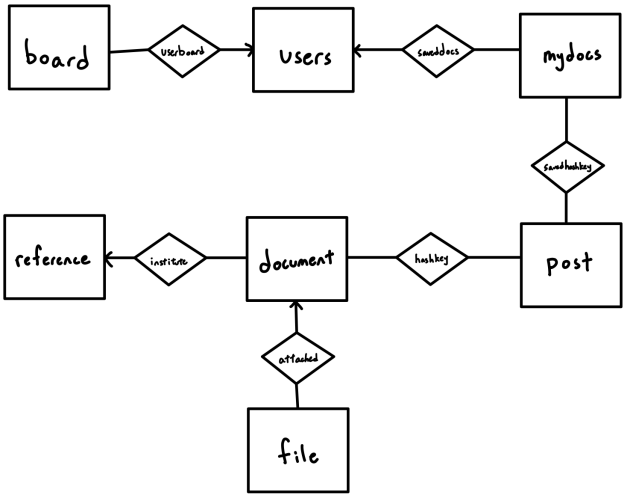
Report

21700303 Junhyung Park
21700352 Mideum Seo
21701062 Changhee Han

1. How to attack this problem?
    a. First, we divided the columns into six categories and designated a table. And we normalized each table, set the primary key and foreign key, organized the tables, named each table, and divided the space for the vast amount of data. And we declared the data type for each table, received the data from Kubicdb, and filled in each data. And after drawing the ER diagram considering the relationship by table, we showed the view we wanted to get through query.
2. ER Diagram
    a.



3. List of All Tables

board	
docId (PK)	TINYINT
title	VARCHAR(50)
content	VARCHAR(90)
userId (FK)	VARCHAR(24)
isMainAnnounce	TINYINT(1)
regDate	BIGINT
modDate	BIGINT
category	VARCHAR(12)

document	
hash_key (PK)	VARCHAR(255)
doc_title	VARCHAR(255)
abstract	TEXT
top_category	VARCHAR(255)

collection_time	VARCHAR(50)
file_id (FK)	VARCHAR(255)

file	
file_id	VARCHAR(255)
file_name	VARCHAR(255)
file_download_url	TEXT
file_content	TEXT

mydocs	
savedUser	VARCHAR (255)
keyword	VARCHAR (255)
savedDocDate	VARCHAR (255)
saveDocHashKey	VARCHAR (255)

post	
hash_key (PK)	VARCHAR (255)
doc_type	VARCHAR (255)
post_date	VARCHAR (255)
post_writer	VARCHAR (255)
post_title	VARCHAR (255)
post_title_first_char	CHAR (1)
post_body	TEXT
topic	VARCHAR (255)

reference	
published_institution	VARCHAR (255)
published_institution_url	VARCHAR (255)
original_url	TEXT
hash_key (FK)	VARCHAR (255)

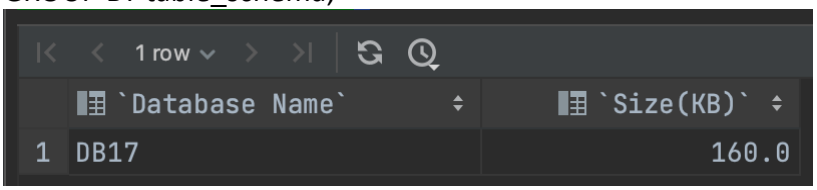
users	
userId (PK)	VARCHAR(24)
name	VARCHAR(30)
email	VARCHAR(30)
institute	VARCHAR(30)
occupation	VARCHAR(30)
registeredDate	BIGINT
modifiedDate	BIGINT

isActive	TINYINT(1)
isApiUser	TINYINT(1)
isAdmin	TINYINT(1)

4. Requested Views

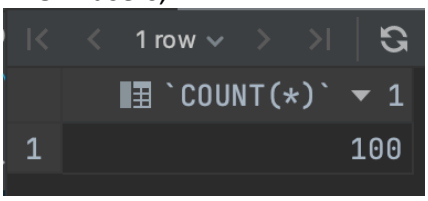
View 1

```
SELECT table_schema AS 'Database Name',
ROUND(SUM(data_length+index_length)/1024,1) AS 'Size(KB)'
FROM information_schema.TABLES
WHERE table_schema='DB17'
GROUP BY table_schema;
```



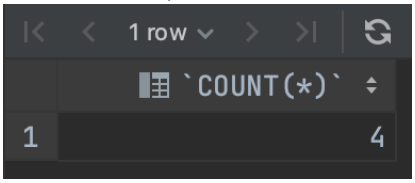
View 2

```
SELECT COUNT(*)
FROM users;
```



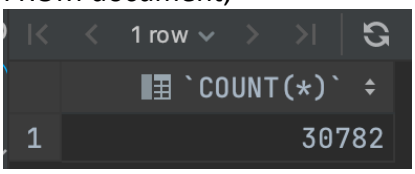
View 3

```
SELECT COUNT(*)
FROM board;
```



View 4

```
SELECT COUNT(*)
FROM document;
```



View 5

```
SELECT published_institution, COUNT(original_url) AS CNT
FROM reference
GROUP BY published_institution
ORDER BY CNT ASC;
```

