

Self Acknowledgeable Intranet Mail System

Ms. Rajaprabha M N
SITE, VIT University,
Vellore, Tamilnadu, India.
mnrajaprabha@vit.ac.in

Abstract— Intranet mail system allows members of an organization to send or receive mails among them. But the sender don't know whether the sent mail is viewed by the receiver in time or not, the response for the mail in the receiver side and so on, unless he receive a mail or message personally from the receiver. So this Self Acknowledgeable Intranet Mail System has been designed and implemented to benefit the sender about the status of his mail. Once a mail is sent, the sender can know the receiver activity in the mail system until the mail is viewed.

Keywords— Intranet Mail, Mail System, Self Acknowledgeable Intranet Mail, SAIMS

I. INTRODUCTION

An intranet is a network based on the internet TCP/IP open standard. An Intranet belongs to an organization, and is designed to be accessible only by the organization's members. Only authorized members can access the intranet. The Self Acknowledgeable Intranet Mail System (SAIMS) looks and acts like other Email System but provides an additional feature which generates an acknowledgement automatically when a mail is viewed or opened for a first time. This feature benefits the sender to know about the receiver's responsiveness to the mail.

In an organization many tasks needs to be completed immediately. In such situations this SAIMS will help the sender (superior) to keep track of the subordinates. As the acknowledgement is generated automatically after the mail is viewed and the receiver activity is added along with it, the subordinates will do the assigned/intimated tasks regularly with a thought that their activities are being monitored.

II. SAIMS DESCRIPTION

Intranet Mail System plays a vital role as a communication tool within the LAN environment. The environment may be an educational institution or an organization or any lab. The mailing system will be a useful tool for sending and receiving messages and files (like circulars, orders...) between the individuals, section heads etc., and every one in the organization. The communication must be provided in a reliable, cost effective and secured way. It is designed to provide a communication channel inside an organization between different clients on the network. It accepts mails from authorized users providing security.

In the SAIMS System two types of roles are allowed. i) The administrator ii) The user.

2.1 The Administrator

The administrator plays a vital role in the Mail System. He performs the tasks like user creation, password resetting on request and managing the data from external sources. While creating a user the administrator specifies the priority of the user. Three types of priorities high, normal and low are available. Based on the priority the user can view the acknowledgement details generated by the sent mails.

2.2 The User

The Administrator creates the user account with the basic information for the first time. An unique username with a default password is provided to the user. The user can use these credentials to login into the SAIMS. Later he can change the personal details, account settings, password etc. But the priority is not known to the user and modifiable only by the administrator.

Following figure depicts the track path for various user roles.

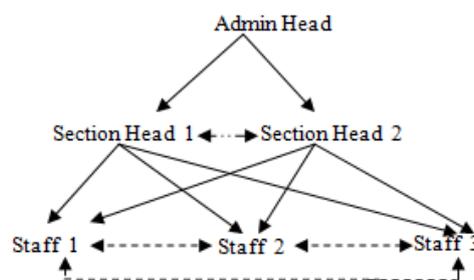


Fig 1 – Track path ———> get the receiver activities till the mail was viewed
← - - -> get the acknowledgement only when the mail was viewed/deleted by the receiver.

The SAIMS provides three types of User Roles.

- Admin Head
- Section Head
- Staff

2.2.1 Admin Head

The Admin Heads are the roles with the highest priority. When they send mails to other section heads or staff they can view the complete receiver activity until the mail is viewed. From this detail the admin can know whether the receiver has logged into the mail system but not view or delete the mail.

2.2.2 Section Heads

The Section Heads are the roles with the normal priority. When a section head send a mail to the admin or other section head, he can get only the date and time when the mail is viewed or deleted. But, if they send mails to staff they can get receiver activity until the mail was viewed. Only at the staff level they can get the activity details.

2.2.3 Staff

The Staffs are the roles with the lowest priority. They can send mail to the admin head, section heads and other staffs. But they can get only the date and time when the mail is viewed or deleted.

III. IMPLEMENTATION

The SAIMS system has been implemented in the .NET platform (ASP.NET & Visual C#) and tested in a local server.

It provides all the functionalities Inbox, Drafts, Sent Items, Folders, Attaching Files, Sending to multiple users, Replying, Replying to all, Move & Copy mails, Editing Account Settings & Personal Details etc which are available in other Email Systems.

The Inbox view is shown in Figure 2. Inbox lists all the received read and unread mails for the logged user. Here the unread mails are displayed in bold whereas read mails are displayed in normal font. When a user views an unread mail, the system will generate an acknowledgement to the sender about this. The sender can view the details in his account. The details available to the sender may vary depending on the priority.

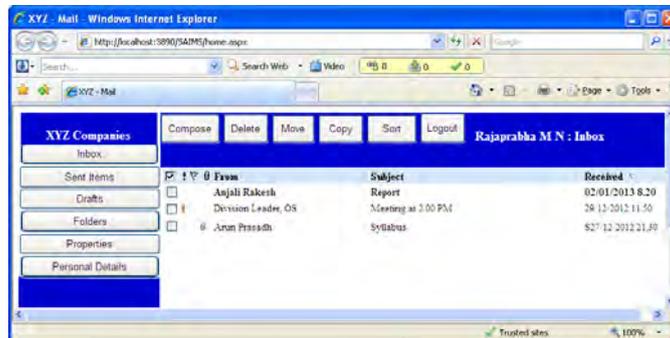


Fig. 2 SAIMS - Inbox

The compose view is shown in Figure 3. Like other Mail Systems it also provides fields like To(receiver),Cc, Bcc, Subject, Mark High Importance and Attach Files.

