

How to launching Rocket

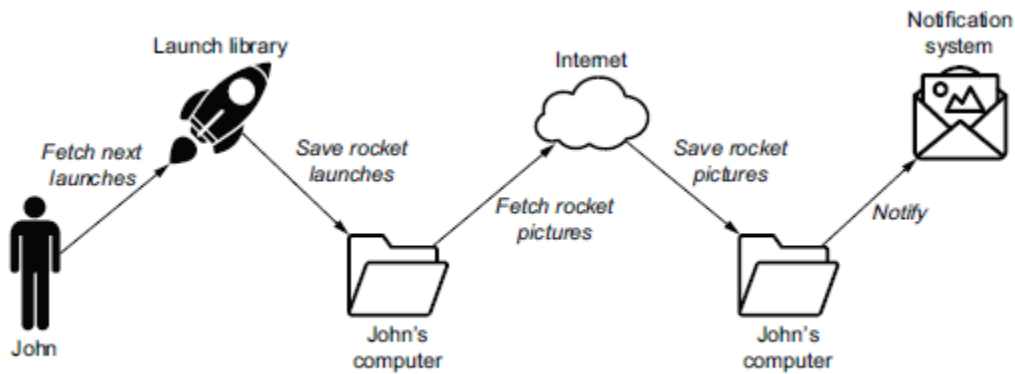


Figure 2.1 John's mental model of downloading rocket pictures

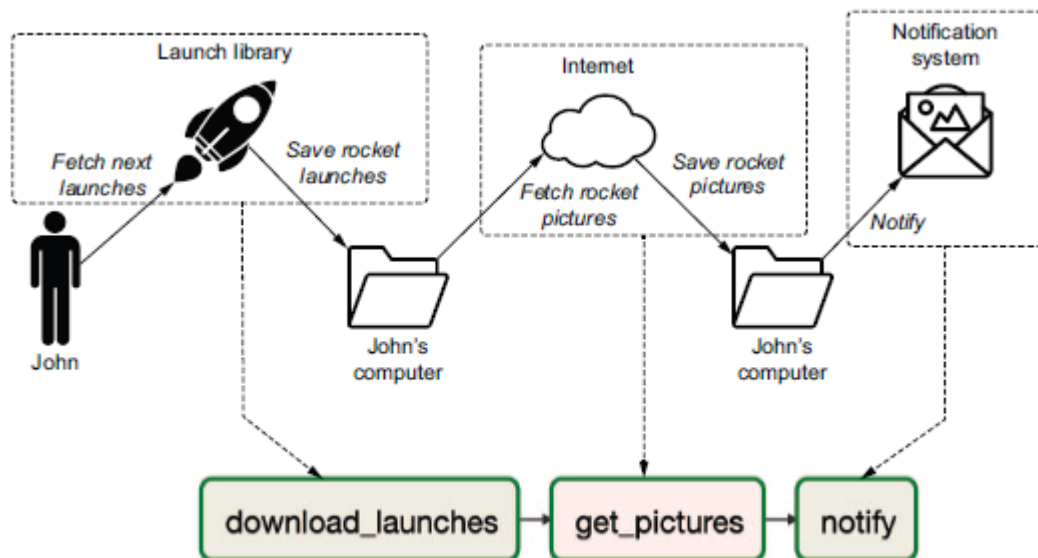
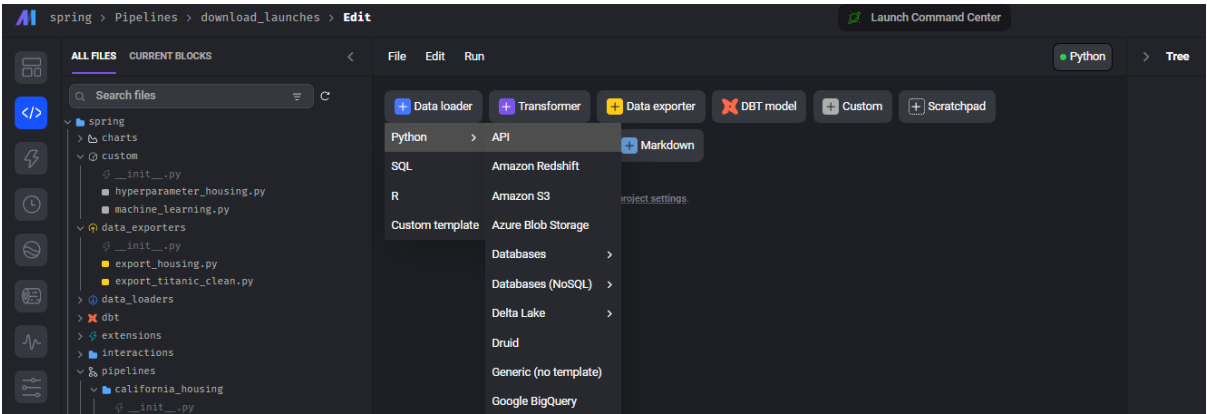
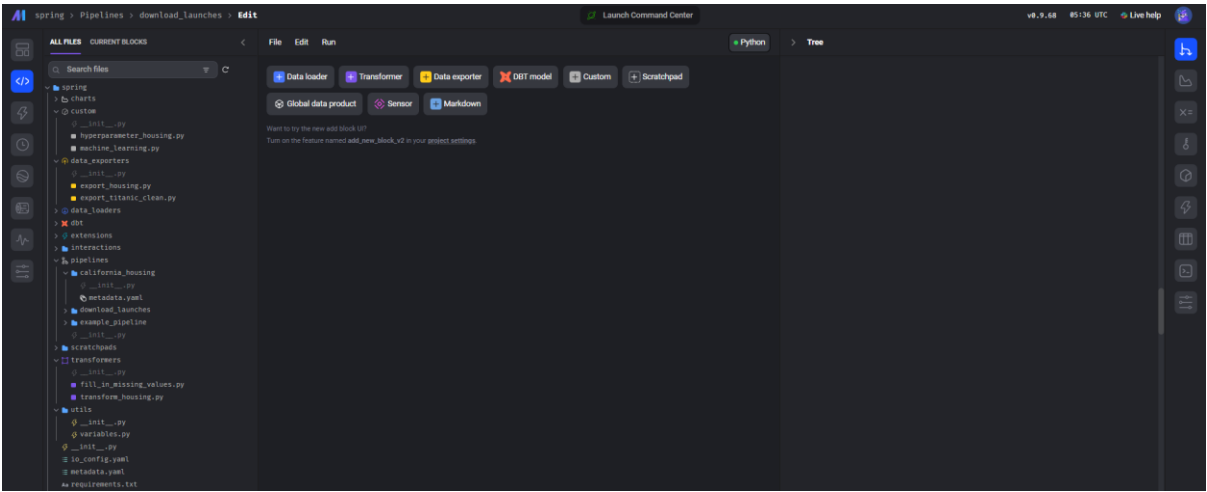
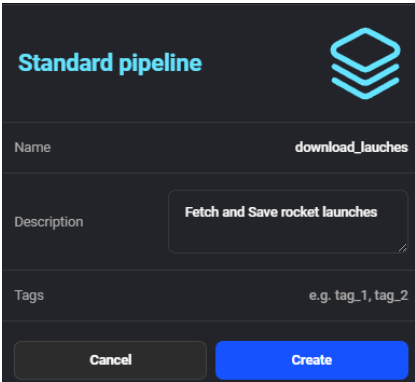
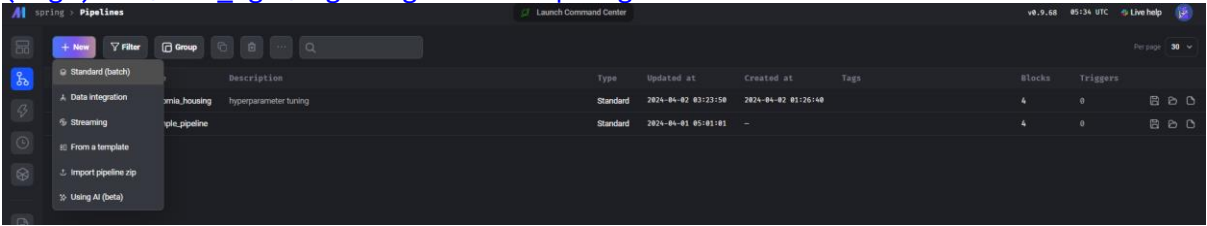





Figure 2.3 John's mental model mapped to tasks in Airflow

1.Download_launches

(mage) C:\data_mgt\mage>mage start spring





Name	download_launches
Type	Data loader 
Language	Python 
<div>Save and addCancel</div>	

