# Functional Requirement

# 1. Functional Requirements  
  
## 1.1 Email Creation Function   
Function ID: FR-01   
Description: The system allows the Administrator to create a new email by entering the subject, content, and selecting recipients.   
Input: Email subject, email content, selected Email Account or Shared Account, recipient Contact(s) or Distribution Group(s)   
Output: A new Email entity with attributes (EmailID, Subject, Body, SenderID, ReceiverID, Timestamp, Status, FolderID) is created and stored in the system.  
  
## 1.2 Email Sending Function   
Function ID: FR-02   
Description: The system allows the Administrator to send an email using the selected Email Account or Shared Account.   
Input: Email to be sent (EmailID), selected Email Account or Shared Account (EmailAccountID), recipient Contact(s) or Distribution Group(s)   
Output: Email is marked as "Sent" in the system, and stored in the Email Flow or Archive. A confirmation message is displayed.  
  
## 1.3 Email Receiving Function   
Function ID: FR-03   
Description: The system retrieves incoming emails from the configured Email Account or Shared Account and logs them in the Email Flow or Archive.   
Input: Incoming email data from the email server, associated Email Account or Shared Account (EmailAccountID)   
Output: A new Email entity is created with attributes (EmailID, Subject, Body, SenderID, ReceiverID, Timestamp, Status, FolderID), and stored in the system. The email is marked as "Received".  
  
## 1.4 Email Viewing Function   
Function ID: FR-04   
Description: The system allows the Administrator to view the details of a selected email.   
Input: Selected EmailID from the Email Flow or Archive   
Output: Displayed email details (Subject, Body, SenderID, ReceiverID, Timestamp, Status). The viewed email remains in its original location.  
  
## 1.5 Email Reply Function   
Function ID: FR-05   
Description: The system allows the Administrator to reply to a selected email.   
Input: Selected EmailID from the Email Flow or Archive, reply content, selected Email Account or Shared Account (EmailAccountID), recipient Contact(s) or Distribution Group(s)   
Output: A new Email entity is created as a reply, and marked as "Sent". The original email remains in the system.  
  
## 1.6 Email Forwarding Function   
Function ID: FR-06   
Description: The system allows the Administrator to forward a selected email to new recipients.   
Input: Selected EmailID from the Email Flow or Archive, forwarding content, selected Email Account or Shared Account (EmailAccountID), recipient Contact(s) or Distribution Group(s)   
Output: A new Email entity is created as a forward, and marked as "Sent". The original email remains in the system.  
  
## 1.7 Email Deletion Function   
Function ID: FR-07   
Description: The system allows the Administrator to delete a selected email from the Email Flow or Archive.   
Input: Selected EmailID from the Email Flow or Archive   
Output: The selected Email is removed from the Email Flow or Archive. A deletion confirmation is displayed.  
  
## 1.8 Email Archiving Function   
Function ID: FR-08   
Description: The system allows the Administrator to move a selected email from the Email Flow to the Archive based on retention policies.   
Input: Selected EmailID from the Email Flow, ArchiveID, PolicyID   
Output: The email is moved to the Archive and marked as "Archived". A confirmation message is displayed.  
  
## 1.9 Email Search Function   
Function ID: FR-09   
Description: The system allows the Administrator to search for emails in the Email Flow or Archive using specified criteria.   
Input: Search criteria such as subject, sender, receiver, date, or status   
Output: A list of matching Email entities with details (EmailID, Subject, SenderID, ReceiverID, Timestamp, Status) is displayed.  
  
## 1.10 Contact Management Function   
Function ID: FR-10   
Description: The system allows the Administrator to add, update, or delete Contact entries and manage their associations with Distribution Groups.   
Input: Contact details (Name, Email, PhoneNumber, Address), optional Distribution Group (GroupID)   
Output: Updated or new Contact entity (ContactID, Name, Email, PhoneNumber, Address, UserID) is stored in the system. Distribution Group associations are updated accordingly.  
  
## 1.11 Contact Addition Function   
Function ID: FR-11   
Description: The system allows the Administrator to add a new contact to the system and optionally assign it to a Distribution Group.   
Input: Contact details (Name, Email, PhoneNumber, Address), optional GroupID   
Output: A new Contact entity is created and stored in the system. The contact is optionally associated with a Distribution Group.  
  
## 1.12 Contact Update Function   
Function ID: FR-12   
Description: The system allows the Administrator to update an existing Contact's information and adjust its Distribution Group memberships.   
Input: Selected ContactID, updated details (Name, Email, PhoneNumber, Address), optional GroupID   
Output: Updated Contact entity is saved in the system. Distribution Group associations are updated accordingly.  
  
## 1.13 Contact Deletion Function   
Function ID: FR-13   
Description: The system allows the Administrator to delete an existing Contact and update its associations with Distribution Groups.   
Input: Selected ContactID   
Output: The Contact is removed from the system. Distribution Group associations are updated accordingly. A confirmation message is displayed.  
  
