

## React Frontend Developer Exercise: Email App

### Project Overview

**Goal:** Build a simple email app using React. The app should allow users to create, send, receive, and view emails.

### Features:

- **Email Creation:** Users can compose new emails, including subject, body, and attachments.
- **Recipient Selection:** Users can choose recipients from a contact list.
- **Email Sending:** Emails should be sent to a backend API for processing.
- **Email Receiving:** The app should fetch received emails from the backend API and display them in a list (by clicking on "Send/Receive" button).
- **Email Viewing:** Users can view the details of a specific email, including sender, recipient, subject, body, and attachments.

### Technical Requirements

- **Frontend:**
  - React
  - Material UI for styling
  - Redux for state management
  - Axios or Fetch API for making HTTP requests to the backend
- **Backend:**
  - Node.js or Python
  - A database (e.g. PostgreSQL)
  - Express or FastAPI for creating a RESTful API
  - ORM according to the selected backend language

**Note:**

If you want to avoid implementing a backend for email management, you can leverage Google's infrastructure.

**Prerequisites:**

1. **Google Cloud Platform (GCP) Account:** You'll need a GCP account to create a project and enable the Gmail API.
2. **OAuth 2.0 Client ID:** Generate a client ID and client secret in your GCP project to authenticate your application with Google's OAuth 2.0 system.
3. Install required dependencies: gapi-script.