

# The Task

**Programming Language:** This assignment should be implemented using Java

You've been asked to build a chat log server that will be used by other internal services. This server presents an HTTP interface with the following commands. In the examples below, don't worry about authentication and assume <user> is an alphanumeric string of less than 16 characters.

- **POST /chatlogs/<user>/**

Creates a new chatlog entry for the user <user>. The POST data can either be url encoded or JSON encoded. The data should contain the following fields.

- message - a String representing the message text
- timestamp - a Long representing the timestamp
- isSent - a Boolean/Integer representing if this message was sent by the user

or received by the user. The response from the message should be a unique messageId that we can refer to the message by.

- **GET /chatlogs/<user>**

Returns chatlogs for the given user. These should be returned in reverse timeorder (most recent messages first). Takes two optional parameters.

- limit - an Integer stating how many messages should return. Default to 10
- start - a key of the same type as messageId to determine where to start from. This is to help implement pagination. If not set, assume the most recent messages.

You may return the response encoded in any format you wish

- **DELETE /chatlogs/<user>**

Deletes all the chat logs for a given user.

- **DELETE /chatlogs/<user>/<msgid>**

Delete just the given chatlog for a given user. Returns an appropriate HTTP error response if the msgid is not found.

# The Rules

You will have 3 hours to finish. At the end of the three hours, if you're not finished, try to get your code to as close to a working state as possible. The requests are listed in order of priority, so try to get those working first. You may use any frameworks or libraries that you want as long as you explain what you've done.

# The Criteria

The most important thing we're looking for is completeness and correctness. If you can, add tests and ensure your code is testable. Think about security, stability and scalability. Given the constrained time, you will have to make tradeoffs in order to finish and there will be flaws and issues with your project. You should know what they are and be prepared to discuss solutions to them. In conclusion, the most important thing is to finish. Knowing your own abilities as a developer and being able to deliver in a timely manner is the biggest thing we're looking for.