

# Twitter application

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## Requirements

Design Twitter application. User should be able to tweet. Timeline -> Home timeline, User timeline, Search timeline. User should also be able to see trending hashtags and topics

## Capacity and constraints (Scope)

1. Create tweet
2. View Timeline
3. View home timeline
4. Search timeline
5. View trending hashtag
6. View trending topics

## System API

API architecture : REST API ([Representational State Transfer](#))

The requirement and scope of the App is pointing to the use of REST API. The app has CRUD operations and REST API is the best API architecture that can be used for the purpose.

1. Tweet creation API : API to create tweet
2. Timeline data fetching: API to fetch timeline data according to conditions
3. Trending data fetching : This includes fetching of topics and hashtags

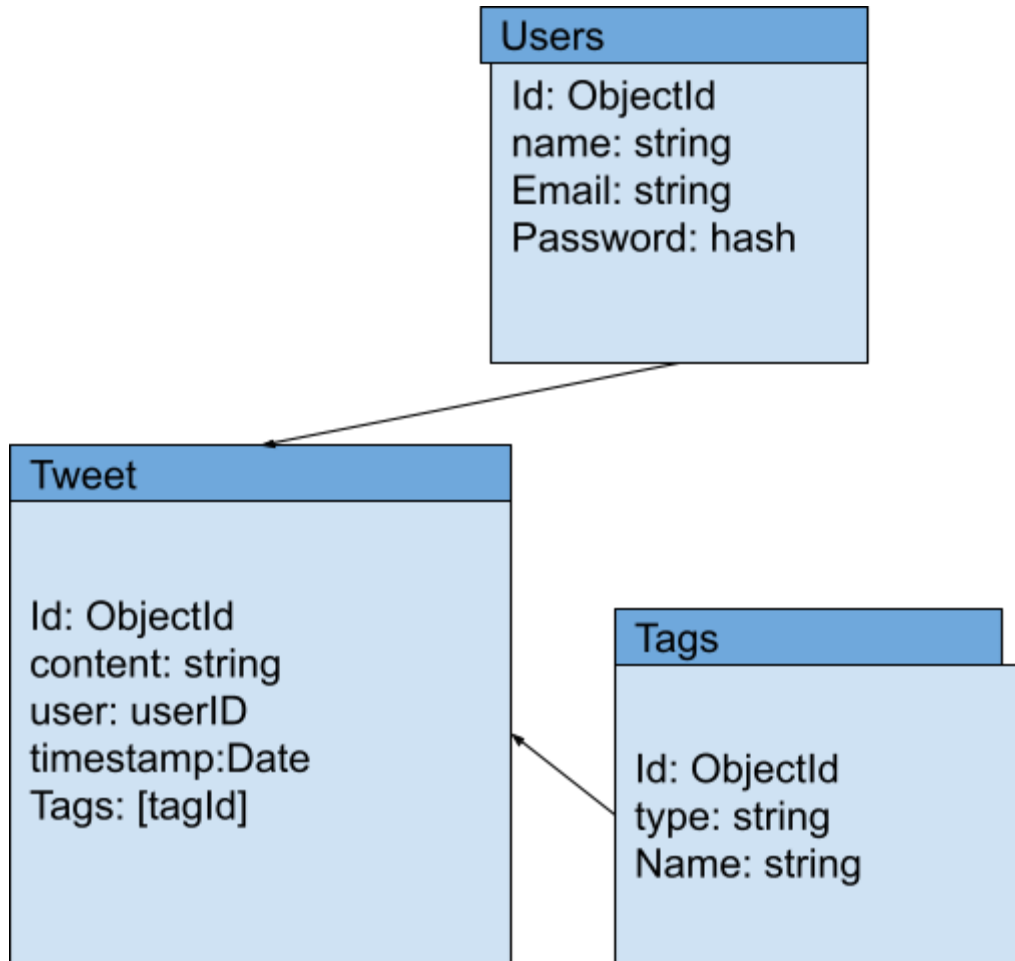
## Database Design

Database : mongo db (No-SQL)

Best database that can be used for this app is No-SQL based databases. There is no requirement of advanced analytics. Most of the use cases are basic CRUD operations. Mongo db is the best database that can be used for this case

Collections:

1. Tweets
2. Trends
3. Users

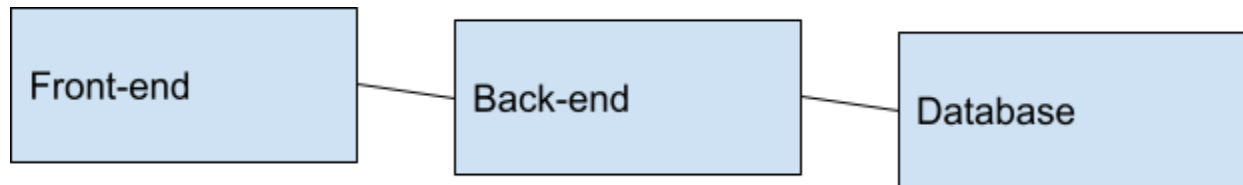


Basic Algorithm or Data structure

**Tweet creation:** Simple mechanism to insert new data to database

**Fetching data:** Fetching data like hashtags, tweet according to the conditions

High level block diagram



**Front-end(UI):** Using this area user interact with the website.Create tweet and fetch details

**Back-end(Application):** Back-end handles all the processing of data like collecting data from database updating data .

**Database :** store all tweets and user informations