

Atmiya University of Technology and Science

Rajkot – 360005



A Project Report On “iPost Mail Service”

*Submitted in the partial fulfillment of the requirements for the award of the Degree of
Masters Of Computer Application*

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Under the support and guidance of:

Mr. Niraj Bhagchandani

Acknowledgement

Knowledge in itself is a continuous process. At this moment of our substantial enhancement, we rarely find words to express our gratitude towards those who were constantly involved with us.

The completion of any interdisciplinary project depends upon coordination, cooperation and combined efforts of several resources of knowledge, creativity, skill, energy and time. The work being accomplished now, we feel our sincerest urge to recall and knowledge through these lines, trying our best to give full credit wherever it deserves.

We would like to thank our project guide **Mr. Niraj Bhagchandani** who advised and gave us moral support through the duration of our project. Without their constant encouragement we could not have been able to achieve what we have.

It's our good fortune that we had the support and well wishes of many. We are thankful to all and those names which have been forgotten to acknowledge here but contributions have not gone unnoticed.

With Sincere Regards,
Jatin Ramanandi (210823061)
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Abstract

Company Profile

Company Name	Technostacks Infotech
Working Technologies	Web & Mobile Apps, AR/VR, Blockchain, IOT, Cloud and DevOps
Address	10th Floor, Sun Square, Chimanlal Girdharlal Rd, beside Hotel Regenta, Navrangpura, Ahmedabad, Gujarat 380006
Founders	Hansal Shah, Mrudul Shah, Harshil Parekh, Kosha Shah
Website	https://technostacks.com/
Email	info@technostacks.com
Contact Number	+91 9909712616

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Project Profile

1.1) Project Profile

Project Title	iPost Mail Service
Objective of System	People can connect and to send and receive digital messages and files over the internet
Web Link	
Operating System	Ubuntu 22.10
Hardware Used	RAM, ROM,
Software Used	Microsoft Visual Studio Code, Google Chrome Browser, Mozilla Firefox Browser
Front End	HTML, CSS, Bootstrap, React Js
Back End	Node Js, MongoDB, Postman
Guided By	Mr. Niraj Bhagchandani
Project Duration	

Project Profile

1.2) Project Description

The purpose of this project is to create a simple and secure email service that allows users to send emails with or without attachments, while also ensuring that all mails are deleted after 24 hours from both the sender and the receiver's account, thus ensuring the protection of personal data and privacy.

The email service is designed with a user-friendly interface, allowing users to easily register, login, and send emails. Upon registration, users are required to provide their basic information such as name, email, and password. Once registered, users can access the main dashboard where they can compose and send emails to other registered users. They can also view their sent and received emails in separate tabs.

In addition to the basic functionalities, the project also includes a feature to track the number of times the email is read. The system will log the number of times the email is accessed and show this number to the sender. The admin panel will also store this information for future reference.

Project Profile

1.3) System Requirements

Hardware Requirements	
Operating System	Ubuntu 22.04.1 LTS
Minimum Hardware Requirements	
RAM	8GB or Higher
Processor	Intel® Core™ i3-4130 CPU @ 3.40GHz × 4
Disk Space	2GB
Software Requirements	
Database	MongoDB
Operating System	Any
IDE	VsCode
Backend	NodeJS
Frontend	ReactJS

Introduction to Tools

- **HTML** : Hypertext Markup Language is the standard markup language for documents designed to be displayed in a web browser.
- **CSS** : Cascading Style Sheets is a style sheet language used for describing the presentation of a document written in a markup language like HTML. CSS is a cornerstone technology of the World Wide Web, alongside HTML and JavaScript.
- **Bootstrap** : Bootstrap is a free and open-source CSS framework directed at responsive, mobile-first front-end web development. It contains CSS- and JavaScript-based design templates for typography, forms, buttons, navigation, and other interface components.
- **JavaScript** : JavaScript, often abbreviated as JS, is a programming language that is one of the core technologies of the World Wide Web, alongside HTML and CSS. As of 2022, 98% of websites use JavaScript on the client side for webpage behavior, often incorporating third-party libraries. All major web browsers have a dedicated JavaScript engine to execute the code on users devices.

