBLE = 1`

`VISIBILITY_CATALOG = 2`

`VISIBILITY_SEARCH = 3`

`VISIBILITY_BOTH = 4`

DOCUMENTATION: `str = 'https://adobe-commerce.redoc.ly/2.3.7-admin/tag/products/'`

Link to the Official Magento 2 API documentation for the endpoint wrapped by the Model

IDENTIFIER: `str = 'sku'`

The API response field that the endpoint's `uid` comes from

`__init__(data, client)`

Initialize a Product object using an API response from the products endpoint

Parameters

- `data` (`dict`) – the API response from the products endpoint
- `client` (`Client`) – an initialized `Client` object

property `excluded_keys`

API response keys that shouldn't be set as object attributes by `set_attrs()`

Returns

list of API response keys that shouldn't be set as attributes

`update_stock(qty)`

Updates the stock quantity

Parameters

`qty` (`int`) – the new stock quantity

Return type

`bool`

`update_status(status)`

Update the product status

Parameters

`status` (`int`) – either 1 (for `STATUS_ENABLED`) or 2 (for `STATUS_DISABLED`)

Return type

`bool`

`update_price(price)`

Update the product price

Parameters

`price` (`Union[int, float]`) – the new price

Return type

`bool`

update_special_price(*price*)

Update the product special price

Parameters

price (`Union[float, int]`) – the new special price

Return type

bool

update_name(*name*, *scope=None*)

Update the product name

Parameters

- **name** (`str`) – the new name to use
- **scope** (`Optional[str]`) – the scope to send the request on; will use the `Client.scope` if not provided

Return type

bool

update_description(*description*, *scope=None*)

Update the product description

Parameters

- **description** (`str`) – the new HTML description to use
- **scope** (`Optional[str]`) – the scope to send the request on; will use the `Client.scope` if not provided

Return type

bool

update_metadata(*metadata*, *scope=None*)

Update the product metadata

Parameters

- **metadata** (`dict`) – the new `meta_title`, `meta_keyword` and/or `meta_description` to use
- **scope** (`Optional[str]`) – the scope to send the request on; will use the `Client.scope` if not provided

Return type

bool

update_attributes(*attribute_data*, *scope=None*)

Update top level product attributes with scoping taken into account

Note: Product attributes can have a Global, Store View or Website scope

Global Attributes

Values are updated on all store views and the admin

Website Attributes

Values are updated on all store views

Store View Attributes

Values are updated on the store view specified in the request scope

A second request will be made to update Store View and Website attributes on the admin, depending on how many [Store views](#) you have:

- **1 View:** admin values are updated for all attributes, regardless of scope
- **2+ Views:** admin values are updated only for [website_product_attributes](#)

Parameters

- **attribute_data** ([dict](#)) – a dictionary of product attributes to update
- **scope** ([Optional\[str\]](#)) – the scope to send the request on; will use the [Client.scope](#) if not provided

Return type

[bool](#)

`update_custom_attributes(attribute_data, scope=None)`

Update custom attributes with scoping taken into account

See [update_attributes\(\)](#) for details

Important

This method only supports updating **custom attributes**

Parameters

- **attribute_data** ([dict](#)) – a dictionary of custom attributes to update
- **scope** ([Optional\[str\]](#)) – the scope to send the request on; will use the [Client.scope](#) if not provided

Return type

[bool](#)

`get_orders()`

Searches for orders that contain the product

If the product is configurable, returns orders containing any of its child products

Returns

orders that contain the product, as an individual or list of [Order](#) objects

Return type

[Optional\[Order | List\[Order\]\]](#)

`get_order_items()`

Searches for order items that contain the product

If the product is configurable, returns order items containing any of its child products

Returns

order items that contain the product, as an individual or list of [OrderItem](#) objects

Return type

[Optional\[OrderItem | List\[OrderItem\]\]](#)

get_invoices()

Searches for invoices that contain the product

If the product is configurable, returns invoices containing any of its child products

Returns

invoices that contain the product, as an individual or list of `Invoice` objects

Return type

`Optional[Invoice | List[Invoice]]`

delete()

Deletes the product

Hint: If you delete a product by accident, the `Product` object's `data` attribute will still contain the raw data, which can be used to recover it.

Alternatively, don't delete it by accident.

Return type

`bool`

get_children(*refresh=False, scope=None*)

Retrieve the child simple products of a configurable product

Parameters

- **refresh** (`bool`) – if True, calls `refresh()` on the child products to retrieve full data
- **scope** (`Optional[str]`) – the scope to refresh the children on (when `refresh=True`)

Return type

`List[Product]`

property children: List[Product]

If the `Product` is a configurable product, returns a list of its child products

property categories: Optional[Category | List[Category]]

Categories the product is in, returned as a list of `Category` objects

property media_gallery_entries: List[MediaEntry]

The product's media gallery entries, returned as a list of `MediaEntry` objects

property thumbnail: MediaEntry

The `MediaEntry` corresponding to the product's thumbnail

property thumbnail_link: str

Link of the product's `thumbnail` image

get_media_by_id(*entry_id*)

Access a `MediaEntry` of the product by id

Parameters

- **entry_id** (`int`) – the id of the media gallery entry

Return type

`MediaEntry`

property encoded_sku: `str`

URL-encoded SKU, which is used in request endpoints

property option_skus: `List[str]`

The full SKUs for the product's customizable options, if they exist

Hint: When a product with customizable options is ordered, these SKUs are used by the API when retrieving and searching for `Order` and `OrderItem` data

property stock: `int`

Current stock quantity

property stock_item: `dict`

Stock data from the `StockItem` Interface

property stock_item_id: `int`

Item id of the `StockItem`, used to `update_stock()`

property description: `str`

Product description (as HTML)

property special_price: `float`

The current special (sale) price

class `magento.models.product.MediaEntry`(*product*, *entry*)