아래 코드 입력하고 Block 실행

```

import io
import pandas as pd
import requests
import os

if 'data_loader' not in globals():
    from mage_ai.data_preparation.decorators import data_loader
if 'test' not in globals():
    from mage_ai.data_preparation.decorators import test

@data_loader
def load_data_from_api(*args, **kwargs):
    url = 'https://11.thespacedevs.com/2.0.0/launch/upcoming'
    #C:\python\etl\mage\spellbound\data_loaders
    #../..
    os.makedirs("../data", exist_ok=True) # mage folder 아래 rocket folder
    response = requests.get(url)

    with open("../data/launches.json", "wb") as f:
        f.write(response.content)

    # Assuming the API returns a JSON that can be read into a DataFrame
    data = response.json()

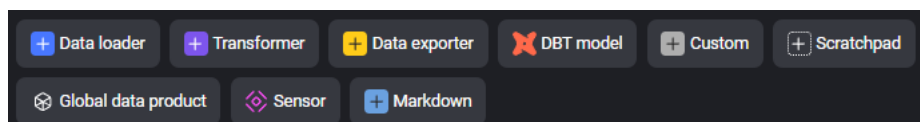
    return pd.DataFrame(data)

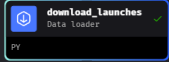
@test
def test_output(output, *args) -> None:
    """
    Template code for testing the output of the block.
    """
    assert output is not None, 'The output is undefined'

```

2.Transform_rocket_launches

Click Transformer





```

import json
import requests
import requests.exceptions as requests_exceptions
import os

if 'transformer' not in globals():
    from mage_ai.data_preparation.decorators import transformer
if 'test' not in globals():
    from mage_ai.data_preparation.decorators import test

@transformer
def get_pictures(data, *args, **kwargs):

    os.makedirs(f"../image", exist_ok=True)

    # Explicitly set the encoding to 'utf-8'
    with open("../data/launches.json", encoding='utf-8') as f:
        launches = json.load(f)

    image_urls = [launch["image"] for launch in launches["results"]]

    print(image_urls)

    for image_url in image_urls:
        try:
            response = requests.get(image_url)
            image_filename = image_url.split("/")[-1]

            # Fix the target file path
            target_file = os.path.join("../image", image_filename)

            with open(target_file, "wb") as f:
                f.write(response.content)

            print(f"Downloaded {image_url} to {target_file}")

        except requests_exceptions.MissingSchema:
            print(f"{image_url} appears to be an invalid URL.")

        except requests_exceptions.ConnectionError:
            print(f"Could not connect to {image_url}.")

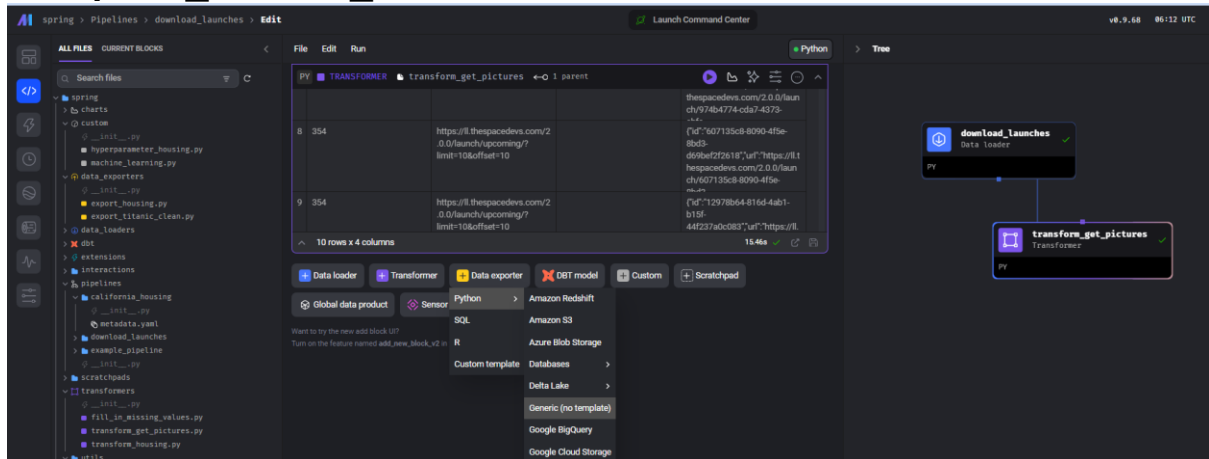
    return data

@test
def test_output(output, *args) -> None:
    """
    Template code for testing the output of the block.
    """
    assert output is not None, 'The output is undefined'