- **React JS** : React (also known as React.js or ReactJS) is a free and open-source front-end JavaScript library for building user interfaces based on components. It is maintained by Meta (formerly Facebook) and a community of individual developers and companies. React can be used as a base in the development of single-page, mobile, or server-rendered applications with frameworks like Next.js. However, React is only concerned with the user interface and rendering components to the DOM, so creating React applications usually requires the use of additional libraries for routing, as well as certain client-side functionality.
- **Node JS** : Node.js is a cross-platform, open-source server environment that can run on Windows, Linux, Unix, macOS, and more. Node.js is a back-end JavaScript runtime environment, runs on the V8 JavaScript Engine, and executes JavaScript code outside a web browser.
- **MongoDB** : MongoDB is a source-available cross-platform document-oriented database program. Classified as a NoSQL database program, MongoDB uses JSON-like documents with optional schemas.
- **Postman** : Postman is an API Platform for developers to design, build, test and iterate their APIs. As of February 2023, Postman reports having more than 25 million registered users and 75,000 open APIs, which it says constitutes the world's largest public API hub. The company is headquartered in San Francisco and maintains an office in Bangalore, where it was founded.

System Analysis

3.1) Existing System

Email (short for electronic mail) is a widely-used electronic communication method that allows people to send and receive digital messages and files over the internet or other computer networks.

An email service is a web-based platform or program that enables users to send and receive emails using their own email addresses. There are numerous email services available today, including Gmail, Yahoo! Mail, Outlook, and many others. These services allow users to create an email account, choose a unique email address, and send and receive messages to and from other email users.

Email services typically offer additional features such as email filtering, spam protection, attachment support, and organizational tools like folders and labels to help users manage their emails efficiently. Additionally, most email services provide users with the ability to access their emails from anywhere with an internet connection, making it a convenient and popular mode of communication for both personal and business use.

System Analysis

3.2) Limitations Of Existing System

Email services have become an essential communication tool for individuals and organizations worldwide. However, they do have some limitations that can impact their usability and effectiveness. Here are some limitations of email services:

- **Security:** Email services are vulnerable to security threats such as phishing attacks, malware, and spam. These threats can compromise sensitive information and cause data breaches.
- **Reliability:** Email services are dependent on internet connectivity and server uptime, and disruptions in either can cause email service downtime or delivery issues.
- **Limited Content:** Email services are primarily designed for text-based communication and have a file size limit for attachments. This can make it challenging to send large files or media-rich content through email.
- **Lack of Personal Touch:** Email services lack the personal touch of face-to-face or voice communication, which can make it difficult to convey emotions and tone.
- **Miscommunication:** Email services can be prone to misunderstandings and miscommunication due to the lack of visual and audio cues.
- **Dependency on Technology:** Email services are dependent on technology, and technical issues can cause delays in sending or receiving emails.
- **Legal and Compliance issues:** Emails are legally binding and can create compliance issues if not managed or stored appropriately.

System Analysis

3.3) Scope Of Proposed System

The scope of the given project, an email service, is to create a web-based platform that allows users to register, login, send emails with or without attachments, and delete emails automatically after 24 hours. The project also includes an admin panel to store user information and email data, as well as the ability to track email read receipts.

The scope of the project is limited to the functionalities mentioned above, and it does not include any additional features such as a calendar, task manager, or video conferencing. However, the project can be expanded to include these functionalities in the future if required.

The project's scope also includes using the React and Node technology stack for development and ensuring that the email service is compatible with different browsers and operating systems. Additionally, the project scope includes compliance with legal and ethical standards, such as data privacy laws and industry standards for email communication.

In summary, the scope of the email service project is to develop a simple yet efficient web-based email platform that offers basic functionalities such as registration, login, sending, receiving, and tracking emails, while adhering to legal and ethical standards and using the latest technology stack.