Bases: `Model`

Wraps a media gallery entry of a `Product`

`MEDIA_TYPES = ['base', 'small', 'thumbnail', 'swatch']`

`DOCUMENTATION:` `str =`

`'https://adobe-commerce.redoc.ly/2.3.7-admin/tag/productsskumediaentryId'`

Link to the Official Magento 2 API documentation for the endpoint wrapped by the `Model`

`IDENTIFIER:` `str = 'id'`

The API response field that the endpoint's `uid` comes from

`__init__`(*product*, *entry*)

Initialize a `MediaEntry` object for a `Product`

Parameters

- **product** (`Product`) – the `Product` that the gallery entry is associated with
- **entry** (`dict`) – the json response data to use as the source data

`query_endpoint`()

No search endpoint exists for media gallery entries

property excluded_keys: `List[str]`

API response keys that shouldn't be set as object attributes by `set_attrs()`

Returns

list of API response keys that shouldn't be set as attributes

property is_enabled

property is_thumbnail

property link

Permalink to the image

disable(*scope=None*)

Disables the MediaEntry on the given scope

Parameters

scope (*Optional[str]*) – the scope to send the request on; will use the `Client.scope` if not provided

Return type

bool

enable(*scope=None*)

Enables the MediaEntry on the given scope

Parameters

scope (*Optional[str]*) – the scope to send the request on; will use the `Client.scope` if not provided

Return type

bool

add_media_type(*media_type, scope=None*)

Add a media type to the MediaEntry on the given scope

Caution: If the media type is already assigned to a different entry, it will be removed

Parameters

- **media_type** (*str*) – one of the `MEDIA_TYPES`
- **scope** (*Optional[str]*) – the scope to send the request on; will use the `Client.scope` if not provided

Return type

bool

remove_media_type(*media_type, scope=None*)

Remove a media type from the MediaEntry on the given scope

Parameters

- **media_type** (*str*) – one of the `MEDIA_TYPES`
- **scope** (*Optional[str]*) – the scope to send the request on; will use the `Client.scope` if not provided

Return type

bool

set_media_types(*types, scope=None*)

Set media types for the MediaEntry on the given scope

Parameters

- **types** (*list*) – a list containing all `MEDIA_TYPES` to assign
- **scope** (*Optional[str]*) – the scope to send the request on; will use the `Client.scope` if not provided

Return type

bool

set_position(*position*, *scope=None*)

Set the position of the `MediaEntry` on the given scope

Parameters

- **position** (*int*) – the position to change to
- **scope** (*Optional[str]*) – the scope to send the request on; will use the `Client.scope` if not provided

Return type

bool

set_alt_text(*text*, *scope=None*)

Set the alt text (label) of the `MediaEntry` on the given scope

Parameters

- **text** (*str*) – the alt text to use
- **scope** (*Optional[str]*) – the scope to send the request on; will use the `Client.scope` if not provided

Return type

bool

update(*scope=None*)

Uses the data dict to update the media entry

Note: Some updates alter the data of other entries; if the update is successful, the associated `Product` will be refreshed on the same scope to keep the data consistent

Tip: If there's only 1 store view, the admin will also be updated

Parameters

scope (*Optional[str]*) – the scope to send the request on; will use the `Client.scope` if not provided

Return type

bool

class `magento.models.product.ProductAttribute`(*data*, *client*)

Bases: `Model`

Wrapper for the `products/attributes` endpoint

DOCUMENTATION: `str = 'https://adobe-commerce.redoc.ly/2.3.7-admin/tag/productsattributes/'`
 Link to the Official Magento 2 API documentation for the endpoint wrapped by the Model

IDENTIFIER: `str = 'attribute_code'`
 The API response field that the endpoint's `uid` comes from

__init__(data, client)
 Initialize a ProductAttribute object using an API response from the products/attributes endpoint

Parameters

- `data` (`dict`) – the API response from the products/attributes endpoint
- `client` (`Client`) – an initialized `Client` object

property excluded_keys: `List[str]`
 API response keys that shouldn't be set as object attributes by `set_attrs()`

Returns
 list of API response keys that shouldn't be set as attributes

property options

4.3 The category module

class `magento.models.category.Category(data, client)`

Bases: `Model`

Wrapper for the categories endpoint

DOCUMENTATION: `str = 'https://adobe-commerce.redoc.ly/2.3.7-admin/tag/categories'`
 Link to the Official Magento 2 API documentation for the endpoint wrapped by the Model

IDENTIFIER: `str = 'id'`

The API response field that the endpoint's `uid` comes from

__init__(data, client)

Initialize a Category object using an API response from the categories endpoint

Parameters

`data` (`dict`) – raw API response

property excluded_keys

API response keys that shouldn't be set as object attributes by `set_attrs()`

Returns

list of API response keys that shouldn't be set as attributes

property custom_attributes: `Dict[str, str]`

property subcategories: `List[Category]`

The child categories, returned as a list of `Category` objects

Note: Only the direct child categories are returned. For a list of all descendants, use `all_subcategories`

property subcategory_ids: List[int]

The `category_ids` of the `subcategories`

property subcategory_names: List[str]

The names of the category's `subcategories`

property all_subcategories: Optional[List[Category]]

Recursively retrieves all descendants of the category

property all_subcategory_ids: List[int]

The `category_ids` of `all_subcategories`

property products: List[Product]

The `Product` s in the category

Alias for `get_products()`

property product_ids: List[int]

The `product_ids` of the category's `products`

property skus: List[str]

The `skus` of the category's `products`

property all_products: List[Product]

The `Product` s in the category and in `all_subcategories`

Alias for `get_products()` with `search_subcategories=True`

property all_product_ids: Set[int]

The `product_ids` of the products in the category and in `all_subcategories`

property all_skus: Set[str]

The `skus` of the products in the category and in `all_subcategories`

get_products(*search_subcategories=False*)

Retrieves the category's products

Parameters

search_subcategories (bool) – if True, also retrieves products from `all_subcategories`

Return type

Optional[Product | List[Product]]

get_orders(*search_subcategories=False*)

