ext_aeid-5482-CartierAsk_v13-1

Analysis & Design Document

Date – 26 Oct 2022

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Topic **Page No.**

1. Scope of work

Scrap the below data from SITE: https://www.cartier.com/en-us/home

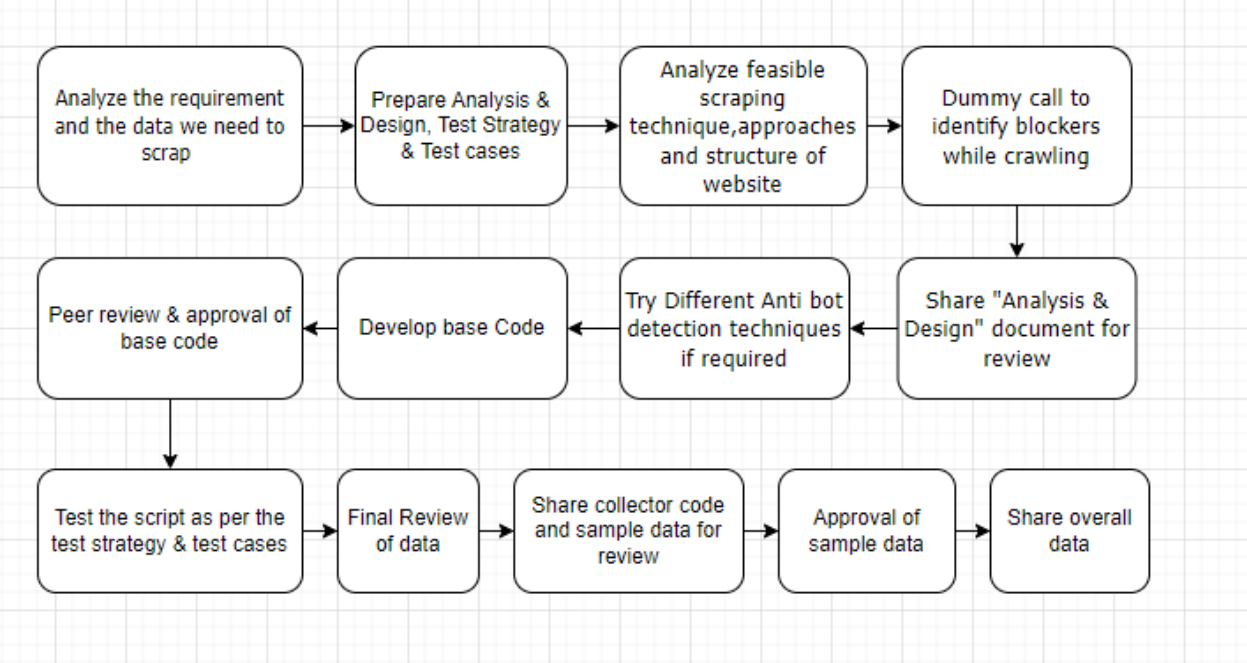
1. Product ID
2. Product Name
3. Product Size
4. Product Price
5. Product Availability
6. Product Details (Optional)

- Handbags data is priority where as other categories are good to have.
- Need data for other countries.

2. Solution Approach

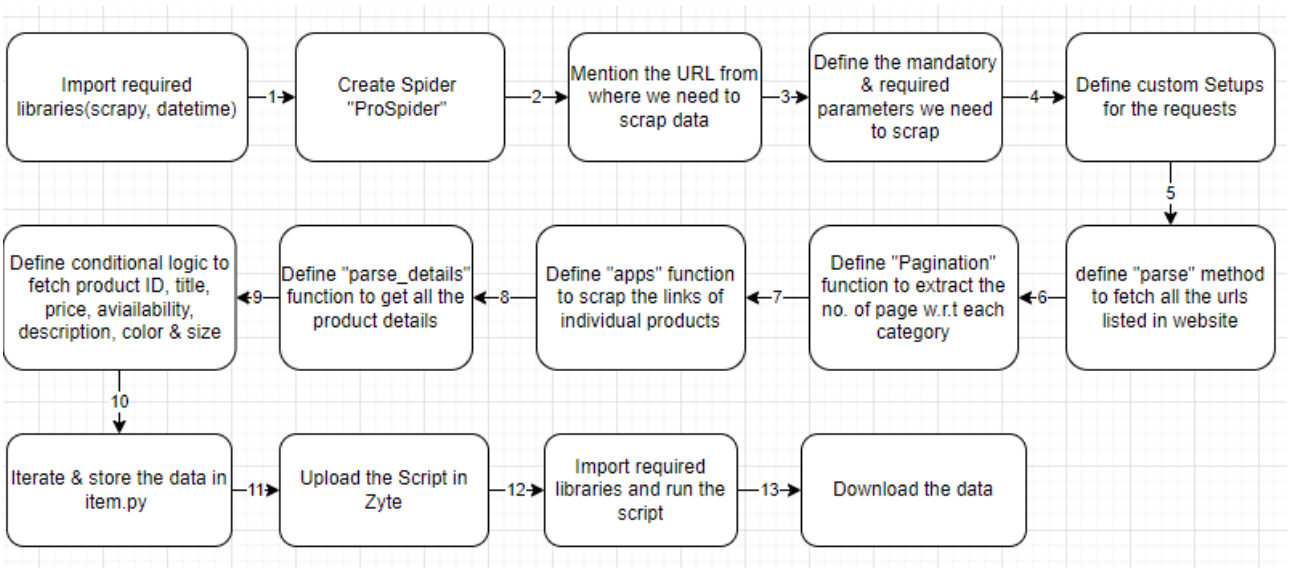
We are following the below steps to develop the script as per the requirement

