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Github Repository: <https://github.com/14848-Spring-2025/hw-4-apache-kafka-TonyHou0925>

Video Link : <https://drive.google.com/drive/folders/1kdYE59UqXoZT-7ExV-FO-Cp3x36y8dud?usp=sharing>

## Q1.2

Timestamp	Offset	Partition	Key	Value
1741664815372	6	0	"e-ORhEE9VVg"	{"video_id":"e-ORhEE9VVg","title":"Taylor Swift - Blank Space","likes":42}
1741664814957	5	0	"ekr2nlex040"	{"video_id":"ekr2nlex040","title":"ROSÉ & Bruno Mars - APT. (Official Music Video)","likes":95}
1741664814729	4	0	"tvTRZJ-4Eyl"	{"video_id":"tvTRZJ-4Eyl","title":"Kendrick Lamar - HUMBLE.","likes":81}
1741664814397	3	0	"JGwWNGJdvx8"	{"video_id":"JGwWNGJdvx8","title":"Ed Sheeran - Shape of You (Official Music Video)","likes":84}
1741664814017	2	0	"YJfHuATJYsQ"	{"video_id":"YJfHuATJYsQ","title":"周杰倫 Jay Chou 【飄浮 Step Aside】 -Official Music Video","likes":180}

## Q1.3

```
(14848-cloud) (14848) kuan-minghou@kuan-mings-air hwe $ python consumer.py
Consumer is listening for messages...
Received data: {'video_id': 'YJfHuATJYsQ', 'title': '周杰倫 Jay Chou 【飄浮 Step Aside】 -Official Music Video', 'likes': 180}
Most popular video so far: 周杰倫 Jay Chou 【飄浮 Step Aside】 -Official Music Video with 180 likes
Received data: {'video_id': 'JGwWNGJdvx8', 'title': 'Ed Sheeran - Shape of You (Official Music Video)', 'likes': 84}
Most popular video so far: 周杰倫 Jay Chou 【飄浮 Step Aside】 -Official Music Video with 180 likes
Received data: {'video_id': 'tvTRZJ-4Eyl', 'title': 'Kendrick Lamar - HUMBLE.', 'likes': 81}
Most popular video so far: 周杰倫 Jay Chou 【飄浮 Step Aside】 -Official Music Video with 180 likes
Received data: {'video_id': 'ekr2nlex040', 'title': 'ROSÉ & Bruno Mars - APT. (Official Music Video)', 'likes': 95}
Most popular video so far: 周杰倫 Jay Chou 【飄浮 Step Aside】 -Official Music Video with 180 likes
Received data: {'video_id': 'e-ORhEE9VVg', 'title': 'Taylor Swift - Blank Space', 'likes': 42}
Most popular video so far: 周杰倫 Jay Chou 【飄浮 Step Aside】 -Official Music Video with 180 likes
[]

Last login: Mon Mar 18 16:48:28 on tty80
(base) kuan-minghou@kuan-mings-air ~ % source 14848-cloud/bin/activate
source: no such file or directory: 14848-cloud/bin/activate
(base) kuan-minghou@kuan-mings-air ~ % cd /Users/kuan-minghou/Documents/CMU_Courses/2S_Spring_Semester/14848 - Cloud Infrastructure
(base) kuan-minghou@kuan-mings-air hwe % source 14848-cloud/bin/activate
(14848-cloud) (base) kuan-minghou@kuan-mings-air hwe $ python producer.py
Enter up to 5 YouTube video IDs (comma-separated): ekr2nlex040,qz1QF8AfnDQ
Sent: {'video_id': 'ekr2nlex040', 'title': 'ROSÉ & Bruno Mars - APT. (Official Music Video)', 'likes': 94}
Sent: {'video_id': 'qz1QF8AfnDQ', 'title': '【TAN】二人版 / Vaundy ギターカバ〜【ギター弾こう！】', 'likes': 18}
Message delivered to youtube-comments (0)
Data sent successfully!
(14848-cloud) (base) kuan-minghou@kuan-mings-air hwe $ python producer.py
Enter up to 5 YouTube video IDs (comma-separated): YJfHuATJYsQ,JGwWNGJdvx8,tvTRZJ-4Eyl,ekr2nlex040,e-ORhEE9VVg
Sent: {'video_id': 'YJfHuATJYsQ', 'title': '周杰倫 Jay Chou 【飄浮 Step Aside】 -Official Music Video', 'likes': 180}
Sent: {'video_id': 'JGwWNGJdvx8', 'title': 'Ed Sheeran - Shape of You (Official Music Video)', 'likes': 84}
Sent: {'video_id': 'tvTRZJ-4Eyl', 'title': 'Kendrick Lamar - HUMBLE.', 'likes': 81}
Sent: {'video_id': 'ekr2nlex040', 'title': 'ROSÉ & Bruno Mars - APT. (Official Music Video)', 'likes': 95}
Sent: {'video_id': 'e-ORhEE9VVg', 'title': 'Taylor Swift - Blank Space', 'likes': 42}
Message delivered to youtube-comments (0)
Message delivered to youtube-comments (0)
Message delivered to youtube-comments (0)
Message delivered to youtube-comments (0)
Data sent successfully!
(14848-cloud) (base) kuan-minghou@kuan-mings-air hwe $
```