```

Block 실행

3. Export_rocket_launches



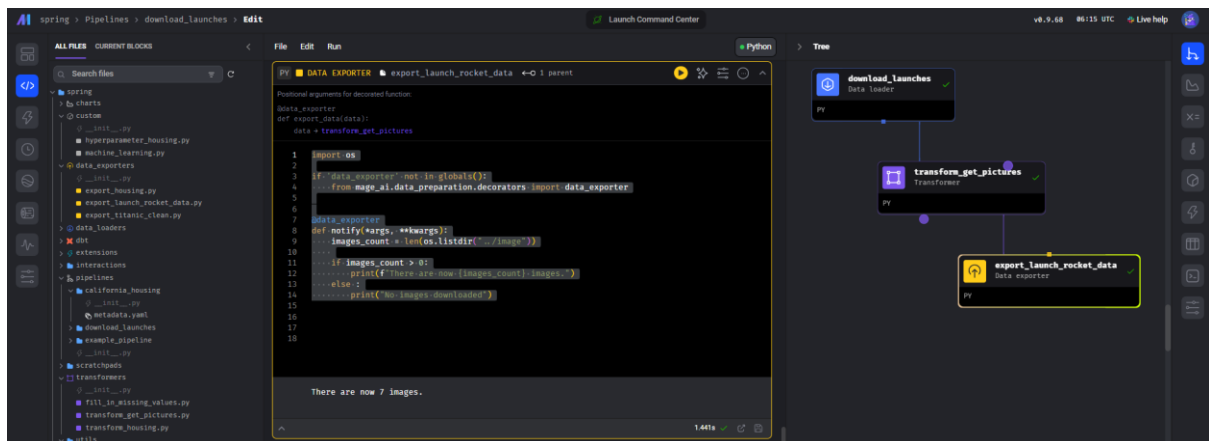
아래 코드 입력하고 block 실행

```
import os

if 'data_exporter' not in globals():
    from mage_ai.data_preparation.decorators import data_exporter

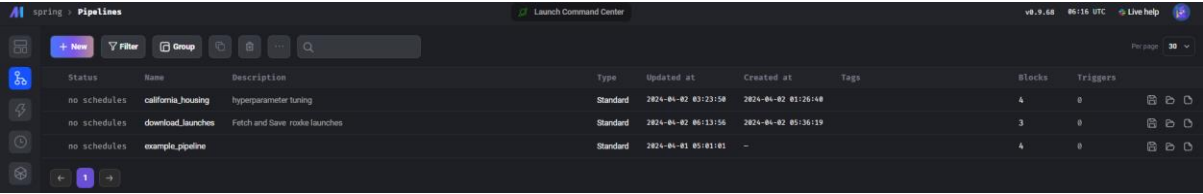
