### **Server Client Communication**

Let's talk a little about the client and the server are expected to interact and what that implies for our implementation

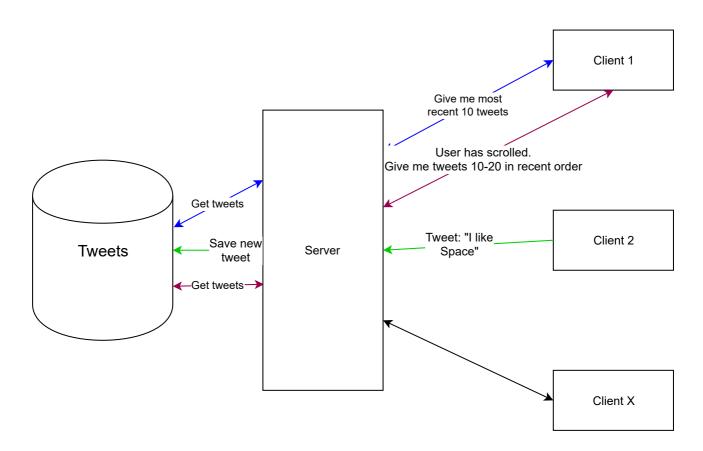
#### WE'LL COVER THE FOLLOWING ^

- The protocol
- Requirements

# The protocol #

The last time we saw the mock server was when we implemented the autocomplete search component, and it's going to play an important role in this component. Let's talk a little more about client-server communication in regards to how the client consumes APIs.

This is a simplified view of the main issue:



The order is:

- 1. Blue
- 2. Green
- 3. Red

An instance of our web app is running on a client, and it has requested to get the ten most recent tweets with "space" hashtag. The user reads them happily while scrolling. During this time, another client has posted a space-related tweet. When the user in client one scrolls to the point where more tweets should be loaded, how does it reconcile that more tweets have come in? If it does a simple lookup of "get 10th to 20th most recent tweets", it'll get duplicates that client one had received in its original request.

Client X is just there to represent that we have potentially many more clients posting and requesting.

This is a design decision you have to make. For your particular infinite list, would putting something out of order confuse the user?

## Requirements #

We're going to step away from how Twitter does things and impose our own set of requirements:

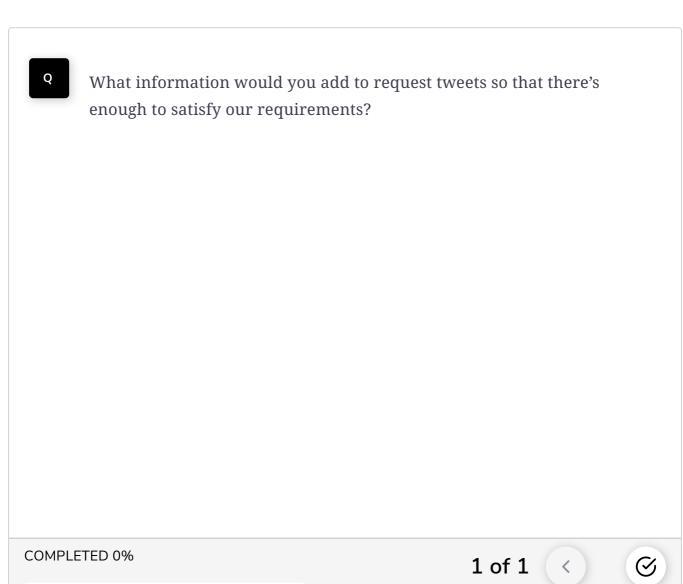
- Everything in our list must be ordered by the date and time at which the Tweet was posted.
- We do **not** want a client to receive duplicate tweets
- Tweets are loaded ten at a time

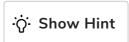
#### Things to keep in mind:

- If there are fewer tweets to serve than requested, the server gives a list of tweets available, if any
- We can keep **any** information about tweets that we want, e.g., the date created, unique ID, etc.

The server must use the information given by the client to figure out the right set of tweets to give it. As a baseline, let's say each client makes a request with the following:

```
{
  pageSize: 10,
  sortOrder: 'recent'
}
```





Let's move on to see how we can get our server to generate tweets.