BANNARI AMMAN INSTITUTE OF TECHNOLOGY
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Sathyamangalam - 638401 Erode District, Tamil Nadu, India

Software Requirement Specification for Bulk Mail Blocking/Unblocking Portal

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Seat no	11
Project ID	11
Project Title	Bulk Mail Blocking/Unblocking

PROBLEM STATEMENT:

The existing email management system at the college does not provide a centralized and efficient way to handle the blocking and unblocking of student email IDs in bulk. As a result, administrative staff face the following challenges:

1. **Inefficient Management:** The current process of managing email IDs is manual and time-consuming, requiring admins to individually block or unblock each student email ID.
2. **Lack of Oversight:** Admins lack a comprehensive view of the current status of student email IDs (blocked or unblocked), making it difficult to maintain control over student accounts.
3. **Inconvenient Student Access:** Students have limited visibility into the status of

their email ID (blocked/unblocked), leading to confusion and difficulties in managing their accounts.

4. **Complex Password Management:** Generating new passwords for unblocked email IDs and securely communicating them to students is a manual and error-prone process.

The proposed Bulk Mail Blocking/Unblocking Portal aims to address these challenges by providing a centralized system for admins to efficiently manage the blocking and unblocking of student email IDs in bulk, while also offering students visibility into the status of their email accounts and simplifying password management.

1. INTRODUCTION:

1.1 Purpose

The purpose of this document is to present a detailed description of the Bulk Mail Blocking/Unblocking Portal for college students' email IDs. This system will provide college administrators with the ability to block or unblock students' email IDs in bulk, as well as manage password generation for unblocked email IDs. Additionally, students will have access to a dedicated dashboard to view the current status of their email ID and retrieve their password if unblocked.

1.2 Scope of Project

- This software system will serve as a portal for college administrators to block or unblock students' email IDs in bulk and manage password generation when email IDs are unblocked.
- Admins will be able to upload a CSV file containing a list of email IDs to block or unblock.

- Upon unblocking an email ID, the system will generate a new password for the student and make it available to them in the student dashboard.
- Students will have access to their own dashboard where they can view the current status of their email ID (blocked or unblocked) and retrieve their password if necessary.
- Admins will be able to view logs of actions taken on email IDs, providing transparency and accountability.

2. SYSTEM OVERVIEW:

2.1. Users:

- **Students:**
    - Students can log in using their credentials to access the student dashboard.
    - In the dashboard, students can view the current status of their email ID, whether it is blocked or unblocked.
    - If their email ID has been unblocked, students can retrieve the newly generated password from the dashboard.
    - Students can also view logs of actions taken on their email ID for reference and transparency.
- **Admins:**
    - Admins can log in using their credentials to access the admin dashboard.
    - In the admin dashboard, admins can upload CSV files to perform bulk actions such as blocking or unblocking students' email IDs.
    - Admins can view the current status of students' email IDs and perform actions such as blocking or unblocking them.
    - Admins can also view logs of actions taken on email IDs for monitoring and auditing purposes.

2.2 Features:

1. **Bulk Blocking/Unblocking:**
    - Admins can upload a CSV file containing a list of students' email IDs to perform bulk blocking or unblocking actions.
    - The system verifies the validity of the email IDs in the CSV file and updates the status accordingly.
    - The admin is provided with confirmation and feedback on the outcome of the bulk action.
2. **Password Generation:**
    - When an email ID is unblocked, the system generates a new password for the student.
    - The new password is securely stored and can be retrieved by the student from their dashboard.
3. **Student Dashboard:**
    - Students can log in to view the current status of their email ID (blocked or unblocked).
    - If unblocked, students can retrieve their new password from the dashboard.
    - Students can also view logs of actions taken on their email ID.
4. **Admin Dashboard:**
    - Admins have access to a comprehensive dashboard where they can manage the blocking or unblocking of students' email IDs.
    - Admins can view the status of students' email IDs and monitor logs of actions taken.
    - The dashboard also provides functionality to perform bulk actions using CSV file uploads.
5. **Logs and Audit Trails:**
    - Both admins and students can view logs of actions taken on email

IDs, providing transparency and accountability.

- Admins can use the logs for auditing purposes and to ensure the integrity of the system.

3. TECHNICAL COMPONENTS:

COMPONENT	TECH STACK
Backend	Django (Python Web Framework)
Frontend	HTML, CSS, JavaScript
DataBase	MySQL
API	RESTful services
Google APIs	Gmail API, Google Admin SDK for email ID management

4. SYSTEM REQUIREMENTS SPECIFICATION:

4.1 Functional Requirements:

1. User Management:

- Students can authenticate using their name and password to access the system.
- Admins have access control to dedicated features such as bulk action processing and viewing logs.

2. Bulk Action Processing:

- Admins can upload a CSV file containing a list of students' email IDs to block or unblock them in bulk.
- The system verifies the validity of each email ID in the CSV file and executes the specified action (block or unblock) accordingly.
- For unblocked email IDs, the system generates a new password and makes it available to the student.

3. **Student Dashboard:**

- Students can log in to view the current status of their email ID (blocked or unblocked).
- Students can view logs of actions taken on their email ID for transparency and reference.

4. **Admin Dashboard:**

- Admins can view the current status of students' email IDs, including whether they are blocked or unblocked.
- Admins can view logs of actions taken on email IDs for monitoring and auditing purposes.