@data_exporter
def notify(*args, **kwargs):
    images_count = len(os.listdir("../image"))

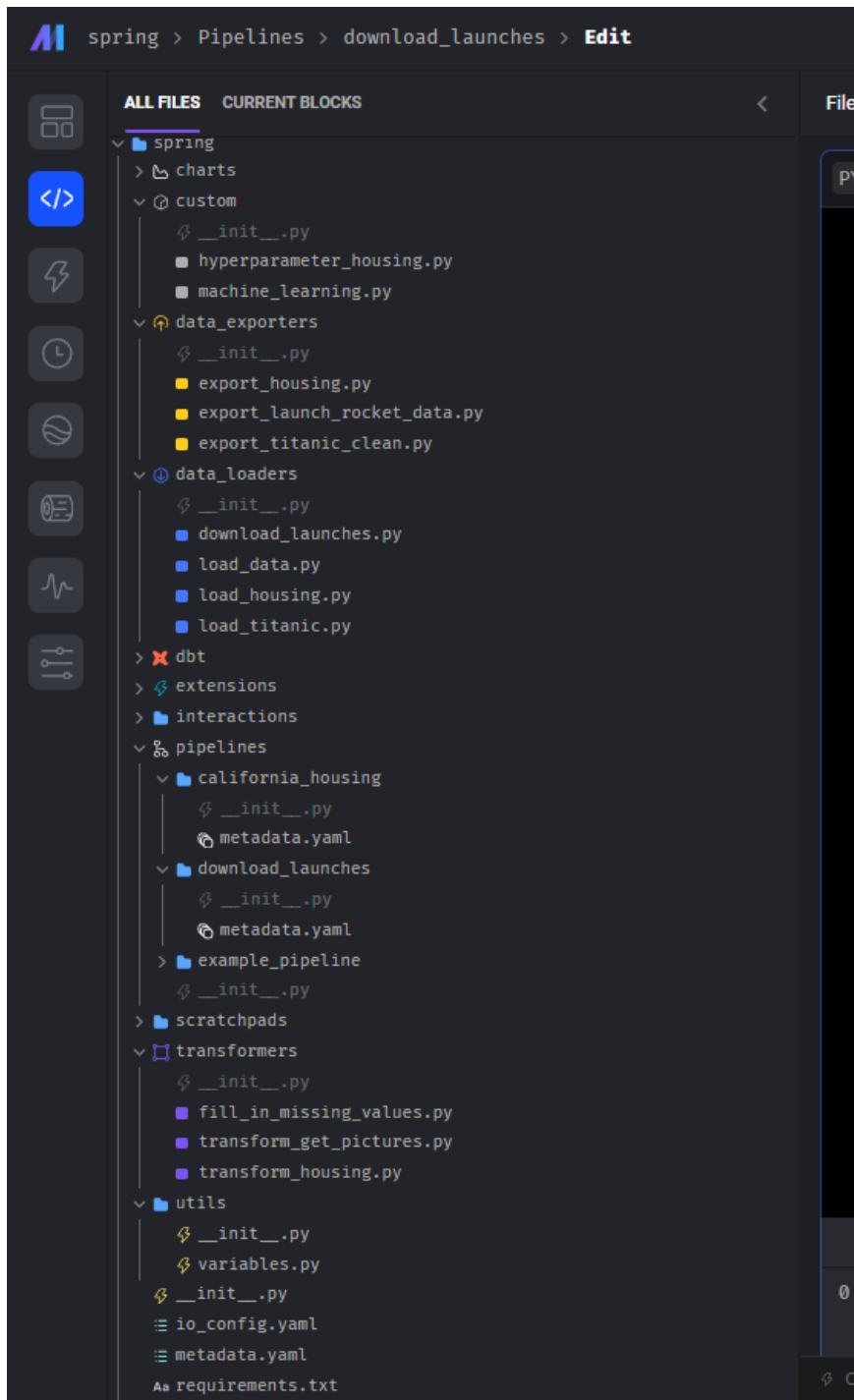
    if images_count > 0:
        print(f"There are now {images_count} images.")
    else :
        print("No images downloaded")
```



