

BULK EMAIL OPTIMIZATION

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Abstract — The project is proposed as a website to send a bulk email which can convey information to a larger audience in a short interval of time. It can include alerts, warnings and news that are of high importance and needs to be delivered to all the citizens of the country in a single go. No extra software installation is required as this service will be available through a web-based administration tool. Technologies are, creating a website for implementation, sending bulk email through Streamlit and SMTPlib.

Keywords — Bulk email, Streamlit, SMTPlib, Bulk Email Optimization, CSV file, Database.

INTRODUCTION

Bulk email generally refers to sending a number of emails to a larger audience in a short span of time. This type of service is not to be confused with free email providers like Gmail and outlook. These services are intended for one-to-one emailing and have strict daily sending limits that make them unsuitable for sending bulk emails. This combines into one product the practicality of a mass email software with the flexibility of a bulk email web service.

Usually, a bulk e-mail program to oversee mailing records and set up mail promoting campaigns in few

steps. This combines into one item the common sense of a mass mail program with the adaptability of a bulk mail web benefit. On the one hand you make bulletins and oversee records specifically on your desktop: on the other you get a cloud mail following benefit to handle detailing and progress your email campaigns.

A bulk e-mail is a limited time mail campaign or e-mail bulletin ordinarily sent to a expansive number of contacts (clients, endorsers, leads, etc.) with the objective of driving deals, expanding client dependability, or communicating vital information.

Bulk e-mail software offers comprehensive deliverability highlights and capable promoting mechanization apparatuses, so your bulk emails really reach each aiming individual on your mailing list. Subsequently the in general prepare of making your mail campaigns is instinctive, simple, and super-fast. Mass mailing doesn't continuously ought to carry a strong cost tag. A mail benefit can dependably and successfully deliver mass e-mail without the bother or costs of attempting to DIY.

Mail optimizing program makes it simple for companies to form and sending a tremendous number of emails and making mail campaigns. With bulk mail promoting administrations, it's simple to construct and portion the respected group of audience, make smooth emails, send out campaigns, analyze performance, and more.

SYSTEM ANALYSIS

In the existing system, the bulk mail service permits its clients to send mass mail messages to numerous records of beneficiaries at a indicated time. Existing framework may incorporate offerings based on their respective enrollment plans, estimating and impediments for specific number of emails. Most of the existing bulk e-mail benefit suppliers offer free benefit as it were for a specific trial period.

In the proposed system, to overcome the drawbacks of the existing system, this service is provided as a web-based administration tool which is cost effective and user-friendly. With this service user can send a single message of any size to thousands of people in a fraction of second. The software can be provided as a patent with specific norms and conditions

A bulk message can over-generalize and conclusion up feeling insignificant to a few beneficiaries – the way to moderate for this issue is to work on your informing and aim to have as much data as conceivable about your recipients as possible.

The bulk e-mail service is adaptable, shareable and measurable which implies it can be utilized to send expansive number of emails to a tremendous list of audiences in a single go. Particularly in brand promoting, it's simple for individuals to forward and share your mail content, building your reputation by word-of-mouth or viral showcasing which can offer assistance and impacts unused clients to become followers of the brand.

SYSTEM ARCHITECTURE

Architecture of the application is given in the given diagram.

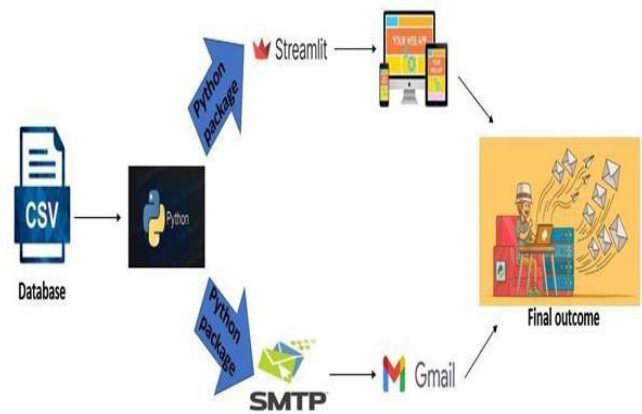


Fig1. System Architecture

First step involved is to collect user's database and the user details are stored in a CSV file. Two python packages, Streamlit and SMTP are used. Streamlit is used to design the frontend for the user interface. SMTP is used to send emails to the receiver.

