Clone GMail in 3 Hours

Thanks for your interest in Wallaroo. As part of your interview process, please code a working toy clone of the GMail frontend, using React.js. You should spend no more than 3 hours on the exercise. *This is not enough time to clone all of GMail!* You'll have to timebox your work and triage. Exercise your product sensibility to decide which bits of functionality are essential and must be included, and which are inessential to the user experience and can be deferred. Please feel free to ask for clarification, feedback, and more information as needed.

Don't spend too long on aesthetics. Something clean and basic is fine. Imagine this draft frontend will later be styled by a professional graphic designer on your team.

Your solution should include all source code, documentation, and a working, self-contained webserver of some kind that delivers and runs your frontend code. Please document and test your codebase to the extent you feel necessary, including a note on why you chose to include or not include different areas of functionality.

You'll use a simulated backend REST API. Attached are JSON files representing mock return values from the various available GET endpoints. Please use them to populate your React app. For POST and DELETE endpoints, just log a message stating what you would write to the endpoint.

GET:
- /folders/ -- Returns a list of the user's folders (e.g. Inbox, Trash, Sent, Spam, Drafts, Work Emails, Mailing Lists)
- /folders/<folder-name> -- Returns the message metadata in the given folder.
- /messages/<message-id> -- Returns the contents of the given email.
- /contacts -- Returns the user's address book.
- /filters -- Returns the user's filter rules for incoming messages.
- /settings -- Returns account settings, such as signature and vacation auto-responder.

POST:
- /messages/new -- Send an email
- /messages/<message-id> - Update message metadata
    - Mark / unmark as important
    - Star / unstar
    - Apply / remove tags

- ○ Archive / unarchive a message
  - ○ Mark / unmark a message as spam
- ● /folders/<folder-name>/<message-id> -- Move message to given folder.
  - ○ Messages are normally deleted by moving them to the Trash folder.
- ● /folders/<foo> -- Creates a new folder if it doesn't exist yet.
- ● /contacts -- Create a new contact.
- ● /contacts/<id> -- Update contact information.

DELETE:
- ● /messages/<message-id> -- Delete a message forever, bypassing the Trash folder.
- ● /contacts/<id> -- Removes an entry from the user's address book.
- ● /folders/<foo> -- Deletes the given folder and all of its contents.
  - ○ The following system default folders are special and cannot be deleted: Inbox, Sent, Drafts, Spam, Trash.
  - ○ Attempting to delete one of them returns a 403 Forbidden code.

Deliver your exercise however convenient for you. Feel free to use a public cloud location, but please don't mention Wallaroo if you use that option.

Note that if you have any questions or concerns about any part of the exercise, please raise them.