## 1.14 Distribution Group Creation Function   
Function ID: FR-14   
Description: The system allows the Administrator to create a new Distribution Group and assign Contacts to it.   
Input: Group name, selected ContactID(s)   
Output: A new Distribution Group entity (GroupID, Name, Description, OwnerID) is created, and associated Contacts are added.  
  
## 1.15 Distribution Group Management Function   
Function ID: FR-15   
Description: The system allows the Administrator to create, update, or delete Distribution Groups and manage their Contact memberships.   
Input: Selected Distribution GroupID, updated name, or selected Contacts to add/remove   
Output: Updated or new Distribution Group entity is stored in the system. Contact associations are updated accordingly.  
  
## 1.16 Distribution Group Update Function   
Function ID: FR-16   
Description: The system allows the Administrator to update the name or membership of a selected Distribution Group.   
Input: Selected Distribution GroupID, new name, and/or updated list of ContactID(s)   
Output: Updated Distribution Group entity is stored in the system. Contact associations are updated accordingly.  
  
## 1.17 Distribution Group Deletion Function   
Function ID: FR-17   
Description: The system allows the Administrator to delete a selected Distribution Group and disassociate its Contacts.   
Input: Selected Distribution GroupID   
Output: The Distribution Group is removed from the system. Contact associations are updated accordingly. A confirmation message is displayed.  
  
## 1.18 Email Account Creation Function   
Function ID: FR-18   
Description: The system allows the Administrator to create a new Email Account (Personal or Shared) for sending and receiving emails.   
Input: Email account details (Username, Password, Domain), account type (Personal or Shared), AdminID (for Shared Accounts)   
Output: A new Email Account entity (EmailAccountID, Username, Password, Domain, Status, UserID) is created and configured.  
  
## 1.19 Email Account Deletion Function   
Function ID: FR-19   
Description: The system allows the Administrator to delete an Email Account and archive or mark associated emails as inactive.   
Input: Selected EmailAccountID   
Output: The Email Account is removed from the system. Associated emails are archived or marked as inactive. A confirmation message is displayed.  
  
## 1.20 Shared Account Management Function   
Function ID: FR-20   
Description: The system allows the Administrator to manage Shared Accounts by creating, updating, or deleting them and associating them with Email Accounts.   
Input: Shared Account details (Name, Email, Password, Domain), associated EmailAccountID   
Output: Updated or new Shared Account entity (SharedAccountID, Name, Email, Password, Domain, AdminID) is stored. Email Account associations are updated accordingly.  
  
## 1.21 Calendar Event Creation Function   
Function ID: FR-21   
Description: The system allows the Administrator to create a new Calendar Event with details such as title, start time, end time, and optional invitees.   
Input: Event title, start and end times, description, optional ContactID(s) or Distribution GroupID(s) as invitees   
Output: A new Calendar Event entity (EventID, Title, Description, StartTime, EndTime, Location, CalendarID, OrganizerID) is created and stored in the Calendar.  
  
## 1.22 Calendar Event Update Function   
Function ID: FR-22   
Description: The system allows the Administrator to update an existing Calendar Event, including title, time, and invitees.   
Input: Selected EventID, updated title, start and end times, description, optional updated invitees (ContactID or Distribution GroupID)   
Output: Updated Calendar Event entity is stored in the Calendar. Invitee associations are updated accordingly.  
  
## 1.23 Calendar Event Deletion Function   
Function ID: FR-23   
Description: The system allows the Administrator to delete a Calendar Event and log the action.   
Input: Selected EventID   
Output: The Calendar Event is removed from the system. A deletion confirmation is displayed.  
  
## 1.24 Calendar View Function   
Function ID: FR-24   
Description: The system allows the Administrator to view all Calendar Events associated with their account.   
Input: CalendarID or UserID   
Output: A list of Calendar Events (EventID, Title, StartTime, EndTime, Description, Location) is displayed. The events remain in the Calendar.  
  
## 1.25 Meeting Scheduling Function   
Function ID: FR-25   
Description: The system allows the Administrator to schedule a meeting, create a Calendar Event, and send invitations via Email Account or Shared Account.   
Input: Meeting title, start and end times, description, selected invitees (ContactID or Distribution GroupID), selected Email Account or Shared Account (EmailAccountID)   
Output: A new Calendar Event is created and stored. Meeting invitation emails are sent and logged in the Email Flow or Archive.  
  
## 1.26 Email Flow Capture Function   
Function ID: FR-26   
Description: The system captures and logs all created, sent, or received emails into the Email Flow for tracking and compliance.   
Input: EmailID, EmailAccountID, FlowDescription, Timestamp, PolicyID   
Output: A new Email Flow entity (FlowID, EmailID, FlowDescription, Timestamp, PolicyID) is created and stored in the system.  
  