System Analysis

3.4) Limitations of Proposed System

The proposed email service system has some limitations that may affect its effectiveness and usability. Some of the limitations are:

- **Limited Storage Capacity:** The proposed system does not mention the storage capacity for user emails, and it assumes that emails will be deleted automatically after 24 hours. However, this might be an issue for users who need to store emails for longer periods.
- **Lack of Advanced Features:** The proposed system only provides basic email functionalities such as sending, receiving, and deleting emails. It does not include advanced features such as email filters, spam protection, email templates, or advanced search capabilities.
- **Dependency on Internet Connection:** The email service is dependent on a stable internet connection, and any disruptions or downtime can impact the ability to send or receive emails.
- **User Interface:** The user interface of the proposed system is not described, and it might be difficult for some users to navigate and use the system effectively.
- **Security Concerns:** The proposed system does not mention any security measures to protect user information and data from hacking or data breaches. It is essential to implement security measures such as encryption, secure login, and password policies to ensure user data is safe.
- **Lack of Flexibility:** The proposed system is limited to the functionalities mentioned in the requirements, and it might not meet the needs of all users.

System Analysis

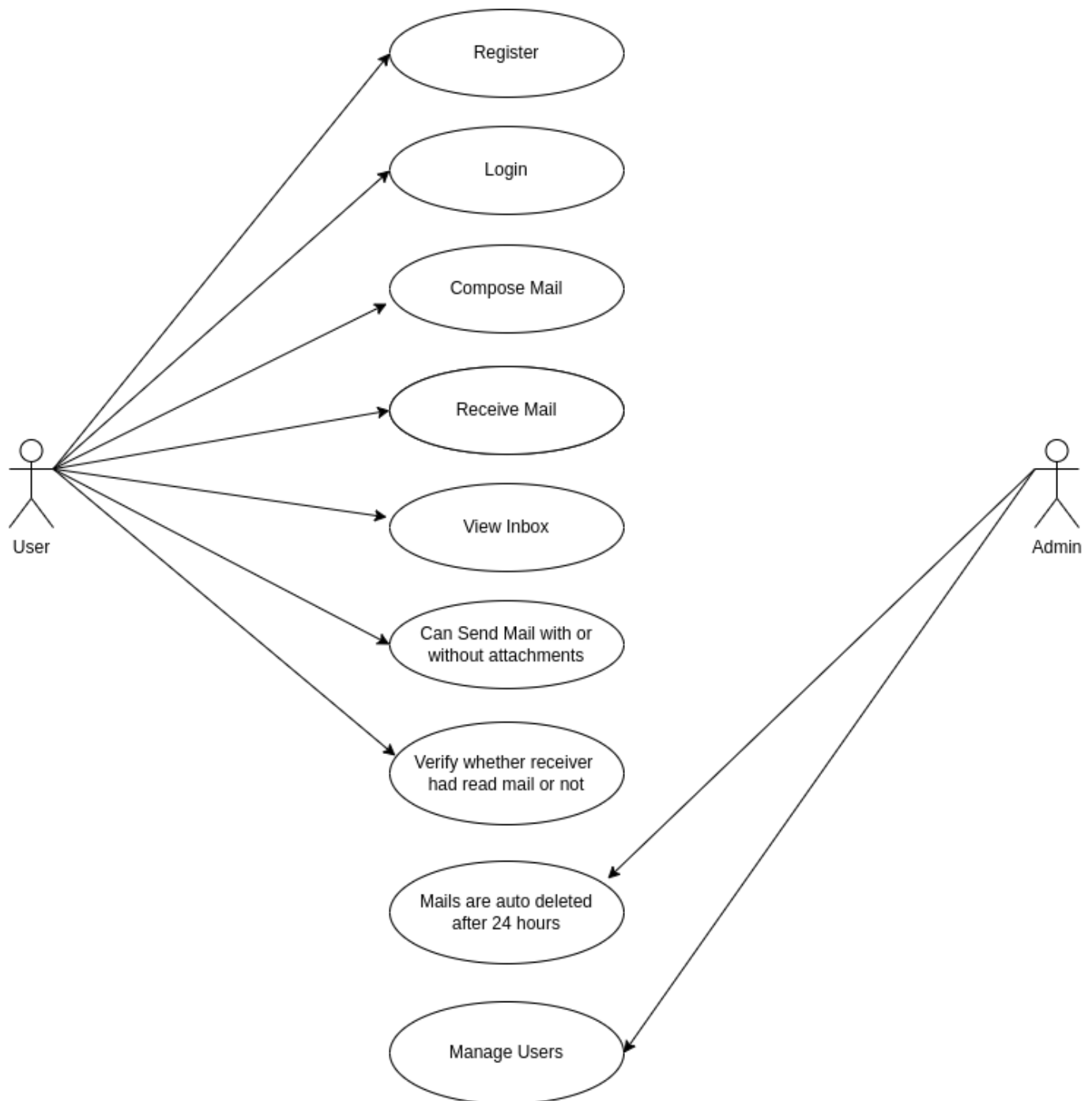
3.5) Targeted users

Based on the given requirements, the targeted users for this email service could be anyone who needs a secure and temporary email solution for personal or business use. However, some potential use cases could include:

- Freelancers or remote workers who need to communicate with clients but don't want to use their personal email address.
- Small business owners who need a temporary email solution for their employees to communicate with customers or clients.
- Individuals who want to protect their privacy while communicating online.
- Students who need a temporary email address for school-related communication.
- It's important to note that the targeted users may vary based on the marketing strategy and features of the email service.