Retrieve any `Order` that contains one of the category's `products`

Parameters

search_subcategories (bool) – if True, also searches for orders from `all_subcategories`

Return type

Optional[Order | List[Order]]

get_order_items(*search_subcategories=False*)

Retrieve any `OrderItem` that contains one of the category's `products`

Parameters

search_subcategories (bool) – if True, also searches for order items from `all_subcategories`

Return type*Optional[OrderItem | List[OrderItem]]***get_invoices**(*search_subcategories=False*)Retrieve any *Invoice* that contains one of the category's *products***Parameters****search_subcategories** (*bool*) – if *True*, also searches for invoices from *all_subcategories***Return type***Optional[Invoice | List[Invoice]]*

4.4 The order module

class `magento.models.order.Order`(*data, client*)Bases: `Model`

Wrapper for the orders endpoint

DOCUMENTATION: `str = 'https://adobe-commerce.redoc.ly/2.3.7-admin/tag/orders'`Link to the Official Magento 2 API documentation for the endpoint wrapped by the `Model`**IDENTIFIER:** `str = 'entity_id'`The API response field that the endpoint's `uid` comes from`__init__`(*data, client*)Initialize an `Order` object using an API response from the orders endpoint**Parameters**

- **data** (`dict`) – API response from the orders endpoint
- **client** (`Client`) – an initialized `Client` object

property `excluded_keys`: `List[str]`API response keys that shouldn't be set as object attributes by `set_attrs()`**Returns**

list of API response keys that shouldn't be set as attributes

property `id`: `int`Alias for `entity_id`**property** `number`: `str`Alias for `increment_id`**property** `items`: `List[OrderItem]`The ordered items, returned as a list of `OrderItem` objects

Note: When a configurable `Product` is ordered, the API returns data for both the configurable and simple product

- The `OrderItem` is initialized using the configurable product data, since the simple product data is incomplete
- The `product` and `product_id` will still match the simple product though

If both entries are needed, the unparsed response is in the data dict

property item_ids: `List[int]`

The `item_ids` of the ordered `items`

property products: `List[Product]`

The ordered `items`, returned as their corresponding `Product` objects

get_invoice()

Retrieve the `Invoice` of the Order

Return type

`Invoice`

property shipping_address: `dict`

Shipping details, from `extension_attributes.shipping_assignments`

property bill_to: `dict`

Condensed version of the `billing_address` dict

property bill_to_address: `str`

The billing address, parsed into a single string

property ship_to: `dict`

Condensed version of the `shipping_address` dict

property ship_to_address: `str`

The shipping address, parsed into a single string

property payment: `dict`

Payment data

property net_tax: `float`

Final tax amount, with refunds and cancellations taken into account

property net_total: `float`

Final Order value, with refunds and cancellations taken into account

property item_refunds: `float`

Total amount refunded for items; excludes shipping and adjustment refunds/fees

property total_qty_invoiced: `int`

Total number of units invoiced

property total_qty_shipped: `int`

Total number of units shipped

property total_qty_refunded: `int`

Total number of units refunded

property total_qty_canceled: `int`

Total number of units canceled

property total_qty_outstanding: `int`

Total number of units that haven't been shipped/fulfilled yet

property net_qty_ordered: `int`

Total number of units ordered, after accounting for refunds and cancellations

class magento.models.order.**OrderItem**(*item*, *client=None*, *order=None*)

Bases: [Model](#)

Wrapper for the order/items endpoint

DOCUMENTATION: **str** = 'https://adobe-commerce.redoc.ly/2.3.7-admin/tag/ordersitems'

Link to the Official Magento 2 API documentation for the endpoint wrapped by the Model

IDENTIFIER: **str** = 'item_id'

The API response field that the endpoint's **uid** comes from

__init__(*item*, *client=None*, *order=None*)

Initialize an OrderItem using an API response from the orders/items endpoint

Note: Initialization requires either a [Client](#) or [Order](#) object

Parameters

- **item** (**dict**) – API response from the orders/items endpoint
- **order** (Optional[[Order](#)]) – the [Order](#) that this is an item of
- **client** (Optional[[Client](#)]) – the [Client](#) to use (if not initializing with an [Order](#))

Raises

[ValueError](#) – if both the order and client aren't provided

property **excluded_keys:** [List\[str\]](#)

API response keys that shouldn't be set as object attributes by `set_attrs()`

Returns

list of API response keys that shouldn't be set as attributes

property **order:** [Order](#)

The corresponding [Order](#)

property **product:** [Product](#)

The item's corresponding [Product](#)

Note: If the ordered item:

- Is a configurable product - the child simple product is returned
 - Has custom options - the base product is returned
-

property **product_id:** **int**

Id of the corresponding simple [Product](#)

property **extension_attributes:** **dict**

property **qty_outstanding:** **int**

Number of units that haven't been shipped/fulfilled yet

property **net_qty_ordered:** **int**

Number of units ordered, after accounting for refunds and cancellations

property net_tax: float

Tax amount after accounting for refunds and cancellations

property net_total: float

Row total (incl. tax) after accounting for refunds and cancellations

property net_refund: float

Refund amount after accounting for tax and discount refunds

property total_canceled: float

Cancelled amount; note that partial cancellation is not possible

4.5 The invoice module

class `magento.models.invoice.Invoice(data, client)`

Bases: `Model`

Wrapper for the invoices endpoint

DOCUMENTATION: `str = 'https://adobe-commerce.redoc.ly/2.3.7-admin/tag/invoices'`

Link to the Official Magento 2 API documentation for the endpoint wrapped by the Model

IDENTIFIER: `str = 'entity_id'`

The API response field that the endpoint's `uid` comes from

`__init__(data, client)`

Initialize an Invoice object using an API response from the invoices endpoint

Parameters

- **data** (`dict`) – API response from the invoices endpoint
- **client** (`Client`) – an initialized `Client` object

property excluded_keys: List[str]