PACKAGES USED

1. StreamLit

Streamlit is a free, open-source, all-python framework that enables data scientists to quickly build interactive dashboards and machine learning web apps with no front-end web development experience required. When the user does StreamLit run admin.py, it starts a web server that runs the interactive application on the local computer at <http://localhost:8501>. This is great for local development for the bulk email service's user interface.

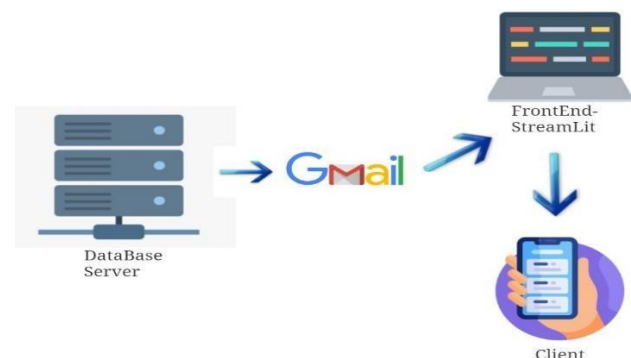


Fig2. StreamLit bulk email sender

2. SMTP

SMTPLIB Python has this module for in the standard library for working with emails & email servers. The SMTPLIB defines an object known as “SMTP client session object” which is used to send mails by the user. There are 3 steps involved - initialize, sendmail(), quit. When the optional parameters which are host and port, are provided connect method is called with these arguments during the first step which is initialization.

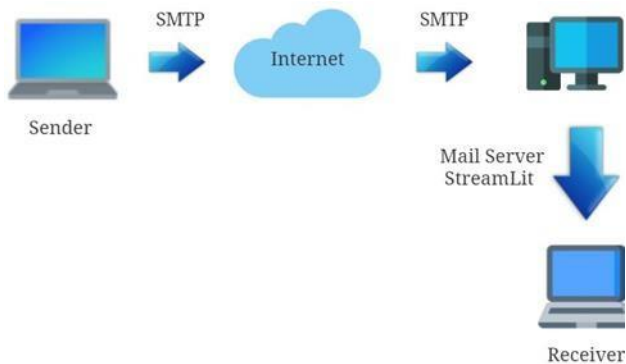
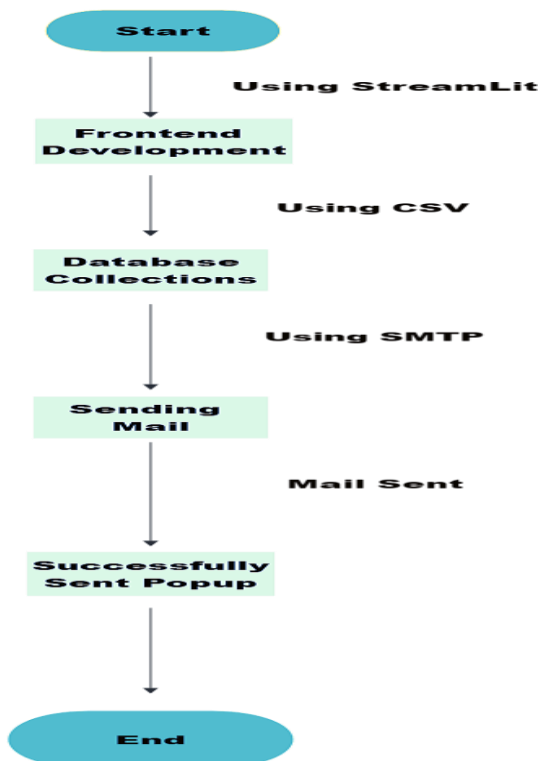