## Q2.2 – queue 1 with all comments

**queue-1**

Configuration Messages Schema

Production Consumption Total messages: 1,300

Filter by timestamp, offset, key or value All partitions Latest Max 50

50 messages shown Auto-refresh on

Timestamp	Offset	Partition	Key	Value
1741731929796	1288	1	"JGwWNGJdv8"	{"video_id":"JGwWNGJdv8","video_title":"Ed Sh
1741731929796	1289	1	"JGwWNGJdv8"	{"video_id":"JGwWNGJdv8","video_title":"Ed Sh
1741731929796	1290	1	"JGwWNGJdv8"	{"video_id":"JGwWNGJdv8","video_title":"Ed Sh
1741731929796	1291	1	"JGwWNGJdv8"	{"video_id":"JGwWNGJdv8","video_title":"Ed Sh
1741731929796	1292	1	"JGwWNGJdv8"	{"video_id":"JGwWNGJdv8","video_title":"Ed Sh
1741731929796	1293	1	"JGwWNGJdv8"	{"video_id":"JGwWNGJdv8","video_title":"Ed Sh

Message details

Timestamp: 3/11/2025, 6:25:28 PM Offset: 1291 Partition: 1

Key Value Headers

```

1 {
2   "video_id": "JGwWNGJdv8",
3   "video_title": "Ed Sheeran - Shape
4   of You (Official Music Video)",
5   "author": "@vazkava44",
6   "comment": "hahaha",
7   "likes": 0
8 }

```

## Q2.2 – queue 2 with only liked comments

**queue-2**

Configuration Messages Schema

Production Consumption Total messages: 758

Filter by timestamp, offset, key or value All partitions Latest Max 50

40 messages shown Auto-refresh on

Timestamp	Offset	Partition	Key	Value
1741731915356	483	0	"	{"video_id":"e-ORHEE9VVg","video_title":"Taylor
1741731915356	484	0	"	{"video_id":"e-ORHEE9VVg","video_title":"Taylor
1741731915355	480	0	"	{"video_id":"e-ORHEE9VVg","video_title":"Taylor
1741731915355	481	0	"	{"video_id":"e-ORHEE9VVg","video_title":"Taylor
1741731915355	482	0	"	{"video_id":"e-ORHEE9VVg","video_title":"Taylor
1741731915354	477	0	"	{"video_id":"e-ORHEE9VVg","video_title":"Taylor

Message details

Timestamp: 3/11/2025, 6:25:15 PM Offset: 483 Partition: 0

Key Value Headers

```

1 {
2   "video_id": "e-ORHEE9VVg",
3   "video_title": "Taylor Swift -
4   Blank Space",
5   "author": "@opasurya2015",
6   "comment": "\n\n~\n~ **Taylor
7   Swift",
8   "likes": 2
9 }

