Problem Description:
To design a simple UI to display the top 10 tweeter user in database and their latest tweet, username and the content of their latest tweet. The UI should also support the CRUD operations from admin (that is user).
The program will do some operation on MongoDB and Redisdatabase.

Functionalities:
The data was first imported to MongoDB and then I select part of the information from MongoDB and transport the selected part to Redis database.

The program supports the end user to create, read, update, and delete the top 10 users' latest tweet.

Data Structure:
1. Sorted set: I used the zset the save the top 10 user's user name and their tweet number. The user name is the value, and his/hers total tweet number is the score.

2. HASH: I used hash to save the detailed information of every tweet(user name, favorite count, created at, user screen name). I saved the tweet id in the key in the form of : tweet: 126y376493467

3. List: I used list to save user and their tweets. The name are like this: tweets:Alex. I used user name as the list name, and the tweet id in the list as the list item.

Logic:
Every operation will also update the information in the above three data structure. For example: If a new tweet is created by admin. An id will be created at the same time, and the user name is the key word.
1. The new tweet will be added to Redis hashes.
2. The users' tweet list will add the id to the end of the list.
3. And the score in the sorted set related to this user will increase by one.

UML

Tweet List

tweetlistID: NUM
tweetcontenid:NUM
userID:NUM

has >

units <

has>

has>

Text

tweet content

tweetcontent:text
tweetid:NUM
created_at: NUM
id: TEXT
id_str: NUM
user:TEXT
geo:TEXT
fav_count:NUM
retweet_count:NUM
contributors:NUM
favorited:Boolean
retweeted:Boolean
langid:NUM

Text

coordinates

coordinateid: NUM
coordinate:NUM

belong to:<

Text..*

user

userID: NUM
name: TEXT
screenname: TEXT
id_str: TEXT
location: TEXT
description: TEXT
url:URL
entitiesid:NUM
protected:boolean
followers_count:NUM
friendscount:NUM
listedcount:NUM
created:NUM
favcount:NUM
geoenabled:Boolean
verified:Boolean
isTranslator:Boolean

has>

entities

entitesId: NUM
descriptionid:num

has>

Text

description

descriptionid:NUM
urls:LIST

has>

language

lanid:NUM
lanType:TEXT