## 1.27 Retention Policy Application Function   
Function ID: FR-27   
Description: The system applies a configured Retention Policy to emails in the Email Flow, moving them to the Archive or deleting them as per policy rules.   
Input: Selected PolicyID, list of EmailID(s) in the Email Flow   
Output: Emails are archived or deleted based on the policy. Status and ArchiveID are updated accordingly.  
  
## 1.28 Retention Policy Management Function   
Function ID: FR-28   
Description: The system allows the Administrator to create, update, or delete Retention Policies.   
Input: Policy name, description, duration, ArchiveID (if applicable), PolicyID (for updates or deletions)   
Output: Updated or new Retention Policy entity (PolicyID, Name, Description, Duration, ArchiveID) is stored in the system.  
  
## 1.29 Expired Email Handling Function   
Function ID: FR-29   
Description: The system allows the Administrator to manage expired emails by recovering, permanently deleting, or moving them to a different archive location.   
Input: Selected ExpiredEmailID, action type (recover, delete, or move), ArchiveID (if applicable)   
Output: Expired Email status and location are updated. Recovery or deletion actions are logged in the Recovery Record.  
  
## 1.30 Email Recovery Function   
Function ID: FR-30   
Description: The system allows the Administrator to recover a deleted or expired email from the Archive and restore it to the Email Flow.   
Input: Selected EmailID or ExpiredEmailID from the Archive, RecoveryRecord details (ItemType, RecoveryDate, UserID)   
Output: The recovered Email is moved to the Email Flow and marked as "Recovered". A Recovery Record is created and stored.  
  
## 1.31 Contact Recovery Function   
Function ID: FR-31   
Description: The system allows the Administrator to recover a deleted or expired Contact from the Archive and restore it to the active Contact list.   
Input: Selected ContactID from the Archive, RecoveryRecord details (ItemType, RecoveryDate, UserID)   
Output: The recovered Contact is added back to the active list and marked as "Recovered". A Recovery Record is created and stored.  
  
## 1.32 Calendar Event Recovery Function   
Function ID: FR-32   
Description: The system allows the Administrator to recover an expired or archived Calendar Event and restore it to the active Calendar.   
Input: Selected EventID from the Archive, RecoveryRecord details (ItemType, RecoveryDate, UserID)   
Output: The recovered Calendar Event is restored to the Calendar and marked as "Recovered". A Recovery Record is created and stored.  
  
## 1.33 Recovery Record Management Function   
Function ID: FR-33   
Description: The system allows the Administrator to create, view, update, or delete Recovery Records to track recovery actions.   
Input: RecoveryRecord details (ItemType, ItemID, RecoveryDate, UserID), action type (create, update, delete)   
Output: Updated or new RecoveryRecord entity is stored in the system. Recovery history is maintained for audit purposes.  
  
## 1.34 Email Folder Management Function   
Function ID: FR-34   
Description: The system allows the Administrator to manage Email Folders, including creating, updating, or deleting folders and associating emails with them.   
Input: Folder name, description, selected EmailID(s) for association, action type (create, update, delete)   
Output: Updated or new EmailFolder entity is stored. Email associations are updated accordingly.  
  
## 1.35 Schedule Invite Update Function   
Function ID: FR-35   
Description: The system allows the Administrator to update a meeting invitation by modifying the event details and resending the updated invitation.   
Input: Selected EventID, updated event details, selected Email Account or Shared Account (EmailAccountID), selected invitee(s) (ContactID or Distribution GroupID)   
Output: Updated Calendar Event is stored. A new ScheduleInvite is generated and sent. Email Flow and Archive are updated accordingly.  
  
## 1.36 Schedule Invite Deletion Function   
Function ID: FR-36   
Description: The system allows the Administrator to delete a meeting invitation and send a cancellation email to all invitees.   
Input: Selected EventID, selected Email Account or Shared Account (EmailAccountID), list of invitee(s) (ContactID or Distribution GroupID)   
Output: The ScheduleInvite is deleted. A cancellation email is sent and stored in the Email Flow or Archive. The event is marked as "Invitation Canceled".  
  
## 1.37 Archive Management Function   
Function ID: FR-37   
Description: The system allows the Administrator to manage the Archive by viewing, recovering, or permanently deleting archived items.   
Input: Selected ArchiveID, action type (view, recover, delete)   
Output: Archive is updated. Items are either restored to the Email Flow or permanently deleted. Recovery actions are logged in the Recovery Record.  
  
## 1.38 Administrator Management Function   
Function ID: FR-38   
Description: The system allows the Administrator to manage other Administrator accounts by creating, updating, or deleting them.   
Input: Administrator details (Name, Role, AdminID), action type (create, update, delete)   
Output: Updated or new Admin entity is stored. Access rights and roles are updated accordingly. Actions are logged for audit purposes.