```

## Q2.3 – consumer output

```

hwd4 — Python q2-consumer.py — 80x24
ROSE & Bruno Mars — APT. (Official Music Video): 91 likes
Ed Sheeran — Shape of You (Official Music Video): 96 likes

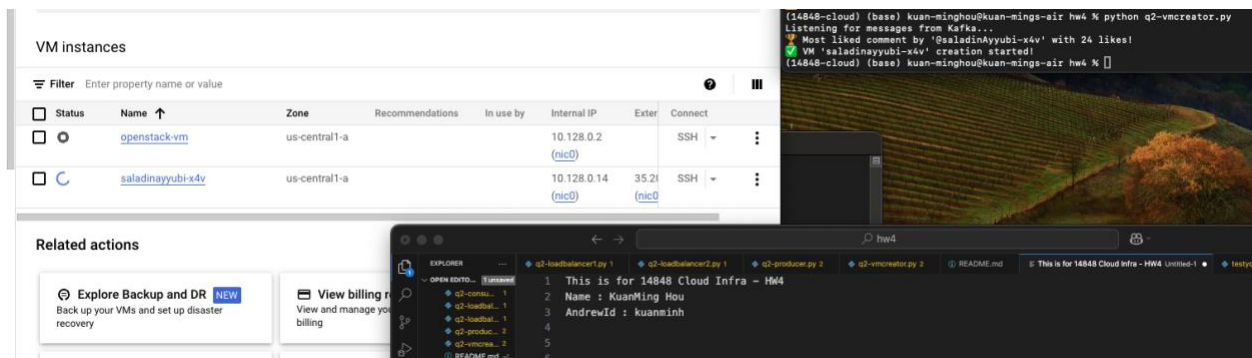
Aggregated Likes Per Video:
Taylor Swift — Blank Space: 174 likes
Kendrick Lamar — HUMBLE.: 152 likes
周杰倫 Jay Chou 【離遠 Step Aside】-Official Music Video: 360 likes
ROSE & Bruno Mars — APT. (Official Music Video): 91 likes
Ed Sheeran — Shape of You (Official Music Video): 97 likes

Aggregated Likes Per Video:
Taylor Swift — Blank Space: 174 likes
Kendrick Lamar — HUMBLE.: 152 likes
周杰倫 Jay Chou 【離遠 Step Aside】-Official Music Video: 360 likes
ROSE & Bruno Mars — APT. (Official Music Video): 91 likes
Ed Sheeran — Shape of You (Official Music Video): 97 likes

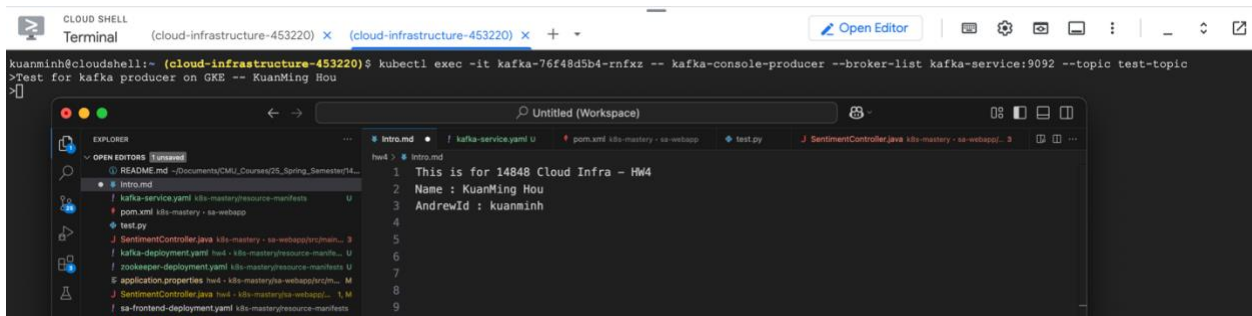
Aggregated Likes Per Video:
Taylor Swift — Blank Space: 174 likes
Kendrick Lamar — HUMBLE.: 152 likes
周杰倫 Jay Chou 【離遠 Step Aside】-Official Music Video: 360 likes
ROSE & Bruno Mars — APT. (Official Music Video): 91 likes
Ed Sheeran — Shape of You (Official Music Video): 97 likes

```

## Q2.4 – VM output



## Q3.1 – Kafka Producer on GKE



## Q3.1 – Kafka Consumer on GKE