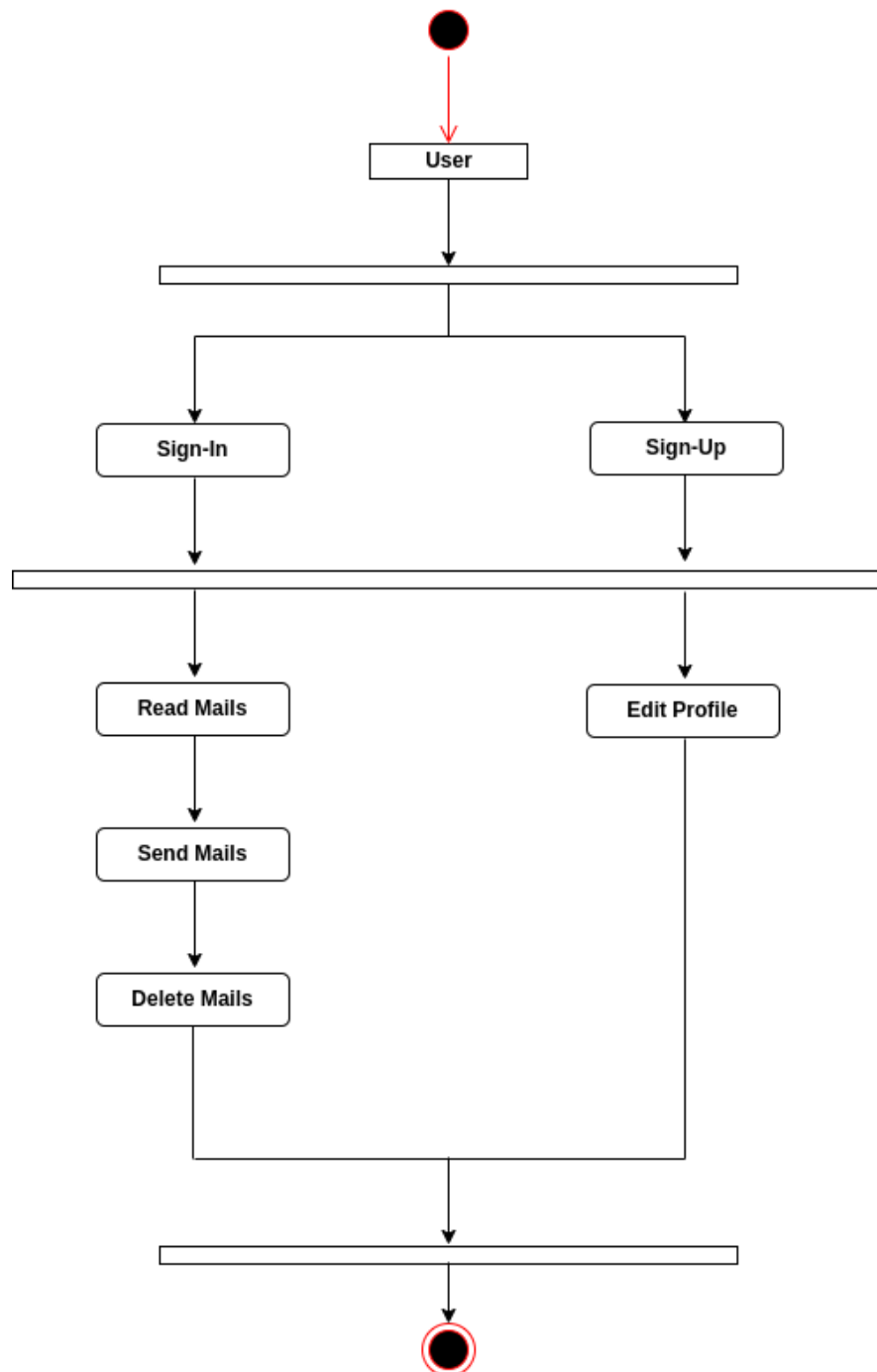
System Design

4.1) Use Case Diagram