API response keys that shouldn't be set as object attributes by `set_attrs()`

Returns

list of API response keys that shouldn't be set as attributes

property id: int

Alias for `entity_id`

property number: str

Alias for `increment_id`

property order: Order

The corresponding `Order`

property items: List[InvoiceItem]

The invoiced items, returned as a list of `InvoiceItem` objects

class `magento.models.invoice.InvoiceItem(item, invoice)`

Bases: `Model`

Wraps an item entry of an `Invoice`

DOCUMENTATION: `str = 'https://adobe-commerce.redoc.ly/2.3.7-admin/tag/invoicesid'`

Link to the Official Magento 2 API documentation for the endpoint wrapped by the Model

IDENTIFIER: `str = 'entity_id'`

The API response field that the endpoint's `uid` comes from

`__init__(item, invoice)`

Initialize an InvoiceItem of an Invoice

Parameters

- `item` (`dict`) – API response to use as source data
- `invoice` (`Invoice`) – the `Invoice` that this is an item of

`data_endpoint(scope=None)`

No data endpoint exists for invoice items

`query_endpoint()`

No search endpoint exists for invoice items

`property excluded_keys: List[str]`

API response keys that shouldn't be set as object attributes by `set_attrs()`

Returns

list of API response keys that shouldn't be set as attributes

`property order: Order`

The `Order` this item is from

`property order_item: OrderItem`

The item's corresponding `OrderItem`

`property product: Product`

The item's corresponding simple `Product`

`property product_id: int`

Id of the corresponding simple `Product`

GET A MAGENTO 2 REST API TOKEN WITH MYMAGENTO

Let's generate a Magento 2 REST API token using the [MyMagento](#) REST API wrapper package.

5.1 Setting the Login Credentials

Use your Magento 2 login credentials to generate an `ACCESS_TOKEN`

```
domain = 'domain.com'  
username = 'username'  
password = 'password'
```

If you're using a local installation of Magento, your domain should look like this:

```
domain = '127.0.0.1/path/to/magento'
```

5.2 Getting a Client

Now that that's set that up, let's start using the API.

MyMagento uses the `Client` class to handle all interactions with the API

```
import magento  
  
api = magento.get_api(domain=domain, username=username, password=password, local=True)
```

```
2023-02-15 01:09:05 INFO    |[ MyMagento | 127_adam ]|: Authenticating adam on 127.0.0.1/  
↪magento24...  
2023-02-15 01:09:06 INFO    |[ MyMagento | 127_adam ]|: Logged in to adam
```

5.3 Setting Environment Variables

To log in faster in the future, you can set the following environment variables:

```
import os

os.environ['MAGENTO_DOMAIN'] = domain
os.environ['MAGENTO_USERNAME'] = username
os.environ['MAGENTO_PASSWORD'] = password
```

The `Client` can now be initialized as follows

```
import magento

api = magento.get_api(local=True)
```

```
2023-02-15 01:09:28 INFO    |[ MyMagento | 127_adam ]|: Authenticating adam on 127.0.0.1/
↪magento24...
2023-02-15 01:09:30 INFO    |[ MyMagento | 127_adam ]|: Logged in to adam
```

ADD DISCOUNT ON EACH PRODUCT BASED ON PRODUCT PRICE

I saw this question on [Magento StackExchange](#):

Question

I have 100 products in my store and each product has different price. I want to add discount on each product based on specific price. For example, If a product is added into the cart and it has 100usd price then i want to apply 10% discount on it and if a product is added into the cart and it has 110usd price then i want to apply 11% discount on it and so on. I hope you understand what I want to achieve. in simple words, discount on each product based on product price. Thanks

6.1 Solution Using MyMagento

First, you'll want to *Get a Magento 2 REST API Token With MyMagento*

```
import magento

>>> api = magento.get_api()
```

Let's say we have the skus of the 100 products in an array.

We can use a `ProductSearch` retrieve these products as `Product` objects using `by_skulist()`

```
>>> skus = [f"test_sku{n}" for n in range(1, 101)]
>>> products = api.products.by_skulist(skus)
```

To retrieve the `Product` objects using a field other than sku, like `product_id`, we can use `by_list()`:

```
>>> product_ids = list(range(1,101))
>>> products = api.products.by_list(
...     field="entity_id", # To search by product_id
...     values=product_ids
... )
```

Once we have our list of `Product` objects, we can calculate the discount based on their price, then update the `special_price` (discount price) using the `Product.update_special_price()` method

```
>>> for product in products:
...     if product.price < 100:
...         continue
```

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```
...  
...     discount = product.price / 1000  
...     price = product.price * (1 - discount)  
...     product.update_special_price(round(price, 2))
```

We loop through our list of products and

1. Skip the products if the price is not \$100 or more
2. Calculate the discount percentage by dividing the price by 1000
3. Calculate the new, discounted product price by multiplying the current price by 1 - discount
4. Use the new price we calculated to update the special_price of the product

CHANGELOG

7.1 v2.1.0

- Added `get_api()` to login using credentials stored in environment variables
 - The environment variables `MAGENTO_USERNAME`, `MAGENTO_PASSWORD`, `MAGENTO_DOMAIN` will be used if the domain, username or password kwargs are missing

```
import magento

>>> magento.get_api()

2023-02-08 03:34:20 INFO    |[ MyMagento | 127_user ]|: Authenticating user on 127.0.0.1/
↳path/to/magento
2023-02-08 03:34:23 INFO    |[ MyMagento | 127_user ]|: Logged in to user
<magento.clients.Client object at 0x000001CA83E1A200>
```

...

- Added local kwarg to `Client` to support locally hosted Magento stores and test environments
 - By default, `local=False`

```
from magento import Client

>>> api = Client("127.0.0.1/path/to/magento", "username", "password", local=True)
```

...

- Add `since()` and `until()` method to `SearchQuery` classes, which search the `created_at` field
 - They can be chained together and also with `add_criteria()`

Example

```
# Retrieve orders from the first 7 days of 2023
>>> api.orders.since("2023-01-01").until("2023-01-07").execute()