In addition to these it also provides an option to receive an acknowledgement. By default this option is enabled. But if the sender don't want to receive the acknowledgement he can disable this option. At the receiver end, he don't know whether the mail will generate an acknowledgement or not. This is one of the advantages of this system. It makes the user to respond all the mails properly.

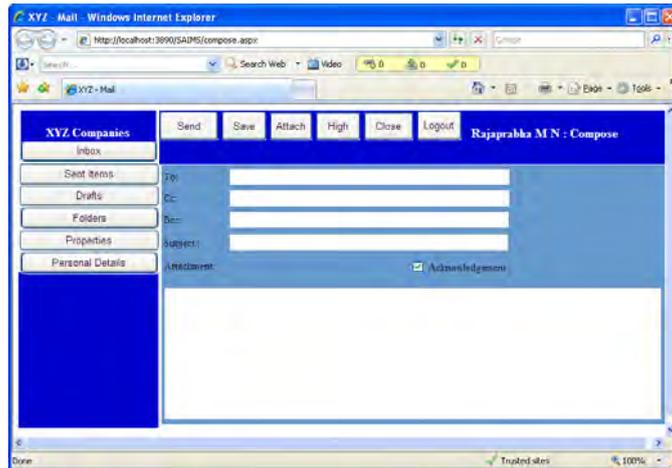


Fig. 3 SAIMS – Compose

Sent Items view is shown in figure 4. It lists all the mails sent by the user in any sorted order depending on the user’s choice. By default the mails are displayed in the order sorted on sent date and time. All the functions are same as normal mail system.

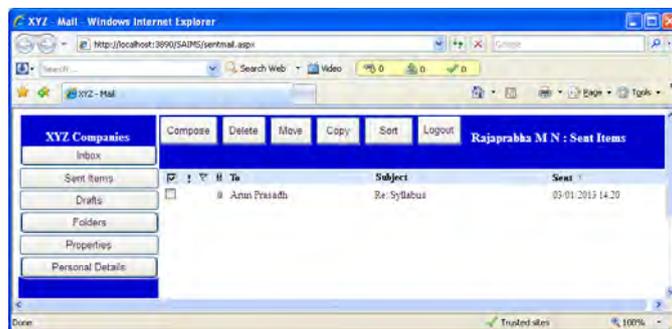


Fig. 4. SAIMS – Sent Items

The following figure 5 shows the view of a sent mail. When the user views a sent mail, it shows the receiver, cc, bcc, subject, details of attachments, sent date and time. Along with this, it provides an option to view the acknowledgment.

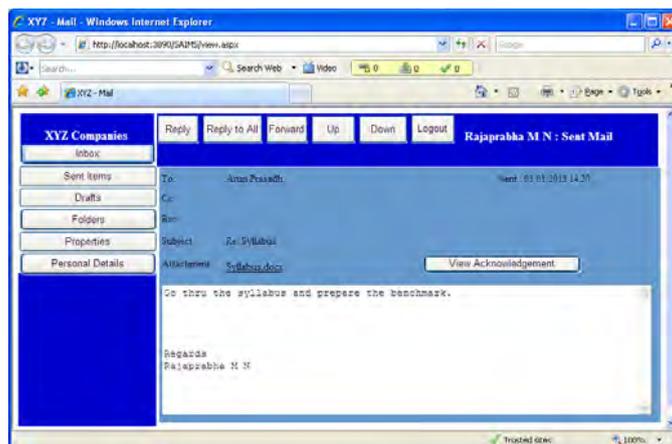


Fig. 5 SAIMS – View Sent Mail

The new feature added to SAIMS is generating mail acknowledgement automatically based on sender request. If the sender requests, he can view the details as shown in fig 6.

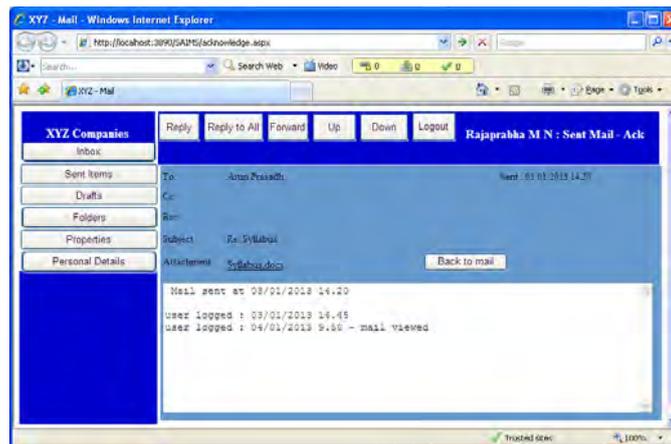


Fig. 6 SAIMS – Acknowledgement view for admin head

In figure 6, three details are shown. First one is the mail sent date and time. Second one is the receiver activity. The receiver logged into the Mail System but not views the mail. Third information shows the next receiver activity. He views the mail only in his second login after the mail being sent.

So from this acknowledgement the sender can know

- i) whether the receiver has deleted a mail without reading it. (ignoring the mail)
- ii) The importance given by the receiver for this mail. (Like ignoring or responding immediately).

IV. CONCLUSION

The SAIMS will act as a communication tool between the members of an organization. It helps much for the admin head and section heads to know about their subordinates' attitude towards any assigned work. It also confirms the sender about the delivery of their messages. We may think that SAIMS stores acknowledgement of mails, so it requires more space than normal mail system. But there is an option for the senders, to enable/disable acknowledgements and can delete the acknowledgement history after viewing. The only drawback is we cannot send or receive messages from external mail systems.

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