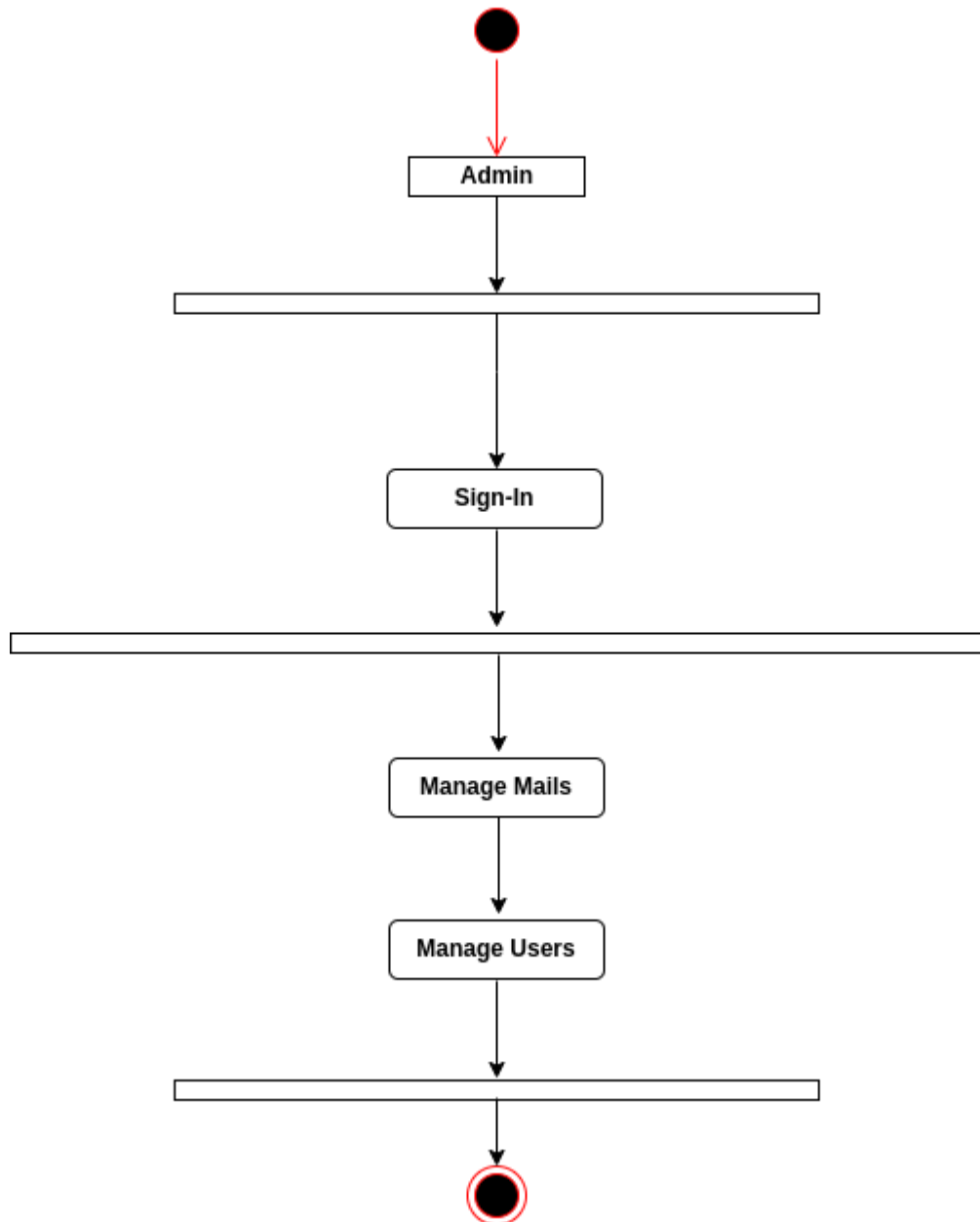
System Design

4.2) Activity Diagram (User)