[<Magento Order: #000000012 placed on 2023-01-02 05:19:55>, ]
```

Example

```
# Retrieve orders over $50 placed since 2022
>>> api.orders.add_criteria(
...     field="grand_total",
...     value="50",
...     condition="gteq"
... ).since("2022-01-01").execute()

[<Magento Order: #000000003 placed on 2022-12-21 08:09:33>, ...]
```

...

- Changed `add_criteria()` to auto-increment the filter group by default if no group is specified (ie. AND condition)

```
# Retrieving products that are over $10 AND in the category with id 15
#
# Before v2.1.0
>>> api.products.add_criteria('category_id', '15').add_criteria('price', '10', 'gteq', group=1)

# v2.1.0+
>>> api.products.add_criteria('category_id', '15').add_criteria('price', '10', 'gteq')
```

...

- Changed the `Client.BASE_URL` to not include "www." at the start (see #8)
- Added unit tests for `url_for()`
- Added Jupyter notebook examples

INDICES AND TABLES

- genindex
- modindex
- *Full Table of Contents*

PYTHON MODULE INDEX

m

- `magento.clients`, 11
- `magento.exceptions`, 30
- `magento.models.category`, 49
- `magento.models.invoice`, 54
- `magento.models.model`, 37
- `magento.models.order`, 51
- `magento.models.product`, 46
- `magento.search`, 17
- `magento.utils`, 31

Symbols

__init__() (*magento.clients.Client* method), 11
 __init__() (*magento.clients.Store* method), 16
 __init__() (*magento.exceptions.AuthenticationError* method), 31
 __init__() (*magento.exceptions.MagentoError* method), 30
 __init__() (*magento.models.category.Category* method), 49
 __init__() (*magento.models.invoice.Invoice* method), 54
 __init__() (*magento.models.invoice.InvoiceItem* method), 55
 __init__() (*magento.models.model.APIResponse* method), 41
 __init__() (*magento.models.model.Model* method), 37
 __init__() (*magento.models.order.Order* method), 51
 __init__() (*magento.models.order.OrderItem* method), 53
 __init__() (*magento.models.product.MediaEntry* method), 46
 __init__() (*magento.models.product.Product* method), 42
 __init__() (*magento.models.product.ProductAttribute* method), 49
 __init__() (*magento.search.CategorySearch* method), 30
 __init__() (*magento.search.InvoiceSearch* method), 25
 __init__() (*magento.search.OrderItemSearch* method), 23
 __init__() (*magento.search.OrderSearch* method), 22
 __init__() (*magento.search.ProductAttributeSearch* method), 29
 __init__() (*magento.search.ProductSearch* method), 28
 __init__() (*magento.search.SearchQuery* method), 18
 __init__() (*magento.utils.ItemManager* method), 31
 __init__() (*magento.utils.MagentoLogger* method),

33

A

ACCESS_TOKEN (*magento.clients.Client* attribute), 12
 active (*magento.clients.Store* property), 16
 add() (*magento.utils.ItemManager* method), 31
 add_criteria() (*magento.search.SearchQuery* method), 18
 add_media_type() (*magento.models.product.MediaEntry* method), 47
 add_request_logging() (*magento.utils.MagentoLogger* static method), 34
 all_product_attributes (*magento.clients.Store* property), 16
 all_product_ids (*magento.models.category.Category* property), 50
 all_products (*magento.models.category.Category* property), 50
 all_skus (*magento.models.category.Category* property), 50
 all_subcategories (*magento.models.category.Category* property), 50
 all_subcategory_ids (*magento.models.category.Category* property), 50
 APIResponse (class in *magento.models.model*), 41
 attributes (*magento.search.ProductSearch* property), 28
 authenticate() (*magento.clients.Client* method), 15
 AuthenticationError, 31

B
 BASE_URL (*magento.clients.Client* attribute), 12
 bill_to (*magento.models.order.Order* property), 52
 bill_to_address (*magento.models.order.Order* property), 52
 by_category() (*magento.search.InvoiceSearch* method), 27

- by_category() (*magento.search.OrderItemSearch method*), 25
- by_category() (*magento.search.OrderSearch method*), 23
- by_category() (*magento.search.ProductSearch method*), 28
- by_category_id() (*magento.search.InvoiceSearch method*), 27
- by_category_id() (*magento.search.OrderItemSearch method*), 25
- by_category_id() (*magento.search.OrderSearch method*), 23
- by_category_id() (*magento.search.ProductSearch method*), 29
- by_code() (*magento.search.ProductAttributeSearch method*), 29
- by_id() (*magento.search.ProductSearch method*), 28
- by_id() (*magento.search.SearchQuery method*), 20
- by_list() (*magento.search.SearchQuery method*), 20
- by_name() (*magento.search.CategorySearch method*), 30
- by_number() (*magento.search.InvoiceSearch method*), 26
- by_number() (*magento.search.OrderSearch method*), 22
- by_order() (*magento.search.InvoiceSearch method*), 26
- by_order_id() (*magento.search.InvoiceSearch method*), 26
- by_order_number() (*magento.search.InvoiceSearch method*), 26
- by_product() (*magento.search.InvoiceSearch method*), 26
- by_product() (*magento.search.OrderItemSearch method*), 24
- by_product() (*magento.search.OrderSearch method*), 22
- by_product_id() (*magento.search.InvoiceSearch method*), 27
- by_product_id() (*magento.search.OrderItemSearch method*), 25
- by_product_id() (*magento.search.OrderSearch method*), 22
- by_sku() (*magento.search.InvoiceSearch method*), 26
- by_sku() (*magento.search.OrderItemSearch method*), 24
- by_sku() (*magento.search.OrderSearch method*), 22
- by_sku() (*magento.search.ProductSearch method*), 28
- by_skulist() (*magento.search.InvoiceSearch method*), 27
- by_skulist() (*magento.search.OrderItemSearch method*), 25
- by_skulist() (*magento.search.OrderSearch method*), 23
- by_skulist() (*magento.search.ProductSearch method*), 28
- ## C
