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1.테이블 생성

youtube

```
create table youtube(
        channel_name varchar(20)
not null,
        creation_date date not null,
        sub_num bigint,
        total_view bigint,
        video_num bigint,
        primary key(channel_name)
    );
```

video

```
create table video(
        channel_name char(20) not null,
        title varchar(20),
        views bigint,
        likes bigint,
        postdate date,
        primary key(channel_name)
        );
```

```python
import pymysql
db = pymysql.connect(host='localhost', port=3306, user='root', passwd='1234', db='mywork', charset='utf8')
ecommerce = db.cursor()
sql = """
    create youtube(
        channel_name varchar(20) not null,
        creation_date date not null,
        sub_num int,
        total_view int,
        video_num int,
        primary key(channel_name)
    );
"""

ecommerce.execute(sql)
```

2. scrapping - youtube 테이블

```python
import selenium
import time
from selenium import webdriver
from selenium.webdriver.common.by import By
from selenium.webdriver.support.ui import WebDriverWait
from selenium.webdriver.support import expected_conditions as EC
driver = webdriver.Chrome()
driver.implicitly_wait(10)
driver.get('https://www.youtube.com/@HYBELABELS/about')
sub_num=driver.find_element_by_xpath('//*[@id="subscriber-count"]').text
channel_name=driver.find_element_by_xpath('//*[@id="text"]').text
creation_date=driver.find_element_by_xpath('//*[@id="right-column"]/yt-formatted-string[2]/span[2]').text
total_view=driver.find_element_by_xpath('//*[@id="right-column"]/yt-formatted-string[3]').text
explanation=driver.find_element_by_xpath('/html/body/ytd-app/div[1]/ytd-page-manager/ytd-browse/ytd-two-col
time.sleep(2)
driver.find_element_by_xpath('//*[@id="tabsContent"]/tp-yt-paper-tab[2]/div').click()
```

SMTOWN ✓
@SMTOWN
구독자 3140만명

	channel_name	creation_date	sub_num	total_view	video_num
▶	smtown	2006-03-19	31400000	26415587293	NULL

2. scrapping - video 테이블

```python
        break
driver.find_element_by_xpath('/html/body/ytd-app/div[1]/ytd-page-manager/ytd-browse/yt
driver.find_element_by_xpath('//*[@id="expand"]').click()
title = driver.find_element_by_xpath('//*[@id="title"]/h1/yt-formatted-string').text
views = driver.find_element_by_xpath('//*[@id="info"]/span[1]').text
postdate = driver.find_element_by_xpath('//*[@id="info"]/span[3]').text
likes = driver.find_element_by_xpath('//*[@id="segmented-like-button"]/ytd-toggle-but

views = views[4:-1].replace(',', '')
likes = likes.replace('만', '0000')
likes = likes.replace('천', '000')
likes = likes.replace('.', '')
if "최초" in postdate:
    postdate = postdate[7:]
postdate = postdate[:-1].replace('. ', '-')
views = int(views)
likes = int(likes)
sql = """
        insert into video(channel_name, title, views, likes, postdate)
        values ("{0}", "{1}", {2}, {3}, "{4}");
        """.format(channel_name, title, views, likes, postdate)
you.execute(sql)
db.commit()
driver.back()
time.sleep(1)
except Exception as e:
    print(e)
    continue
```

각 기획사 별 데이터 다운

Result Grid		Filter Rows:		Export:	Wrap Cell Content:	Fetch rows:

channel_name	title	views	likes	postdate
smtown	YESUNG 예성 'Small Things' MV	450841	52000	2023-01-25
smtown	[STATION] 웬디 (WENDY) X 멜로망스 (MeloMan...	86576	9700	2023-01-25
smtown	'윈 (Time After Time)' Recording Behind the Sce...	383271	34000	2023-01-24
smtown	YESUNG 예성 'Small Things' MV Teaser #2	60084	9500	2023-01-24
smtown	[SMROOKIES] Lunar New Year Cooking Contest	119070	12000	2023-01-23
smtown	'2022 Winter SMTOWN : SMCU PALACE' Jacket ...	131510	13000	2023-01-20
smtown	YESUNG 예성 'Small Things' MV Teaser #1	130731	17000	2023-01-20