- The website is operational in 68 countries, hence the collector code is needed for all the countries.
- Each country has slight changes in the layout and rendering method of the categories.
- We are fetching the required details for each product.
- Checked the javascript data (the data we get from AJAX calls) with the help of view page source.
- We are fetching all category links then fetching the product links from where we are scraping the required product details.
- We are scraping the category handbags for all the Countries & all the categories for some countries


Analyze the requirement and the data we need to scrap
Prepare Analysis & Design, Test Strategy & Test cases
Analyze feasible scraping technique,approaches and structure of website
Dummy call to identify blockers while crawling
Share "Analysis & Design" document for review
Try Different Anti bot detection techniques if required
Develop base Code
Peer review & approval of base code
Test the script as per the test strategy & test cases
Final Review of data
Share collector code and sample data for review
Approval of sample data
Share overall data

3. Script Development Flow

Below steps are followed to create spider



4. Technology Considerations

Custom signup - Not required

Programming Language - Python

Framework - Scrapy

Tool - Zyte

Functions & Libraries used - datetime, scrapy-user-agents

Storage (Database) - Zyte Cloud

Deployment Requirements

- Install all the required libraries in Zyte Cloud

Logging considerations

- No logging is required
- No CAPCTHA authentication required

Proxy Details

- We are using user agent to avoid getting blocked, this is present in settings.py file.

5. Base Collector Code

File name - Cartier.py

Here we are scraping the data as per the requirements

Step 1 - Importing required libraries

```
from scrapy import Request
import scrapy
import json
from ..items import CartierItem
from datetime import datetime
```

Step 2 - Here we are defining the custom details

```
custom_settings = {
    'SCHEDULER_PRIORITY_QUEUE': 'scrapy.pqueues.DownloaderAwarePriorityQueue',
    'REACTOR_THREADPOOL_MAXSIZE': '20',
    'LOG_LEVEL': 'INFO',
    'RETRY_ENABLED': 'False',
    'DOWNLOAD_TIMEOUT': '1000',
    'REDIRECT_ENABLED': 'False',
    'AJAXCRAWL_ENABLED': 'True',
    'CONCURRENT_REQUESTS_PER_DOMAIN': '2',
    'DNS_RESOLVER': 'scrapy.resolver.CachingThreadedResolver',
    'DUPEFILTER_CLASS': "scrapy.dupefilters.BaseDupeFilter",
    'AUTOTHROTTLE_ENABLED':'False'
}
```

Step 3 - Here a spider named "ProSpider" is created and start url of the website are defined that we are crawling

```
class ProSpider(scrapy.Spider):
name = 'Cartier'
    headers = {
        'User-Agent': "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML,
like Gecko) "
                      "Chrome/106.0.0.0 Safari/537.36"}

    start_urls = ['https://www.cartier.com/en-us/home']
```

Step 4 - Here we are defining the mandatory data

```
site = 'https://www.cartier.com'
execution_id = '621291'
feed_code = 'aeid5482'
record_create_by = 'aeid5482_cartier'
record_create_date = datetime.now()
source_country = 'USA'  this will be dynamic based on countries
```

Step 5 - Here we are fetching all links available on the website

```
def parse(self, response):
```

Step 6 - Here we getting the total no. of pages that category have

```
def pagination(self, response):
```

Step 7 - Here we are fetching the script and links of individual products

```
def apps(self, response):
    data = response.xpath('//script[@type="application/ld+json"]/text()').get()
```

Step 8 - Here we are defining parse function. Inside this function we are writing code for crawling the details of each product

```
def parse_details(self, response):
    items = CartierItem()
    details = response.xpath('//script[@type="application/ld+json"]/text()').get()
```

Step 9 - yielding all items here

```
        yield item
```

6. Template Parameters & Description

The template contains the data that is scraped as per the ranking of newly listed products.

For the parameters where **mandatory** is mentioned, this is mandatory parameters as per the required template.

For the parameters where **Required** is mentioned, this is parameters needed as per the requirement document.

Below are the parameters that we are scraping and their description

1. **Context_identifier (Mandatory) -** We are capturing the hierarchy of product in a website
2. **Execution_id (Mandatory) -** Execution id will be taken automatically from zyte.
3. **Feed_code (Mandatory) -** This is hardcoded as project name.
4. **Availability (Required) -** This we are getting from website
5. **Available_Colors_OR_Size (Required) -** This we are getting from website
6. **Description (Required) -** This we are getting from website
7. **Price_Currency (Required) -** This we are getting from website
8. **Product_Id (Required) -** This we are getting from website.
9. **Product_Price (Required) -** This we are getting from website.
10. **Product_Title (Required) -** This we are getting from website.
11. **Record_create_by (Mandatory) -** This is hardcoded with spider name
12. **Record_create_dt (Mandatory) -** This is the timestamp for capturing the data.
13. **Site (Mandatory)-** This is hardcoded.
14. **Source (Mandatory) -** This is the link of the individual product.
15. **Source_country (Mandatory) -**This is hardcoded as per the specific country.
16. **Type (Mandatory) -** This is hardcoded.

7. Risks and Dependencies

Below are the identified risks and their possible solutions:

Risk	Mitigation
Risk of getting blacklisted/blocked/IP restrictions due to security/network policies on the web server.	we need to control the concurrency & use different proxy methods.
If the semantic code/markup of the website changes, the script will have a possibility of failure.	Identify the changes in the semantic code/markup of the website and modify the script accordingly.