**L3.5 Requirements**

**Solution for Exercise**

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## **1. using this description as a starting point, derive a set of requirements for this problem.**

1. **User Interface: The system should have a user-friendly interface that is easy to navigate and use, allowing users to create, read, copy, and store letters.**

**2. Email Creation: The system should allow users to create letters to be sent to other users, all users, or specific address lists. Users should be able to use existing word processing programs to create letters.**

**3. Message Formatting: The system should support formatting options such as font style, size, color, and attachments. Users should be able to add attachments to emails.**

**4. Security: The system should ensure that emails are sent and received securely. It should have features such as password protection, encryption, and digital signatures to prevent unauthorized access and ensure privacy.**

**5. Storage and Retrieval: The system should store sent and received emails on a central server for easy retrieval. Users should be able to search and filter emails by date, sender, recipient, and subject.**

**6. Notifications: The system should have a notification system to inform users of new emails. Users should be able to choose the frequency and type of notifications they receive.**

**7. User Management: The system should allow the network administrator to manage user accounts, permissions, and access levels.**

## **2. Think up several use cases for this example.**

1. **Creating a new email: John wants to send an email to his colleague, Emily, about a project they are working on. He logs into the email system, selects "New Email," enters Emily's email address, writes the message, and hits "Send."**

**2. Sending an email to a group: The HR department wants to send an email to all employees about an upcoming training session. They create a group email address in the system and select the group as the recipient of the email.**

**3. Storing and organizing emails: Jane receives an important email from her manager about a new project. She saves the email in a folder named "New Project" for easy reference later.**

**4. Responding to an email: Bob receives an email from a client with questions about a product. He responds to the email using the email system and attaches a product brochure to the email.**

**5. Forwarding an email: Susan receives an email from a colleague that she thinks her manager should see. She forwards the email to her manager using the email system.**

**6. Searching for an email: Mark needs to find an email that he received a few weeks ago from a client. He uses the search feature in the email system to search for the email by the client's name.**

**7. Sending an encrypted email: The IT department needs to send sensitive information to a vendor. They use the email system's encryption feature to ensure the information is secure.**

**8. Reviewing sent emails: Rachel needs to check if she sent an email to a client. She reviews her sent emails in the email system and confirms that the email was sent.**

**9. Setting email notifications: Tom wants to receive email notifications when he receives a new email. He sets up the email system to send him notifications every time he receives a new email.**

## **3. Write up one of the use cases.**

**John, who wants to send an email to his colleague, Emily, about a project they are working on.**

**John logs into the electronic mail system and selects "New Email." He enters Emily's email address in the "To" field and writes the message in the body of the email. He attaches a document to the email to provide more information about the project.**

**After reviewing the email, John clicks on the "Send" button to send the email to Emily. The system confirms that the email has been sent and provides a timestamp for future reference.**

**Emily receives the email and reviews the attached document. She replies to John's email with some additional questions about the project. John receives the reply in his inbox and replies back to Emily with the requested information.**

**In the meantime, John saves the email in a folder named "Project Emails" for easy access later. He also sets a reminder in the email system to follow up with Emily next week.**

**The email system notifies John when Emily replies to his email. John logs back into the system and continues the conversation with Emily until they resolve the issue. Finally, John archives the email thread for future reference.**

**This use case demonstrates how the email system enables users to communicate efficiently and effectively, collaborate on projects, and organize and store their emails for future reference.**