System Requirements

- Ubuntu (Ubuntu 18.04 recommended)

Install Node & Docker

1. Install `node`

```
sudo apt install npm
sudo npm i n -g
sudo n lts
```

2. Install `docker` & `docker-compose`

```
sudo apt docker.io docker-compose
```

Build Demo

First of all, you should change current path to demo project.

```
cd /path/to/demo/project
```

1. Build docker images

```
sudo docker-compose build
```

2. Install demo project dependencies

```
npm i
```

3. Build frontend

```
npm run build
```

Initialize DBMS Clusters

1. Start dbms docker containers

```
sudo docker-compose up -d db1 db2 db3 db4 db5 db11 db12 db13 db14 db15
```

`db1 db2 db3 db4 db5` are first type DBMS, and `db11 db12 db13 db14 db15` are second type DBMS.

2. Initialize dbms

```
sudo docker-compose exec db1 mongo --eval "rs.initiate()"
sudo docker-compose exec db11 mongo --eval "rs.initiate()"
```

Start demo website

Now we can start our website using following command:

```
sudo docker-compose up -d web
```

And then we can open `http://localhost:8800/` in our browser, we can see there are welcome page, articles page, users page, popular page and admin page, but erveything is empty because we have not imported data.

If you are the first time open whe website, it's recommended that add 2 DBMS in admin page (`http://localhost:8800/admin`) using following instructions:

1. Open admin page (`http://localhost:8800/admin`) in browser
2. Next you can see the `Add DBMS` panel in admin page
3. Set `DB HOST` as `db1` (the text input), and set `DB TYPE` as `Type 1` (the selection input), and click `Add` button
4. Set `DB HOST` as `db11` (the text input), and set `DB TYPE` as `Type 2` (the selection input), and click `Add` button

If you see the following admin page, the your setting is all right.

Build & Import data

1. Generate data

```
cd 3-sized-db-generation
python3 genTable_mongoDB10G.py
```

2. Load data to dbms
   Make sure you have add 2 DBMS in the admin page before importing data.

```
sudo docker-compose run --rm web node src/load.js
```

3. Generate popular rank

```
sudo docker-compose run --rm web node src/buildrank.js
```

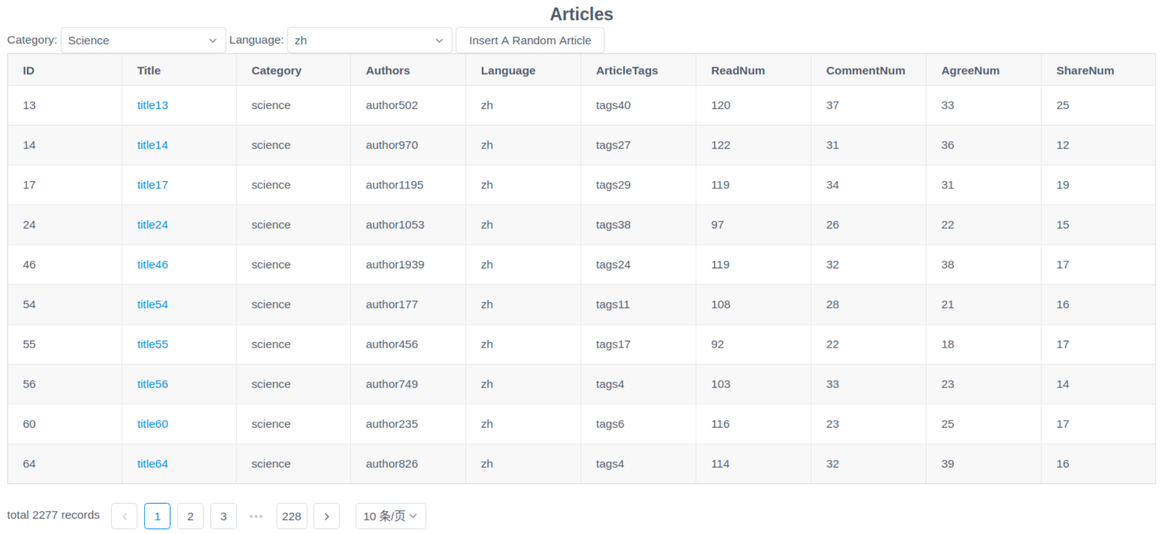
[Optional]Add More DBMS

Open admin page `http://localhost:8800/admin`, use the `Add DBMS` panel to add more dbms, but there is something you need to know:

3. `db11, db12, db13, db14, db15` can only be added as `Type 2` DBMS

Demo Website

If you have done all the things above, then you will be able to use all the functions. Here are some images about our website.



ID	Title	Category	Authors	Language	ArticleTags	ReadNum	CommentNum	AgreeNum	ShareNum
13	title13	science	author502	zh	tags40	120	37	33	25
14	title14	science	author970	zh	tags27	122	31	36	12
17	title17	science	author1195	zh	tags29	119	34	31	19
24	title24	science	author1053	zh	tags38	97	26	22	15
46	title46	science	author1939	zh	tags24	119	32	38	17
54	title54	science	author177	zh	tags11	108	28	21	16
55	title55	science	author456	zh	tags17	92	22	18	17
56	title56	science	author749	zh	tags4	103	33	23	14
60	title60	science	author235	zh	tags6	116	23	25	17
64	title64	science	author826	zh	tags4	114	32	39	16