# Functional Requirement

1. Functional Requirements   
  
1.1 Email Creation Function   
 Function ID: FR-01   
 Description: A user or administrator can create a new email by filling in the subject, body, and recipient information. The email must be validated and stored in the email archive.   
 Input: Email subject, body, sender ID, recipient ID, timestamp, and formatting rules (optional).   
 Output: A new email stored in the email archive with a unique EmailID and status updated to "Draft" or "Pending Approval."  
  
1.2 Email Sending Function   
 Function ID: FR-02   
 Description: A user or administrator can send an existing email to the intended recipient after validation and approval (if required).   
 Input: Email to be sent, recipient validation result, and administrative approval status (if required).   
 Output: Email status updated to "Sent" in the email archive, and a confirmation message to the user.  
  
1.3 Email Receiving Function   
 Function ID: FR-03   
 Description: The system receives an email from an external source or another user, validates it, and stores it in the email archive under the recipient's information.   
 Input: Incoming email data including sender, recipient, subject, body, and timestamp.   
 Output: Email stored in the email archive with status "Received" and a notification sent to the recipient user.  
  
1.4 Email Reading Function   
 Function ID: FR-04   
 Description: A user or administrator can read the content of an existing email in the email archive. The system updates the email status to "Read" and logs the action if required.   
 Input: EmailID of the selected email.   
 Output: Displayed email content (subject, sender, body, attachments) and updated email status to "Read."  
  
1.5 Email Deletion Function   
 Function ID: FR-05   
 Description: A user or administrator can delete an email from the system. The system must confirm the deletion and log it if an administrator is involved.   
 Input: EmailID of the email to be deleted.   
 Output: Email removed from the email archive and a confirmation message sent to the user or administrator.  
  
1.6 Email Archiving Function   
 Function ID: FR-06   
 Description: A user or administrator can archive an email, moving it from the active inbox or sent items to the email archive.   
 Input: EmailID of the email to be archived.   
 Output: Email moved to the archive with updated status and a confirmation message to the user or administrator.  
  
1.7 Email Recovery Function   
 Function ID: FR-07   
 Description: A user or administrator can recover an archived email, moving it back to the active inbox or sent items.   
 Input: EmailID of the archived email.   
 Output: Email moved back to the active section with updated status and a confirmation message to the user or administrator.  
  
1.8 Contact Creation Function   
 Function ID: FR-08   
 Description: A user or administrator can create a new contact with name, email address, and phone number. The contact must be validated and stored in the user account database.   
 Input: Name, email address, phone number, and UserID.   
 Output: A new contact stored in the user account database with a unique ContactID and status updated to "Pending Approval" or "Active."  
  
1.9 Contact Update Function   
 Function ID: FR-09   
 Description: A user or administrator can update the information of an existing contact. The system must validate the new data and update the contact in the user account database.   
 Input: ContactID and updated contact information (name, email, phone number).   
 Output: Updated contact information stored in the user account database and a confirmation message to the user or administrator.  
  
1.10 Contact Deletion Function   
 Function ID: FR-10   
 Description: A user or administrator can delete a contact from the user account database. The system must confirm the deletion and log it if an administrator is involved.   
 Input: ContactID of the contact to be deleted.   
 Output: Contact removed from the database and a confirmation message sent to the user or administrator.  
  
1.11 Contact Viewing Function   
 Function ID: FR-11   
 Description: A user or administrator can view the details of an existing contact. The system must retrieve and display the contact information without modifying it.   
 Input: ContactID of the contact to be viewed.   
 Output: Displayed contact details (name, email, phone number, notes) and a log entry if an administrator is viewing it.  
  
1.12 User Account Creation Function   
 Function ID: FR-12   
 Description: An administrator can create a new user account by entering the username, email, password, and role. The system must validate the input and store the account in the user account database.   
 Input: Username, email address, password, and role.   
 Output: A new user account stored in the user account database with a unique AccountID and a confirmation message to the administrator.  
  