- cached (*magento.models.model.Model property*), 40
- categories (*magento.clients.Client property*), 14
- categories (*magento.models.product.Product property*), 45
- Category (*class in magento.models.category*), 49
- CategorySearch (*class in magento.search*), 29
- children (*magento.models.product.Product property*), 45
- clear() (*magento.models.model.Model method*), 40
- clear_file_handlers() (*magento.utils.LoggerUtils static method*), 32
- clear_handlers() (*magento.utils.LoggerUtils static method*), 32
- clear_magento_file_handlers() (*magento.utils.MagentoLogger static method*), 34
- clear_magento_handlers() (*magento.utils.MagentoLogger static method*), 34
- clear_magento_stdout_handlers() (*magento.utils.MagentoLogger static method*), 34
- clear_stream_handlers() (*magento.utils.LoggerUtils static method*), 32
- Client (*class in magento.clients*), 11
- client (*magento.search.SearchQuery attribute*), 18
- CLIENT_LOG_NAME (*magento.utils.MagentoLogger attribute*), 33
- configs (*magento.clients.Store property*), 16
- critical() (*magento.utils.MagentoLogger method*), 34
- custom_attributes (*magento.models.category.Category property*), 49
- ## D
- data_endpoint() (*magento.models.invoice.InvoiceItem method*), 55
- data_endpoint() (*magento.models.model.APIResponse method*), 41
- data_endpoint() (*magento.models.model.Model method*), 38
- debug() (*magento.utils.MagentoLogger method*), 33
- DEFAULT_MSG (*magento.exceptions.AuthenticationError attribute*), 31
- DEFAULT_MSG (*magento.exceptions.MagentoError attribute*), 30
- delete() (*magento.clients.Client method*), 14

- delete() (*magento.models.product.Product* method), 45
- description (*magento.models.product.Product* property), 46
- disable() (*magento.models.product.MediaEntry* method), 47
- DOCUMENTATION (*magento.models.category.Category* attribute), 49
- DOCUMENTATION (*magento.models.invoice.Invoice* attribute), 54
- DOCUMENTATION (*magento.models.invoice.InvoiceItem* attribute), 55
- DOCUMENTATION (*magento.models.model.Model* attribute), 37
- DOCUMENTATION (*magento.models.order.Order* attribute), 51
- DOCUMENTATION (*magento.models.order.OrderItem* attribute), 53
- DOCUMENTATION (*magento.models.product.MediaEntry* attribute), 46
- DOCUMENTATION (*magento.models.product.Product* attribute), 42
- DOCUMENTATION (*magento.models.product.ProductAttribute* attribute), 48
- domain (*magento.clients.Client* attribute), 12
- ## E
- enable() (*magento.models.product.MediaEntry* method), 47
- encode() (*magento.models.model.Model* static method), 40
- encoded_sku (*magento.models.product.Product* property), 45
- endpoint (*magento.search.SearchQuery* attribute), 18
- error() (*magento.utils.MagentaLogger* method), 33
- excluded_keys (*magento.models.category.Category* property), 49
- excluded_keys (*magento.models.invoice.Invoice* property), 54
- excluded_keys (*magento.models.invoice.InvoiceItem* property), 55
- excluded_keys (*magento.models.model.APIResponse* property), 41
- excluded_keys (*magento.models.model.Model* property), 38
- excluded_keys (*magento.models.order.Order* property), 51
- excluded_keys (*magento.models.order.OrderItem* property), 53
- excluded_keys (*magento.models.product.MediaEntry* property), 46
- excluded_keys (*magento.models.product.Product* property), 42
- excluded_keys (*magento.models.product.ProductAttribute* property), 49
- execute() (*magento.search.SearchQuery* method), 19
- extension_attributes (*magento.models.order.OrderItem* property), 53
- ## F
- fields (*magento.search.SearchQuery* attribute), 18
- file_handlers (*magento.utils.MagentaLogger* property), 34
- filter_website_attrs() (*magento.clients.Store* method), 17
- format_msg() (*magento.utils.MagentaLogger* method), 33
- FORMATTER (*magento.utils.MagentaLogger* attribute), 33
- from_dict() (*magento.clients.Client* class method), 13
- from_items() (*magento.search.OrderSearch* method), 23
- from_json() (*magento.clients.Client* class method), 13
- from_order_items() (*magento.search.InvoiceSearch* method), 27
- ## G
- get() (*magento.clients.Client* method), 14
- get_agent() (in module *magento.utils*), 35
- get_agents() (in module *magento.utils*), 34
- get_all() (*magento.search.CategorySearch* method), 30
- get_all() (*magento.search.ProductAttributeSearch* method), 29
- get_api() (in module *magento*), 11
- get_attrs() (*magento.utils.ItemManager* method), 31
- get_children() (*magento.models.product.Product* method), 45
- get_file_handlers() (*magento.utils.LoggerUtils* static method), 32
- get_handler_by_log_file() (*magento.utils.LoggerUtils* static method), 32
- get_handler_names() (*magento.utils.LoggerUtils* static method), 31
- get_invoice() (*magento.models.order.Order* method), 52
- get_invoices() (*magento.models.category.Category* method), 51
- get_invoices() (*magento.models.product.Product* method), 44
- get_log_files() (*magento.utils.LoggerUtils* static method), 32
- get_logger() (*magento.clients.Client* method), 15

- `get_magento_handlers()` (*magento.utils.MagentoLogger* static method), 34
 - `get_media_by_id()` (*magento.models.product.Product* method), 45
 - `get_order_items()` (*magento.models.category.Category* method), 50
 - `get_order_items()` (*magento.models.product.Product* method), 44
 - `get_orders()` (*magento.models.category.Category* method), 50
 - `get_orders()` (*magento.models.product.Product* method), 44
 - `get_package_file_handler()` (in module *magento.utils*), 35
 - `get_package_handler()` (*magento.utils.MagentoLogger* static method), 34