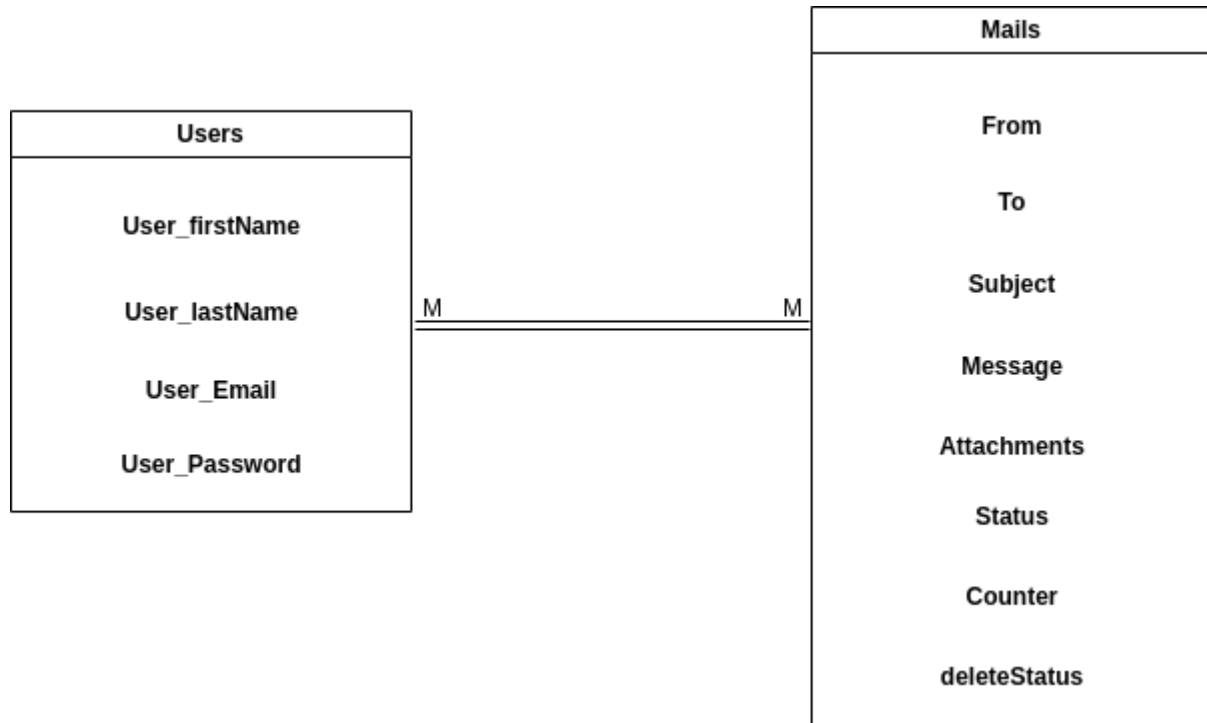
System Design

4.2) Activity Diagram (Admin)



System Design

4.3) Data Dictionary Diagram



System Design

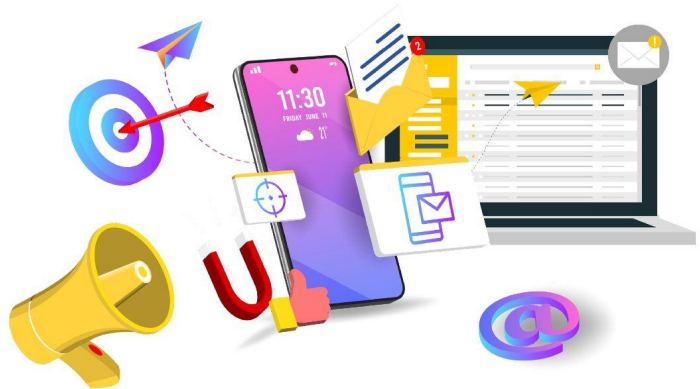
4.3) Screenshots Of Proposed System



iPost Mail

Now a post is just a mail away Now a post is just a mail away Now a post is just a mail away Now a post is just.