1.13 User Account Update Function   
 Function ID: FR-13   
 Description: A user or administrator can update the information of an existing user account. The system must validate the new data and update the account in the user account database.   
 Input: AccountID and updated user account information (username, password, email, role).   
 Output: Updated user account information stored in the user account database and a confirmation message to the user or administrator.  
  
1.14 User Account Deletion Function   
 Function ID: FR-14   
 Description: A user or administrator can delete a user account. The system must confirm the deletion, remove the account, and delete or archive associated data.   
 Input: AccountID of the account to be deleted.   
 Output: User account removed from the database, associated data deleted or archived, and a confirmation message to the user or administrator.  
  
1.15 User Account Viewing Function   
 Function ID: FR-15   
 Description: A user or administrator can view the details of an existing user account. The system must retrieve and display the account information without modifying it.   
 Input: AccountID of the user account to be viewed.   
 Output: Displayed user account details (username, email, role, creation date, last login) and a log entry if an administrator is viewing it.  
  
1.16 Email Folder Management Function   
 Function ID: FR-16   
 Description: A user or administrator can manage email folders by creating, renaming, deleting, or moving emails between folders.   
 Input: FolderID and folder management action (create, rename, delete, move).   
 Output: Updated email folder structure in the database and a confirmation message to the user or administrator.  
  
1.17 Email Format Management Function   
 Function ID: FR-17   
 Description: A user or administrator can manage email formatting rules by creating, editing, or deleting formatting templates.   
 Input: FormatID and formatting action (create, edit, delete).   
 Output: Updated email format configuration in the database and a confirmation message to the user or administrator.  
  
1.18 Email Format Application Function   
 Function ID: FR-18   
 Description: A user or administrator can apply formatting rules to an email, ensuring it is styled according to the system or user-defined template.   
 Input: EmailID and FormatID to be applied.   
 Output: Email updated with the specified formatting rules in the email archive.  
  
1.19 Email Archive Management Function   
 Function ID: FR-19   
 Description: An administrator can manage the email archive by setting retention policies, reorganizing folders, or modifying archive contents.   
 Input: ArchiveID and archive management action (set retention, reorganize, modify).   
 Output: Updated email archive structure and configuration and a confirmation message to the administrator.  
  
1.20 Email Archive Viewing Function   
 Function ID: FR-20   
 Description: A user or administrator can view the contents of the email archive, including filtering and searching for specific emails.   
 Input: ArchiveID or search/filter criteria.   
 Output: Displayed list of archived emails with details (subject, sender, timestamp, status) and a log entry if an administrator is viewing it.  
  
1.21 Administrator Assignment Function   
 Function ID: FR-21   
 Description: An administrator can assign administrative privileges to another user. The system must update the user account and log the action.   
 Input: Target UserID and administrative role assignment.   
 Output: Updated user account with administrative role and a log entry in the archive log.  
  
1.22 Administrator Permission Management Function   
 Function ID: FR-22   
 Description: An administrator can modify the permissions of another administrator, granting or revoking access to specific system functions.   
 Input: Target AdminID and permission update action (grant, revoke).   
 Output: Updated permissions in the user account database and a log entry in the archive log.  
  
1.23 Administrator Deletion Function   
 Function ID: FR-23   
 Description: An administrator can delete another administrator account. The system must confirm the deletion, remove the account, and log the action.   
 Input: AdminID of the administrator to be deleted.   
 Output: Administrator account removed from the database, permissions revoked, and a confirmation message to the administrator.  
  
1.24 Archive Log Management Function   
 Function ID: FR-24   
 Description: An administrator can view, filter, export, or delete entries in the archive log for auditing purposes.   
 Input: Log management action (view, filter, export, delete) and optional search criteria.   
 Output: Updated or retrieved archive log entries and a confirmation message to the administrator.