# Functional Requirement

1. Functional Requirements   
  
1.1 Email Creation Function   
Function ID: FR-01   
Description: An administrator can create a new email with subject, content, recipients (individual contacts or distribution groups), and choose an associated email account for sending.   
Input: Subject, body content, recipient list (contact IDs or distribution group IDs), selected email account ID, send/schedule option.   
Output: A new email record stored in the system (sent or saved as a draft).   
  
1.2 Email Sending Function   
Function ID: FR-02   
Description: An administrator can send an email to the selected recipients through the configured email server.   
Input: Email ID, selected email account ID, recipient list (contact IDs or distribution group IDs).   
Output: Sent email marked as "Sent" in the system and a recovery record created if retention policies are enabled.   
  
1.3 Email Receiving Function   
Function ID: FR-03   
Description: The system can receive incoming emails from the configured email server and store them in the appropriate inbox.   
Input: Email server configuration, incoming email content and metadata.   
Output: A new email record stored in the inbox of the associated email account.   
  
1.4 Email Viewing Function   
Function ID: FR-04   
Description: An administrator can view the content of a selected email, including subject, sender, recipient, body, and attachments.   
Input: Email ID.   
Output: Full email content and metadata displayed to the administrator.   
  
1.5 Email Archiving Function   
Function ID: FR-05   
Description: An administrator can move an email to the archive folder and apply a retention policy if configured.   
Input: Email ID, archive folder configuration, retention policy ID (optional).   
Output: Email marked as "Archived" and moved to the archive folder, with a recovery record created if applicable.   
  
1.6 Email Archive Search Function   
Function ID: FR-06   
Description: An administrator can search for archived emails using keywords, date range, sender, recipient, or associated email account.   
Input: Search criteria (keywords, date range, sender, recipient, account).   
Output: List of matching archived emails displayed to the administrator.   
  
1.7 Email Archive Management Function   
Function ID: FR-07   
Description: An administrator can perform actions such as restoring or deleting an archived email.   
Input: Email archive ID, action type (restore or delete).   
Output: Updated email status (e.g., restored to inbox or deleted), and a recovery record created if applicable.   
  
1.8 Calendar Creation Function   
Function ID: FR-08   
Description: An administrator can create a new calendar event with title, date, time, location, and optional email notifications to attendees.   
Input: Title, start and end times, location, attendee list (contact IDs or distribution group IDs), notification settings.   
Output: A new calendar event record stored in the system.   
  
1.9 Calendar View Function   
Function ID: FR-09   
Description: An administrator can view the details of a calendar event, including title, date, time, attendees, and description.   
Input: Calendar event ID.   
Output: Display of full event details to the administrator.   
  
1.10 Calendar Update Function   
Function ID: FR-10   
Description: An administrator can modify the details of an existing calendar event and optionally send updated notifications to attendees.   
Input: Calendar event ID, updated event details (title, date, time, location, attendees).   
Output: Updated calendar event record, with notifications sent if enabled, and a recovery record created if applicable.   
  
1.11 Calendar Event Deletion Function   
Function ID: FR-11   
Description: An administrator can delete a calendar event, with the option to send cancellation notifications to attendees.   
Input: Calendar event ID, confirmation for deletion, notification settings.   
Output: Deleted calendar event, with cancellation notifications sent if enabled, and a recovery record created if applicable.   
  
1.12 Contact Creation Function   
Function ID: FR-12   
Description: An administrator can create a new contact with name, email, phone number, and other relevant details.   
Input: Name, email address, phone number, address, and optional notes.   
Output: A new contact record stored in the system.   
  
1.13 Contact Viewing Function   
Function ID: FR-13   
Description: An administrator can view the details of a selected contact, including name, email, phone number, and any additional notes.   
Input: Contact ID.   
Output: Display of full contact details to the administrator.   
  
1.14 Contact Update Function   
Function ID: FR-14   
Description: An administrator can update the details of an existing contact, such as name, email, phone number, or address.   
Input: Contact ID, updated contact details.   
Output: Updated contact record stored in the system, with a recovery record created if applicable.   
  