Sign In



Create an account.

We'd love to have you on board. Join over 500+ customers around the globe and enhance productivity.

First Name _____ Last Name _____
Email _____
Password _____
Confirm Password _____

Sign Up

System Design



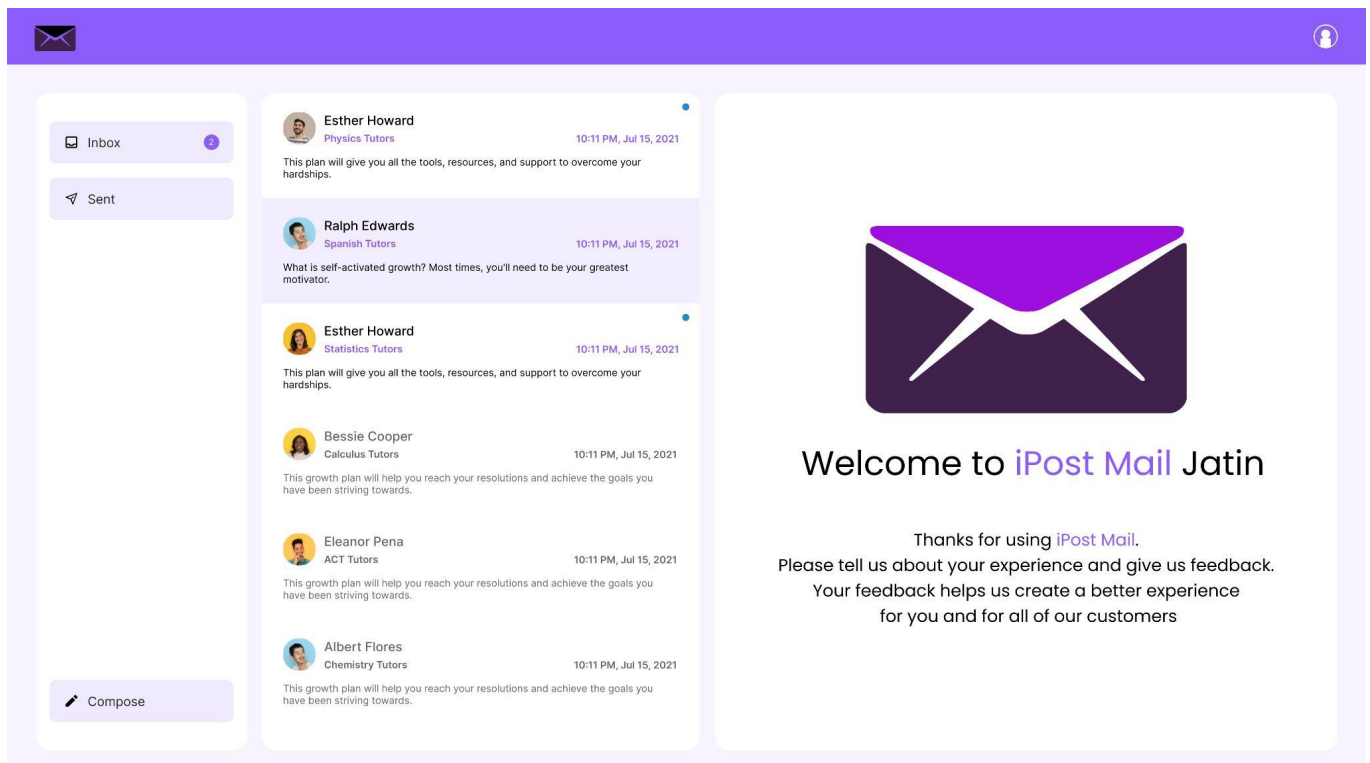
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System Design