video_test 1 ×

Output

질문1. 조회수 대비 좋아요 top 10

```sql
select *,round((likes/views)*100,2) "조회수대비 좋아요 비율"
from video_result
order by (likes/views)*100 desc
limit 10;
```

	channel_name	title	views	likes	postdate	조회수대비 좋아요 비율
▶	HYBE LABELS	ENHYPEN (엔하이픈) DIMENSION : ANSWER Concept Film (YET ver.) - 제이 (JAY)	197186	68000.0000	2021-12-31 ...	34.49
	HYBE LABELS	ENHYPEN (엔하이픈) DIMENSION : ANSWER Concept Film (YET ver.) - 선우 (SUNOO)	237657	77000.0000	2021-12-31 ...	32.40
	HYBE LABELS	ENHYPEN (엔하이픈) DIMENSION : ANSWER Concept Film (NO ver.) - 희승 (HEESEUNG)	311443	98000.0000	2021-12-28 ...	31.47
	HYBE LABELS	ENHYPEN (엔하이픈) DIMENSION : ANSWER Concept Film (YET ver.) - 성훈 (SUNGHOON)	219430	69000.0000	2021-12-31 ...	31.45
	HYBE LABELS	ENHYPEN (엔하이픈) DIMENSION : ANSWER Concept Film (YET ver.) - 정원 (JUNGWON)	273566	82000.0000	2021-12-31 ...	29.97
	HYBE LABELS	ENHYPEN (엔하이픈) DIMENSION : ANSWER Concept Film (NO ver.) - 성훈 (SUNGHOON)	319346	95000.0000	2021-12-28 ...	29.75
	HYBE LABELS	ENHYPEN (엔하이픈) DIMENSION : ANSWER Concept Film (YET ver.) - 희승 (HEESEUNG)	239563	71000.0000	2021-12-31 ...	29.64
	smtown	WayV-KUN&XIAOJUN '这时烟火 (Back To You)' MV Teaser	517170	150000.0000	2021-06-15 ...	29.00
	smtown	CHEN 첸 '안녕 (Hello)' MV Teaser	1199467	340000.0000	2020-10-13 ...	28.35
	smtown	SUHO 수호 'Hurdle' MV Teaser	327444	91000.0000	2022-04-06 ...	27.79

질문2. 4대기획사 5년간 동영상 갯수 탑 4

```sql
select channel_name, count(*)
from video_result
where year(postdate) >= 2018
group by channel_name
order by 2 desc;
```

	channel_name	count(*)
▶	HYBE LABELS	642
	smtown	429
	JYP Entertainment	279
	YG ENTERTAINMENT	35

질문3. 2022년에 나온 인기 동영상 top 10

```sql
select *
from video_result
where year(postdate)=2022
order by views  desc
limit 10;
```

channel_name	title	views	likes	postdate
HYBE LABELS	BTS (방탄소년단) 'Yet To Come (The Most Beautiful Moment)' Official MV	178148994	1070000.0000	2022-06-10 ...
HYBE LABELS	LE SSERAFIM FEARLESS OFFICIAL M/V	142193357	224000.0000	2022-05-02 ...
HYBE LABELS	LE SSERAFIM (르세라핌) 'ANTIFRAGILE' OFFICIAL M/V	120527728	237000.0000	2022-10-16 ...
smtown	aespa 에스파 'Girls' MV	118918715	1950000.0000	2022-07-08 ...
JYP Entertainment	ITZY(있지) "Cheshire" M/V @ITZY	109124832	139000.0000	2022-11-30 ...
HYBE LABELS	SEVENTEEN (세븐틴) 'HOT' Official MV	105369049	198000.0000	2022-05-27 ...
JYP Entertainment	NMIXX "O.O" M/V	96960114	185000.0000	2022-02-22 ...
smtown	NCT 127 엔시티 127 '질주 (2 Baddies)' MV	90111158	1200000.0000	2022-09-15 ...
smtown	NCT DREAM 엔시티 드림 '버퍼링 (Glitch Mode)' MV	81163392	1850000.0000	2022-03-28 ...
smtown	TAEYONG, JENO, HENDERY, YANGYANG, GISELLE 'ZOO' Stage Video	77667700	1930000.0000	2022-01-14 ...