4.2. Non-Functional Requirements:

1. **Performance:**

- The system should respond to user actions within 2 seconds to ensure efficient usability.
- The system should handle a concurrent user load of at least 100 users without significant performance degradation.

2. **Security:**

- User data must be encrypted during transmission and storage to protect sensitive information.
- Access to sensitive functionalities should be restricted to authorized admin users through secure authentication mechanisms.

3. **Usability:**

- The user interface should be intuitive and user-friendly, providing clear and concise error messages to guide users in case of input errors or system failures.

4. **Reliability:**

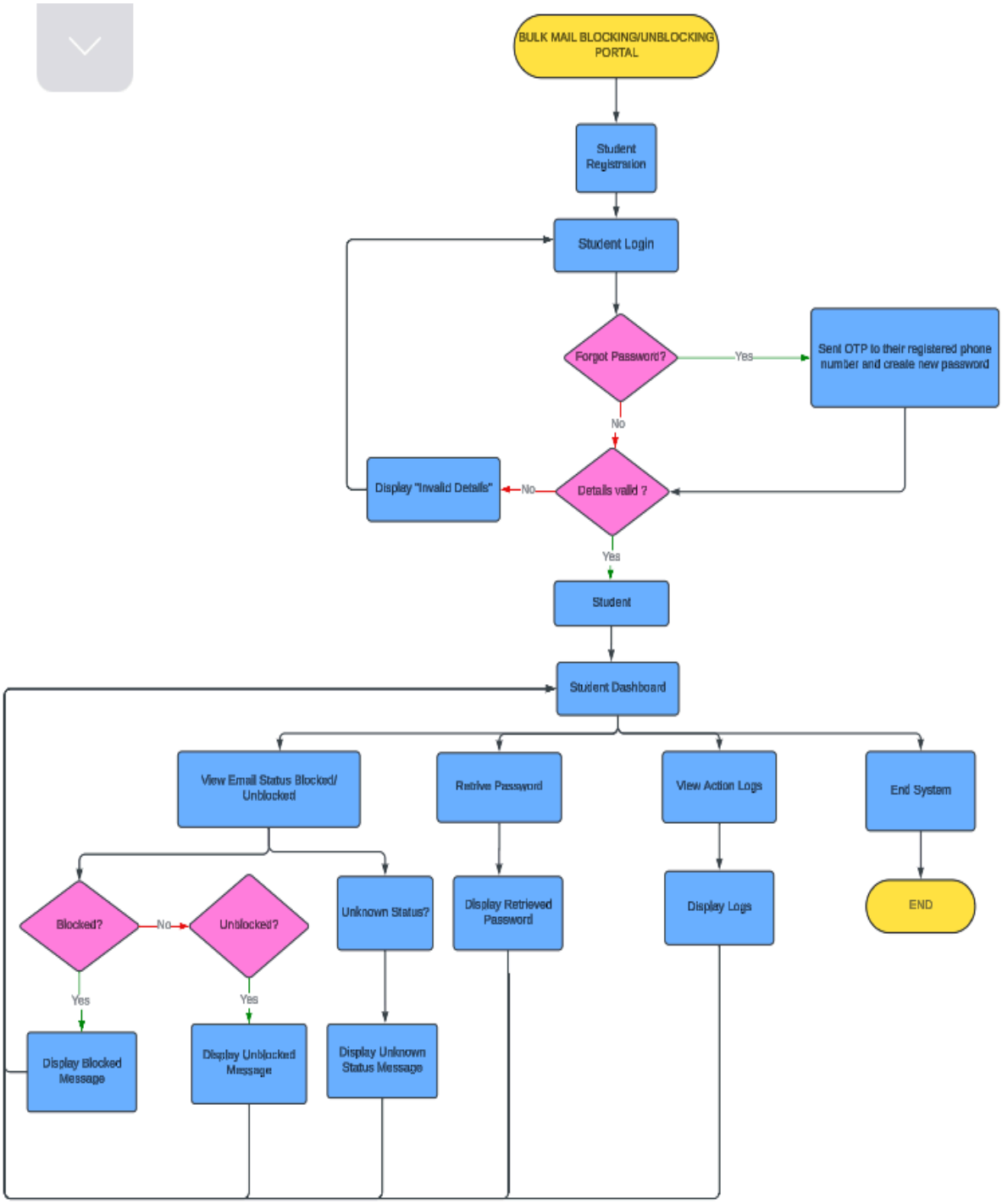
- The system should be available 24/7 with minimal downtime to ensure consistent availability to users.
- A backup and recovery mechanism should be in place to prevent data loss in case of system failures or crashes.

5. **Scalability:**

- The system should accommodate an increasing number of users and data volume over time as the user base grows.
- It should be designed to support additional features and functionalities as per future requirements.

5. FLOWCHART:

5.1 User Flowchart:


BULK MAIL BLOCKING/UNBLOCKING PORTAL
Student Registration
Student Login
Forgot Password?
Yes
Sent OTP to their registered phone number and create new password
No
Details valid ?
No
Display "Invalid Details"
Yes
Student
Student Dashboard
View Email Status Blocked/ Unblocked
Retrive Password
View Action Logs
End System
Blocked?
No
Unblocked?
Unknown Status?
Display Retrieved Password
Display Logs
END
Yes
Yes
Display Blocked Message
Display Unblocked Message
Display Unknown Status Message

5.2 Admin Flowchart: