

SMART INDIA HACKATHON 2022



AICTE

ALL INDIA COUNCIL FOR TECHNICAL EDUCATION

PS Code – DR703

Problem Statement Title - Bulk email & SMS service

Theme Name – Smart Education

TEAM NAME – DAZZLING DEVELOPERS

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TEAM INTRODUCTION – DAZZLING DEVELOPERS

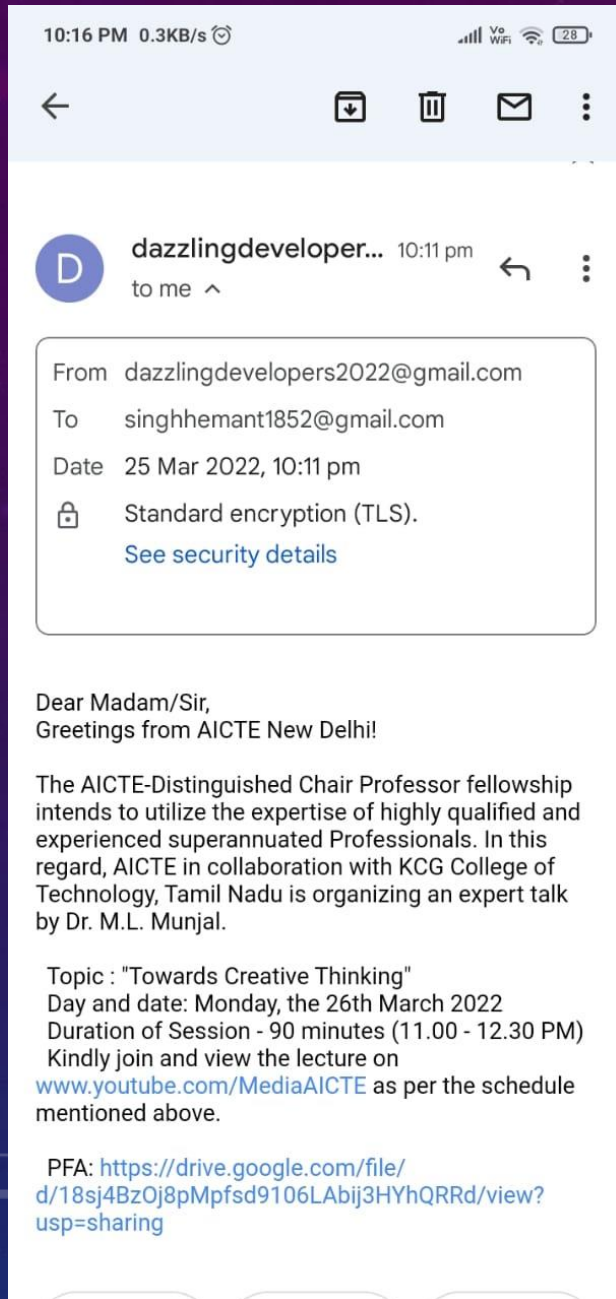
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|------------------------------------|--------------|------------|
| • Team Leader – Pratyush Bhatnagar | Branch – CSE | Year – III |
| • Team Member 1 – Hemant Singh | Branch – IT | Year – III |
| • Team Member 2 – Rishabh Kumar | Branch – IT | Year – III |
| • Team Member 3 – Akshat Aggarwal | Branch – IT | Year - III |
| • Team Member 4 – Babita | Branch – CSE | Year – III |
| • Team Member 5 – Anshul Vats | Branch – IT | Year - III |

PROBLEM **STATEMENT**

- **Background:** Information sharing is a major factor for development in the country. It is a time taking process to share information to all the citizens of the country through media and newspaper.
- A bulk SMS or email service which can convey information to larger audience in short interval of time is a requirement.
- **Objective:** We need a mobile/web app that will allow sending Bulk email & SMS (around 1 crore) user in one go through SMTP or other technology and it will be compatible for that.

OUR APPROACH & TECH STACK USED

- Since the Problem statement emphasizes on creating a solution for communicating and sharing Information to vast audience at a minimal duration of time via SMS/email, our software fulfills the requirements of communication alongside with the additional features as well.
- The Recipients list can be selected manually or can be automatically imported through .doc files or .xls sheets. The Website will be using SMTP (Simple Mail Transfer Protocol) API for sending information over email/SMS. It will show status of success or failure with time.
 - **Server Backend:** Node.js, Express.js
 - **Database:** my-SQL
 - **Information Sharing:** Third-Party Email sending APIs as SMTP Technology.
 - **Website Frontend:** HTML, CSS, JavaScript



BRIEF WORKFLOW DISPLAY

First, we have to authenticate the user (sender identity) by providing email and password.



The server sends a request to SMTP API with given credentials to initiate the server and generate a transporter between our server and Webmail (i.e Gmail, Yahoo, etc.)

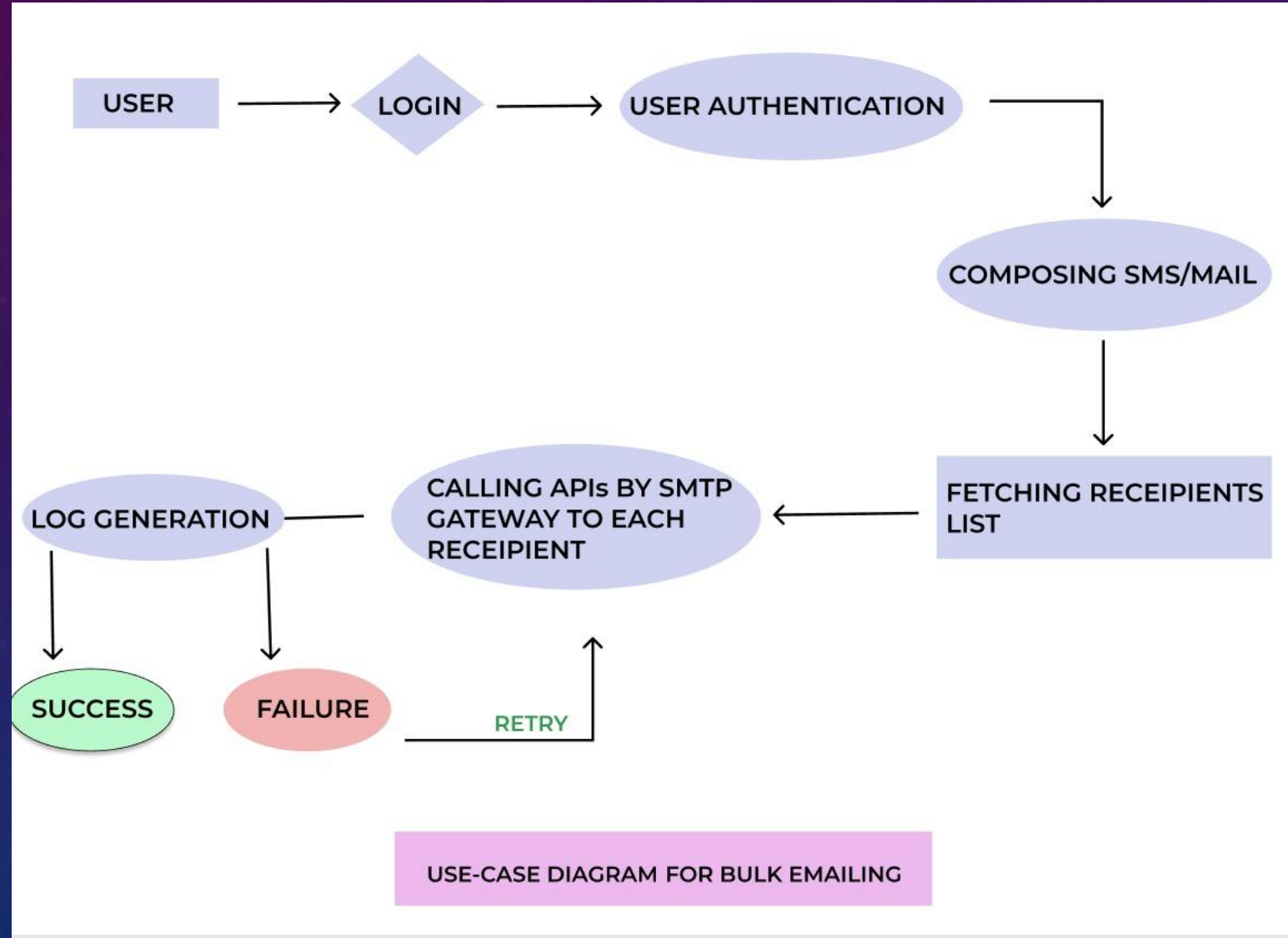


Server calls the SMTP API with (receiver mail id, message).
On Each Call(), APIs revert back the response with the status code(either failure or success), and accordingly log gets generated.

Generated Log-

```
{
  accepted: ['receivermail@gmail.com'],
  rejected: [],
  response: '250 2.0.0 OK 1648218439 z16-20020aa78890000000b004fad8469f88sm6986887pfe.38 - gsmtpp',
  messageId: '<2e1b0574-082f-83bf-d028-cb786726fac5@gmail.com>'
}
```