 - `get_products()` (*magento.models.category.Category* method), 50
 - `get_root()` (*magento.search.CategorySearch* method), 30
 - `get_scope_name()` (*magento.models.model.Model* method), 40
 - `get_stock()` (*magento.search.ProductSearch* method), 29
 - `get_stream_handlers()` (*magento.utils.LoggerUtils* static method), 31
 - `get_types()` (*magento.search.ProductAttributeSearch* method), 29
 - `global_product_attributes` (*magento.clients.Store* property), 16
- ## H
- `handler_map` (*magento.utils.MagentoLogger* property), 34
 - `HANDLER_NAME` (*magento.utils.MagentoLogger* attribute), 33
 - `handler_names` (*magento.utils.MagentoLogger* property), 34
 - `handlers` (*magento.utils.MagentoLogger* property), 34
 - `headers` (*magento.clients.Client* property), 15
- ## I
- `id` (*magento.models.invoice.Invoice* property), 54
 - `id` (*magento.models.order.Order* property), 51
 - `IDENTIFIER` (*magento.models.category.Category* attribute), 49
 - `IDENTIFIER` (*magento.models.invoice.Invoice* attribute), 54
 - `IDENTIFIER` (*magento.models.invoice.InvoiceItem* attribute), 55
 - `IDENTIFIER` (*magento.models.model.APIResponse* attribute), 41
 - `IDENTIFIER` (*magento.models.model.Model* attribute), 37
 - `IDENTIFIER` (*magento.models.order.Order* attribute), 51
 - `IDENTIFIER` (*magento.models.order.OrderItem* attribute), 53
 - `IDENTIFIER` (*magento.models.product.MediaEntry* attribute), 46
 - `IDENTIFIER` (*magento.models.product.Product* attribute), 42
 - `IDENTIFIER` (*magento.models.product.ProductAttribute* attribute), 49
 - `info()` (*magento.utils.MagentoLogger* method), 33
 - `Invoice` (class in *magento.models.invoice*), 54
 - `InvoiceItem` (class in *magento.models.invoice*), 54
 - `invoices` (*magento.clients.Client* property), 14
 - `InvoiceSearch` (class in *magento.search*), 25
 - `is_enabled` (*magento.models.product.MediaEntry* property), 46
 - `is_single_store` (*magento.clients.Store* property), 16
 - `is_thumbnail` (*magento.models.product.MediaEntry* property), 47
 - `item_ids` (*magento.models.order.Order* property), 52
 - `item_refunds` (*magento.models.order.Order* property), 52
 - `ItemManager` (class in *magento.utils*), 31
 - `items` (*magento.models.invoice.Invoice* property), 54
 - `items` (*magento.models.order.Order* property), 51
- ## L
- `last_group` (*magento.search.SearchQuery* property), 21
 - `link` (*magento.models.product.MediaEntry* property), 47
 - `load()` (*magento.clients.Client* class method), 13
 - `log_files` (*magento.utils.MagentoLogger* property), 34
 - `LOG_MESSAGE` (*magento.utils.MagentoLogger* attribute), 33
 - `log_path` (*magento.utils.MagentoLogger* property), 34
 - `logger` (*magento.clients.Client* attribute), 12
 - `LoggerUtils` (class in *magento.utils*), 31
- ## M
- `magento.clients` module, 11
 - `magento.exceptions` module, 30
 - `magento.models.category` module, 49
 - `magento.models.invoice` module, 54

- magento.models.model
 - module, 37
 - magento.models.order
 - module, 51
 - magento.models.product
 - module, 46
 - magento.search
 - module, 17
 - magento.utils
 - module, 31
 - MagentoError, 30
 - MagentoLogger (class in magento.utils), 32
 - map_handlers_by_name() (magento.utils.LoggerUtils static method), 32
 - media_gallery_entries (magento.models.product.Product property), 45
 - MEDIA_TYPES (magento.models.product.MediaEntry attribute), 46
 - MediaEntry (class in magento.models.product), 46
 - Model (class in magento.models.model), 37
 - Model (magento.search.SearchQuery attribute), 18
 - module
 - magento.clients, 11
 - magento.exceptions, 30
 - magento.models.category, 49
 - magento.models.invoice, 54
 - magento.models.model, 37
 - magento.models.order, 51
 - magento.models.product, 46
 - magento.search, 17
 - magento.utils, 31
- N**
- net_qty_ordered (magento.models.order.Order property), 52
 - net_qty_ordered (magento.models.order.OrderItem property), 53
 - net_refund (magento.models.order.OrderItem property), 54
 - net_tax (magento.models.order.Order property), 52
 - net_tax (magento.models.order.OrderItem property), 53
 - net_total (magento.models.order.Order property), 52
 - net_total (magento.models.order.OrderItem property), 54
 - new() (magento.clients.Client class method), 12
 - number (magento.models.invoice.Invoice property), 54
 - number (magento.models.order.Order property), 51
- O**
- option_skus (magento.models.product.Product property), 46
 - options (magento.models.product.ProductAttribute property), 49
 - Order (class in magento.models.order), 51
 - order (magento.models.invoice.Invoice property), 54
 - order (magento.models.invoice.InvoiceItem property), 55
 - order (magento.models.order.OrderItem property), 53
 - order_item (magento.models.invoice.InvoiceItem property), 55
 - order_items (magento.clients.Client property), 14
 - OrderItem (class in magento.models.order), 52
 - OrderItemSearch (class in magento.search), 23
 - orders (magento.clients.Client property), 14
 - OrderSearch (class in magento.search), 22
 - owns_handler() (magento.utils MagentoLogger static method), 34
- P**
- pack_attributes() (magento.models.model.Model static method), 40
 - PACKAGE_LOG_NAME (magento.utils MagentoLogger attribute), 33
 - parse() (magento.exceptions MagentoError static method), 30
 - parse() (magento.models.model.Model method), 38
 - parse() (magento.search.OrderItemSearch method), 24
 - parse() (magento.search.SearchQuery method), 21
 - payment (magento.models.order.Order property), 52
 - post() (magento.clients.Client method), 14
 - PREFIX (magento.utils MagentoLogger attribute), 33