Fig3. SMTP Protocol

SYSTEM FLOWCHART



EXPECTED OUTCOME

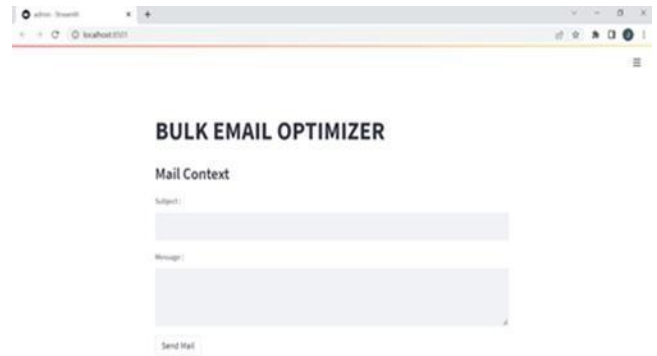


Fig.4 Frontend

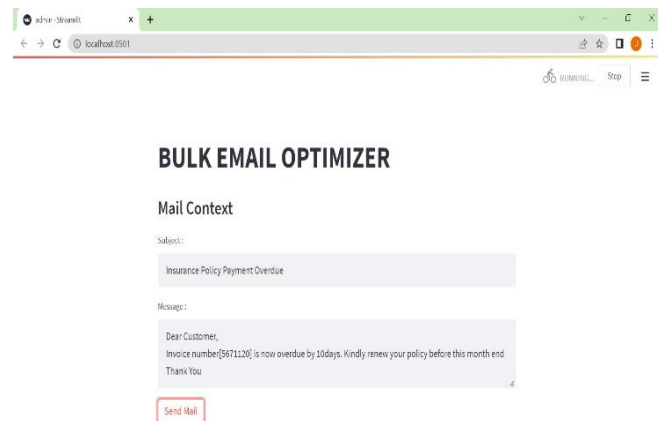


Fig.5 Input

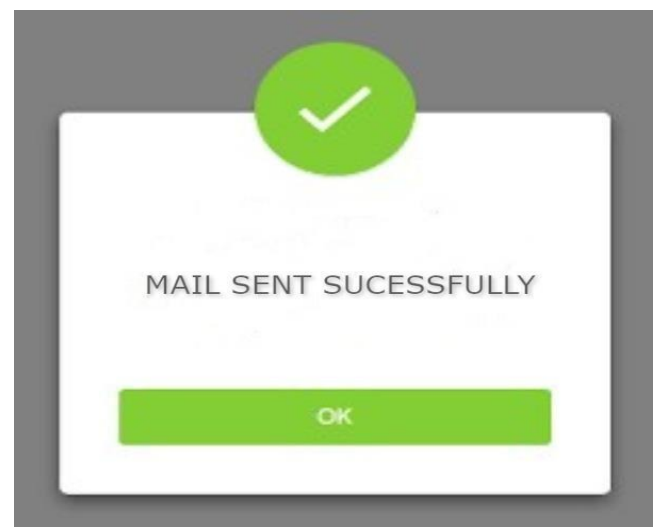


Fig.6 Output

CONCLUSION

The project offers high reliability, it is cost effective and bulk emails can be delivered instantly. It can be used in various fields like e-commerce, marketing, banking, health care, insurance policy, etc....Remainders for deadlines, payment health checkups, alert and fraud messages can be made.

FUTURE SCOPE

The future work is to develop a service which includes sending SMS and WhatsApp messages along with the emails. As an additional feature the information can be added to the user's google calendar, so that user's schedule will be updated and reminded regularly. The service will be compatible on all operating systems. Major goal is to provide a patent-based service which comprises of certain norms and conditions to the clients.

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