1.15 Contact Deletion Function   
Function ID: FR-15   
Description: An administrator can delete a contact, updating any related records (e.g., distribution groups or calendar events) if needed.   
Input: Contact ID, confirmation for deletion.   
Output: Deleted contact record, with related references updated and a recovery record created if applicable.   
  
1.16 Distribution Group Creation Function   
Function ID: FR-16   
Description: An administrator can create a new distribution group with a name, description, and a list of contacts to include.   
Input: Group name, description, and selected contact IDs.   
Output: A new distribution group record stored in the system.   
  
1.17 Distribution Group Modification Function   
Function ID: FR-17   
Description: An administrator can add or remove contacts from a distribution group.   
Input: Distribution group ID, list of contacts to add or remove.   
Output: Updated distribution group record, with a recovery record created if applicable.   
  
1.18 Distribution Group Deletion Function   
Function ID: FR-18   
Description: An administrator can delete a distribution group, ensuring all associated email references are updated or removed.   
Input: Distribution group ID, confirmation for deletion.   
Output: Deleted distribution group record, with a recovery record created if applicable.   
  
1.19 Email Account Creation Function   
Function ID: FR-19   
Description: An administrator can create a new email account with username, password, and server configuration.   
Input: Username, password, server settings (e.g., IMAP/SMTP), account type.   
Output: A new email account record stored in the system.   
  
1.20 Email Account Deletion Function   
Function ID: FR-20   
Description: An administrator can delete an email account and process any associated emails or recovery records.   
Input: Email account ID, confirmation for deletion.   
Output: Deleted email account record, with associated data processed and a recovery record created if applicable.   
  
1.21 Email Account Management Function   
Function ID: FR-21   
Description: An administrator can update the configuration of an existing email account, including password, server settings, or account type.   
Input: Email account ID, updated configuration details.   
Output: Updated email account record and a recovery record created if applicable.   
  
1.22 User Account Creation Function   
Function ID: FR-22   
Description: An administrator can create a new user account with name, email, password, and role.   
Input: Name, email, password, role.   
Output: A new user account record stored in the system.   
  
1.23 User Account Management Function   
Function ID: FR-23   
Description: An administrator can update or delete a user account, updating related data (e.g., email accounts, calendars, contacts) as needed.   
Input: User ID, action type (update or delete), updated details (if updating).   
Output: Updated or deleted user account record, with a recovery record created if applicable.   
  
1.24 User Account Viewing Function   
Function ID: FR-24   
Description: An administrator can view the details of a user account, including name, role, associated email accounts, and access logs.   
Input: User ID.   
Output: Display of full user account details to the administrator.   
  
1.25 Retention Policy Creation Function   
Function ID: FR-25   
Description: An administrator can define a new retention policy with a name, description, duration, and trigger condition.   
Input: Policy name, description, duration, trigger condition.   
Output: A new retention policy record stored in the system.   
  
1.26 Retention Policy Application Function   
Function ID: FR-26   
Description: An administrator can apply a retention policy to an email or folder, ensuring the policy is enforced on the selected data.   
Input: Email or folder ID, retention policy ID.   
Output: Updated retention policy status for the selected data, and a recovery record created if applicable.   
  
1.27 Retention Policy Management Function   
Function ID: FR-27   
Description: An administrator can update or delete a retention policy, and the system will apply changes to affected data.   
Input: Retention policy ID, action type (update or delete), updated policy details (if updating).   
Output: Updated or deleted retention policy record, with a recovery record created if applicable.   
  
1.28 Expired Email Management Function   
Function ID: FR-28   
Description: An administrator can manage expired emails, including restoring or permanently deleting them.   
Input: Expired email ID, action type (restore or delete).   
Output: Updated email status (restored or deleted), and a recovery record created if applicable.   
  
1.29 Recovery Record Creation Function   
Function ID: FR-29   
Description: When an email, contact, event, or policy is modified or deleted, a recovery record is automatically created for audit and restoration purposes.   
Input: Modified or deleted data ID, action type, initiator ID.   
Output: A new recovery record stored in the system.   
  
1.30 Recovery Record Viewing Function   
Function ID: FR-30   
Description: An administrator can view recovery records to audit past actions and determine the feasibility of restoration.   
Input: Recovery record ID.   
Output: Display of full recovery record details to the administrator.