 - Product (class in magento.models.product), 41
 - product (magento.models.invoice.InvoiceItem property), 55
 - product (magento.models.order.OrderItem property), 53
 - product_attributes (magento.clients.Client property), 14
 - product_id (magento.models.invoice.InvoiceItem property), 55
 - product_id (magento.models.order.OrderItem property), 53
 - product_ids (magento.models.category.Category property), 50
 - ProductAttribute (class in magento.models.product), 48
 - ProductAttributeSearch (class in magento.search), 29
 - products (magento.clients.Client property), 14
 - products (magento.models.category.Category property), 50
 - products (magento.models.order.Order property), 52
 - ProductSearch (class in magento.search), 28
 - put() (magento.clients.Client method), 14

Q

qty_outstanding (*magento.models.order.OrderItem* property), 53
 query (*magento.search.SearchQuery* attribute), 18
 query_endpoint() (*magento.models.invoice.InvoiceItem* method), 55
 query_endpoint() (*magento.models.model.Model* method), 38
 query_endpoint() (*magento.models.product.MediaEntry* method), 46

R

refresh() (*magento.clients.Store* method), 17
 refresh() (*magento.models.model.Model* method), 39
 remove_media_type() (*magento.models.product.MediaEntry* method), 47
 request() (*magento.clients.Client* method), 15
 reset() (*magento.search.SearchQuery* method), 21
 restrict_fields() (*magento.search.SearchQuery* method), 19
 result (*magento.search.OrderItemSearch* property), 24
 result (*magento.search.SearchQuery* property), 21
 result_count (*magento.search.SearchQuery* property), 21
 result_type (*magento.search.SearchQuery* property), 21

S

scope (*magento.clients.Client* attribute), 12
 search() (*magento.clients.Client* method), 13
 SearchQuery (class in *magento.search*), 17
 set_alt_text() (*magento.models.product.MediaEntry* method), 48
 set_attrs() (*magento.models.model.Model* method), 38
 set_media_types() (*magento.models.product.MediaEntry* method), 47
 set_position() (*magento.models.product.MediaEntry* method), 48
 setup_logger() (*magento.utils.MagentaLogger* method), 33
 ship_to (*magento.models.order.Order* property), 52
 ship_to_address (*magento.models.order.Order* property), 52
 shipping_address (*magento.models.order.Order* property), 52

since() (*magento.search.SearchQuery* method), 20
 skus (*magento.models.category.Category* property), 50
 special_price (*magento.models.product.Product* property), 46
 STATUS_DISABLED (*magento.models.product.Product* attribute), 42
 STATUS_ENABLED (*magento.models.product.Product* attribute), 41
 stock (*magento.models.product.Product* property), 46
 stock_item (*magento.models.product.Product* property), 46
 stock_item_id (*magento.models.product.Product* property), 46
 Store (class in *magento.clients*), 16
 store (*magento.clients.Client* attribute), 12
 store_view_product_attributes (*magento.clients.Store* property), 16
 stream_handlers (*magento.utils.MagentaLogger* property), 34
 subcategories (*magento.models.category.Category* property), 49
 subcategory_ids (*magento.models.category.Category* property), 49
 subcategory_names (*magento.models.category.Category* property), 50
 sum_attrs() (*magento.utils.ItemManager* method), 31

T

thumbnail (*magento.models.product.Product* property), 45
 thumbnail_link (*magento.models.product.Product* property), 45
 to_dict() (*magento.clients.Client* method), 16
 to_json() (*magento.clients.Client* method), 16
 to_pickle() (*magento.clients.Client* method), 15
 token (*magento.clients.Client* property), 15
 total_canceled (*magento.models.order.OrderItem* property), 54
 total_qty_canceled (*magento.models.order.Order* property), 52
 total_qty_invoiced (*magento.models.order.Order* property), 52
 total_qty_outstanding (*magento.models.order.Order* property), 52
 total_qty_refunded (*magento.models.order.Order* property), 52
 total_qty_shipped (*magento.models.order.Order* property), 52

U

uid (*magento.models.model.APIResponse* property),

41

`uid` (*magento.models.model.Model* property), 38

`unpack_attributes()` (*magento.models.model.Model* static method), 39

`until()` (*magento.search.SearchQuery* method), 21

`update()` (*magento.models.product.MediaEntry* method), 48

`update_attributes()` (*magento.models.product.Product* method), 43

`update_custom_attributes()` (*magento.models.product.Product* method), 44

`update_description()` (*magento.models.product.Product* method), 43

`update_metadata()` (*magento.models.product.Product* method), 43

`update_name()` (*magento.models.product.Product* method), 43

`update_price()` (*magento.models.product.Product* method), 42

`update_special_price()` (*magento.models.product.Product* method), 42

`update_status()` (*magento.models.product.Product* method), 42

`update_stock()` (*magento.models.product.Product* method), 42

`url_for()` (*magento.clients.Client* method), 13

`user_agent` (*magento.clients.Client* attribute), 12

`USER_CREDENTIALS` (*magento.clients.Client* attribute), 12

V

`validate()` (*magento.clients.Client* method), 15

`validate_result()` (*magento.search.SearchQuery* method), 21

`view_config()` (*magento.clients.Client* method), 16

`views` (*magento.clients.Store* property), 16

`VISIBILITY_BOTH` (*magento.models.product.Product* attribute), 42

`VISIBILITY_CATALOG` (*magento.models.product.Product* attribute), 42

`VISIBILITY_NOT_VISIBLE` (*magento.models.product.Product* attribute), 42

`VISIBILITY_SEARCH` (*magento.models.product.Product* attribute), 42

W

`warning()` (*magento.utils.MagentoLogger* method), 34