FLOWCHART TO DEPICT BULK SMS/EMAILING

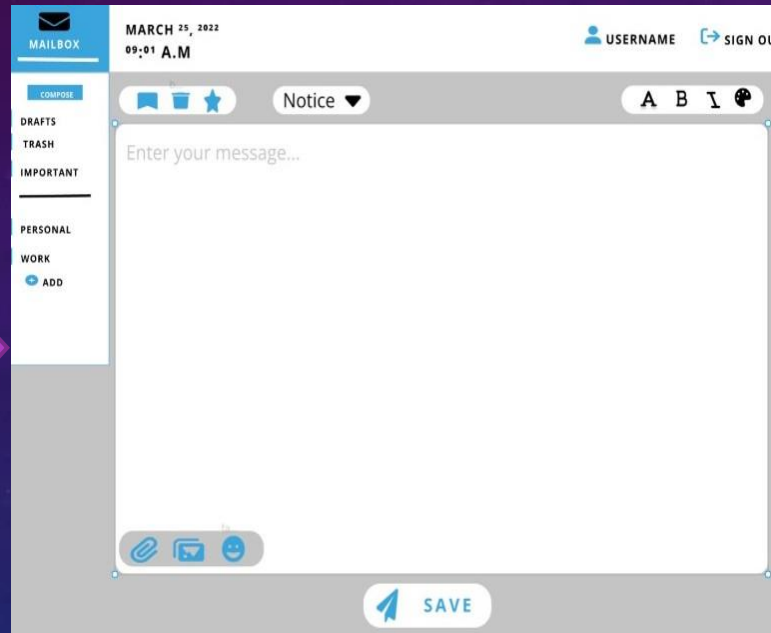


USER INTERFACE OF THE PROTOTYPE



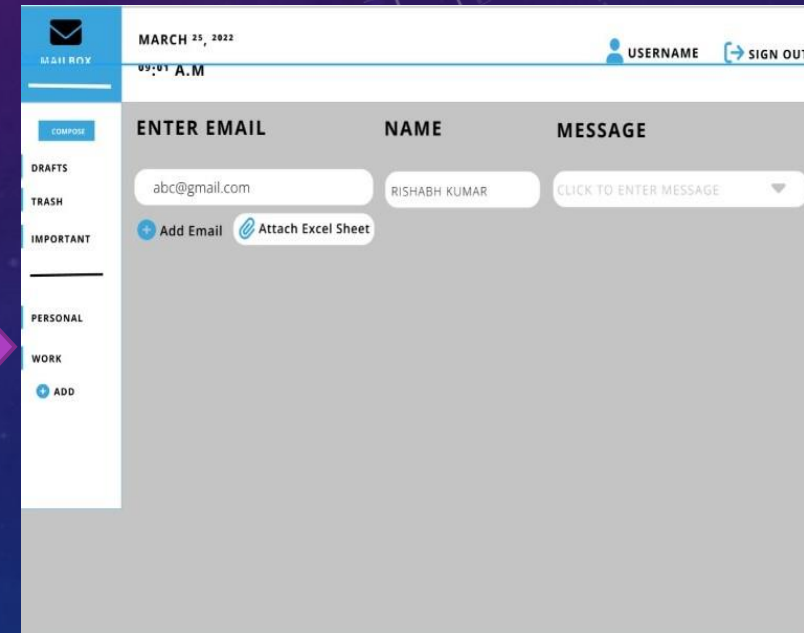
A login form with a purple shield icon and the word "LOGIN" above two input fields labeled "EMAIL" and "PASSWORD". Below the fields is a blue "LOGIN" button and a link "Forgot Password".

Login & user authentication page



A compose screen for SMS or email. It features a sidebar with "MAILBOX" (Compose, Drafts, Trash, Important, Personal, Work, Add) and a main area with a date/time header, a "Notice" dropdown, a text input field "Enter your message...", a rich text toolbar, and a "SAVE" button at the bottom.

Compose SMS/Email



A screen for retrieving and fetching a receiver's email address. It has a sidebar similar to the compose screen. The main area has a header "ENTER EMAIL" and "NAME", and a table with columns "ENTER EMAIL", "NAME", and "MESSAGE". The table contains one row with "abc@gmail.com", "RISHABH KUMAR", and "CLICK TO ENTER MESSAGE". Below the table are buttons for "Add Email" and "Attach Excel Sheet".

Retrieving and fetching receiver's email address

FEATURES INVOLVED

- Reduced processing time with efficient working (cost efficient)
- User Authentication
- Mail Scheduling
- Allows Customization of SMS/emails according to receiver's details
- Sharing information with a large community
- Allows well formatted message sharing
- Categorizes SMS/mail based on their category (such as warning, alert, information)
- Log generation (success or failure)
- Importing contact details from excel worksheets

MARKET SCOPE

01

SMS based Pandemic alarming system for the Primary Health centers to manage public health information.

02

Banking and Finance alerting system for server as well as user bank details

03

Subscription reminders to organization's Newsletters, new products and upcoming release notes

04

Educational purposes(SMS based attendance records, student's evaluation report)

05

Travel & Tourism, Restaurants, E-Commerce, recommendations based on preferences on public utilities, Real Estate, Media etc.