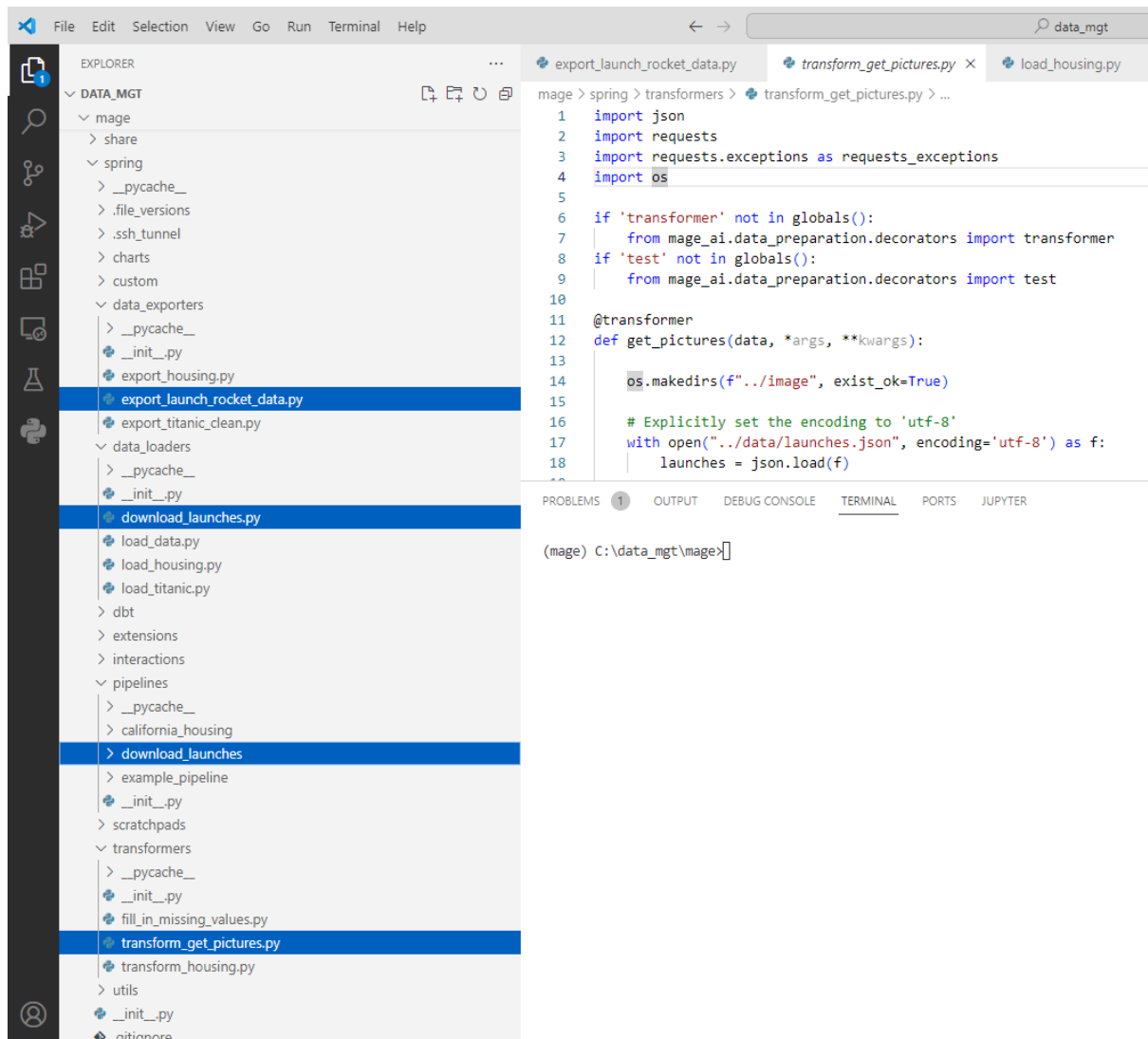
4.Review

왼쪽 상단의 메뉴 spring > Pipeline을 클릭하면





VS code 에서 확인 (여기서 *.py 파일 편집이 가능)



현재 폴더는 (mage) C:\data_mgt\mage> → mage

'../image', '../data' 상대적 폴더 위치에서 디렉토리를 만들었기 때문에

`os.makedirs("../data", exist_ok=True)` # mage folder 아래로 data folder 생성

5.Restart

- Mage WEB ui close
- Vs code 에서 “ctrl + c”로 stop

```
Aborted.  
Process Process-2:  
Traceback (most recent call last):  
  File "C:\Users\조상구\AppData\Local\Programs\Python\Python38\lib\multiprocessing\process.py", line 315, in _bootstrap  
    self.run()  
  File "C:\Users\조상구\AppData\Local\Programs\Python\Python38\lib\multiprocessing\process.py", line 108, in run  
    self._target(*self._args, **self._kwargs)  
  File "C:\data_mgt\mage\lib\site-packages\mage_ai\orchestration\db\process.py", line 15, in start_session_and_run  
    results = target(*args)  
  File "C:\data_mgt\mage\lib\site-packages\mage_ai\server\scheduler_manager.py", line 50, in run_scheduler  
    LoopTimeTrigger().start()  
  File "C:\data_mgt\mage\lib\site-packages\mage_ai\orchestration\triggers\loop_time_trigger.py", line 18, in start  
    time.sleep(sleep_time)  
KeyboardInterrupt  
WARNING:traitlets:Could not destroy zmq context for <jupyter_client.blocking.client.BlockingKernelClient object at 0x000001888065ACD0>  
[IPKernelApp] WARNING | Parent appears to have exited, shutting down.  
C:\arrow\cpp\src\arrow\filesystem\s3fs.cc:2904: arrow::fs::FinalizeS3 was not called even though S3 was initialized. This could lead to a segmentation fault at exit
```

- (mage) C:\data_mgt\mage>]

가상환경에서 Spring 프로젝트가 있는 상위 폴더에서 mage start

- (mage) C:\data_mgt\mage>
- (mage) C:\data_mgt\mage>mage start spring
- No
- (mage) C:\data_mgt\>mage start spring