53 rows

	published_institution	CNT
1	한민족통일여성협의회	1
2	평화통일연대	5
3	KYC한국청년연합	8
4	남북사회통합연구원	8
5	고려대 아세아문제연구원	9

View 6

```
SELECT keyword, COUNT(keyword) AS CNT
FROM mydocs
WHERE keyword IS NOT NULL AND LEFT(savedDocDate, 4) LIKE '2019'
GROUP BY keyword
ORDER BY CNT DESC;
```

10 rows

	keyword	CNT
1	교육	194
2	정책	194
3	토론	190
4	연구	188
5	발표	187

View 7

```
SELECT post_writer, COUNT(hash_key) AS CNT
FROM post RIGHT JOIN mydocs ON post.hash_key=mydocs.savedDocHashKey
WHERE post_writer IS NOT NULL AND keyword LIKE '교육'
GROUP BY post_writer
ORDER BY cnt desc;
```

25 rows

	post_writer	cnt
1	재나이스피플	76
2	국가안보전략연구원	53
3	서보혁	52
4	김병권	48
5	세종연구소	46

View 8

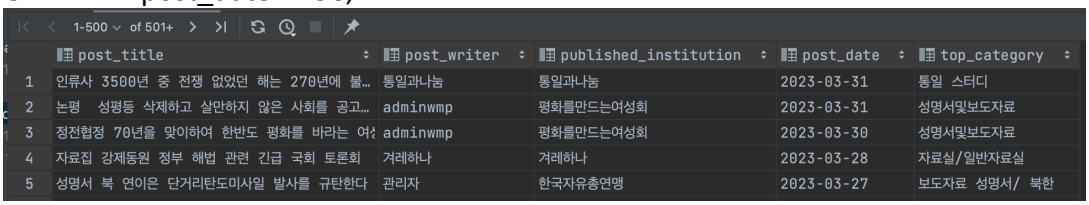
```
SELECT institute, MAX(occupation) AS max_status, COUNT(occupation) AS
max_status_count
FROM users
GROUP BY institute
ORDER BY max_status_count DESC
```

15 rows

	institute	max_status	max_status_count
1	한동대학교	연구원	70
2	서울대학교	박사	12
3	연세대학교	대학생	4
4	한동대	대학생	3
5	고려대학교	대학생	1

View 9

```
SELECT post_title, post_writer, published_institution, post_date, top_category
FROM post JOIN document USING (hash_key) JOIN reference USING(hash_key)
ORDER BY post_date DESC;
```

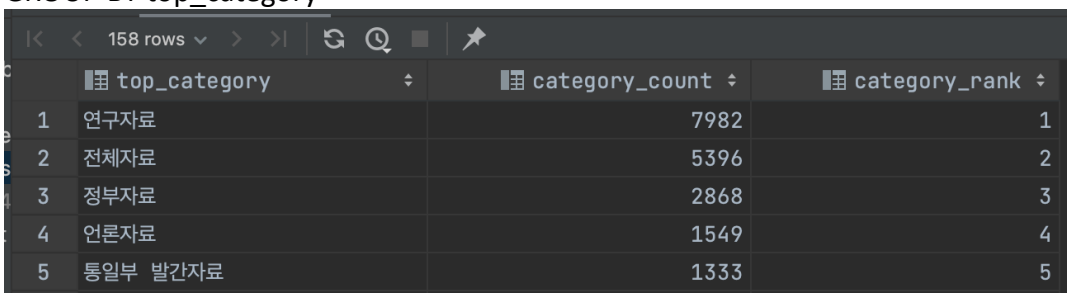


1-500 of 501+

	post_title	post_writer	published_institution	post_date	top_category
1	인류사 3500년 중 전쟁 없었던 해는 270년에 불…	통일과나눔	통일과나눔	2023-03-31	통일 스터디
2	논평 성평등 삭제하고 살만하지 않은 사회를 공고…	adminwmp	평화를만드는여성회	2023-03-31	성명서및보도자료
3	정전협정 70년을 맞이하여 한반도 평화를 바라는 여…	adminwmp	평화를만드는여성회	2023-03-30	성명서및보도자료
4	자료집 강제동원 정부 해법 관련 긴급 국회 토론회	겨레하나	겨레하나	2023-03-28	자료실/일반자료실
5	성명서 북 연이은 단거리탄도미사일 발사를 규탄한다	관리자	한국자유총연맹	2023-03-27	보도자료 성명서/ 북한

View 10

```
SELECT top_category, COUNT(hash_key) AS category_count, RANK() OVER
(ORDER BY COUNT(hash_key) DESC) AS category_rank
FROM document
GROUP BY top_category
```



158 rows

	top_category	category_count	category_rank
1	연구자료	7982	1
2	전체자료	5396	2
3	정부자료	2868	3
4	언론자료	1549	4
5	통일부 발간자료	1333	5

5. Summary
    a. Database
        i. Size: 160.0 KB
    b. Tables
        i. Board Size: 16.0 KB
        ii. Document Size: 16.0 KB
        iii. File Size: 16.0 KB
        iv. Mydocs Size: 16.0 KB
        v. Post Size: 16.0 KB
        vi. Reference Size: 16.0 KB
        vii. Users Size: 16.0 KB