# Functional Requirement

### 1.1 Create New Email

\*\*Function Number: FR-01\*\*

\*\*Description\*\*: Users can create and send new emails through the system, which must support email formatting, attachment addition, sending, and saving.

\*\*Input\*\*:

- User ID (UserID)

- Recipient Email Address (ReceiverID)

- Email Subject (Subject)

- Email Body (Body)

- Attachments (Optional)

- Send Time (SentAt)

\*\*Output\*\*:

- Email ID (EmailID)

- Success message for sending

- Email saved to the "Sent" email folder

### 1.2 Send Email

\*\*Function Number: FR-02\*\*

\*\*Description\*\*: Users can send emails that have been drafted through the system, which must validate the email format and record the sending log.

\*\*Input\*\*:

- User ID (UserID)

- Email ID (EmailID)

- Recipient Email Address (ReceiverID)

- Email Subject (Subject)

- Email Body (Body)

- Attachments (Optional)

\*\*Output\*\*:

- Success message for sending

- Email saved to the "Sent" email folder

- Sending log record

### 1.3 Receive Email

\*\*Function Number: FR-03\*\*

\*\*Description\*\*: The system receives and stores emails sent to the user, allowing users to view new emails.

\*\*Input\*\*:

- User ID (UserID)

- Email content (including sender, subject, body, attachments, etc.)

\*\*Output\*\*:

- Email ID (EmailID)

- Email saved to the "Inbox"

- New email notification

### 1.4 Search for Emails

\*\*Function Number: FR-04\*\*

\*\*Description\*\*: Users can search for existing emails through the system, supporting a variety of search conditions.

\*\*Input\*\*:

- User ID (UserID)

- Search conditions (such as subject, sender, recipient, date range, keywords, etc.)

\*\*Output\*\*:

- List of matching emails

- Search result prompt

### 1.5 Manage Email Folders

\*\*Function Number: FR-05\*\*

\*\*Description\*\*: Users can create, rename, delete email folders, and move emails to different folders.

\*\*Input\*\*:

- User ID (UserID)

- Folder operation type (such as create, rename, delete, move email, etc.)

- Folder Name (FolderName)

- Target Folder ID (Optional)

- Email ID (Optional)

\*\*Output\*\*:

- Success message for folder operation

- Updated list of email folders

### 1.6 Create New Schedule

\*\*Function Number: FR-06\*\*

\*\*Description\*\*: Users can create new schedules through the system and set reminder tasks.

\*\*Input\*\*:

- User ID (UserID)

- Schedule Title (Title)

- Start Time (StartDateTime)

- End Time (EndDateTime)

- Location (Optional)

- Description (Optional)

- Participants (Optional)

- Reminder settings (such as 1 hour in advance, 1 day in advance, etc.)

\*\*Output\*\*:

- Schedule ID (EventID)

- Success message for schedule creation

- Schedule saved to the user's schedule list

- Reminder task added to the task queue

### 1.7 View Schedule

\*\*Function Number: FR-07\*\*

\*\*Description\*\*: Users can view created schedules, including detailed information and reminder settings.

\*\*Input\*\*:

- User ID (UserID)

- Schedule ID (EventID)

\*\*Output\*\*:

- Detailed schedule information (including title, time, location, description, participants, reminder settings, etc.)

- Success message for viewing

### 1.8 Modify Schedule

\*\*Function Number: FR-08\*\*

\*\*Description\*\*: Users can modify created schedules, including title, time, location, description, participants, and reminder settings.

\*\*Input\*\*:

- User ID (UserID)

- Schedule ID (EventID)

- Updated schedule information (such as title, time, location, description, participants, reminder settings, etc.)

\*\*Output\*\*:

- Success message for schedule modification

- Updated detailed schedule information

### 1.9 Delete Schedule

\*\*Function Number: FR-09\*\*

\*\*Description\*\*: Users can delete created schedules and cancel related reminder tasks.

\*\*Input\*\*:

- User ID (UserID)

- Schedule ID (EventID)

\*\*Output\*\*:

- Success message for schedule deletion

- Updated schedule list

### 1.10 Create New Contact

\*\*Function Number: FR-10\*\*

\*\*Description\*\*: Users can create new contacts through the system and add them to the contact list.

\*\*Input\*\*:

- User ID (UserID)

- First Name (FirstName)

- Last Name (LastName)

- Email (Email)

- Phone (Phone)

- Address (Optional)

- Distribution Group (Optional)

\*\*Output\*\*:

- Contact ID (ContactID)

- Success message for contact creation

- Contact saved to the user's contact list

### 1.11 View Contact

\*\*Function Number: FR-11\*\*

\*\*Description\*\*: Users can view created contacts, including detailed information and distribution group.

\*\*Input\*\*:

- User ID (UserID)

- Contact ID (ContactID)

\*\*Output\*\*:

- Detailed contact information (including first name, email, phone, address, distribution group, etc.)

- Success message for viewing

### 1.12 Modify Contact

\*\*Function Number: FR-12\*\*

\*\*Description\*\*: Users can modify created contact information, including first name, email, phone, address, and distribution group.

\*\*Input\*\*:

- User ID (UserID)

- Contact ID (ContactID)

- Updated contact information (such as first name, email, phone, address, distribution group, etc.)

\*\*Output\*\*:

- Success message for contact modification

- Updated detailed contact information

### 1.13 Delete Contact

\*\*Function Number: FR-13\*\*

\*\*Description\*\*: Users can delete created contacts and remove them from the distribution group.

\*\*Input\*\*:

- User ID (UserID)

- Contact ID (ContactID)

\*\*Output\*\*:

- Success message for contact deletion

- Updated contact list

### 1.14 Create Distribution Group

\*\*Function Number: FR-14\*\*

\*\*Description\*\*: Users can create new distribution groups through the system and add members.

\*\*Input\*\*:

- User ID (UserID)

- Distribution Group Name (ListName)

- List of Members (including contact IDs)

\*\*Output\*\*:

- Distribution Group ID (ListID)

- Success message for distribution group creation

- Distribution group saved to the user's distribution group list

### 1.15 View Distribution Group

\*\*Function Number: FR-15\*\*

\*\*Description\*\*: Users can view created distribution groups, including the list of members.

\*\*Input\*\*:

- User ID (UserID)

- Distribution Group ID (ListID)

\*\*Output\*\*:

- Detailed distribution group information (including name, description, list of members, etc.)

- Success message for viewing

### 1.16 Modify Distribution Group

\*\*Function Number: FR-16\*\*

\*\*Description\*\*: Users can modify created distribution group information, including name, description, and list of members.

\*\*Input\*\*:

- User ID (UserID)

- Distribution Group ID (ListID)

- Updated distribution group information (such as name, description, list of members, etc.)

\*\*Output\*\*:

- Success message for distribution group modification

- Updated detailed distribution group information

### 1.17 Delete Distribution Group

\*\*Function Number: FR-17\*\*

\*\*Description\*\*: Users can delete created distribution groups and remove them from the list of members.

\*\*Input\*\*:

- User ID (UserID)

- Distribution Group ID (ListID)

\*\*Output\*\*:

- Success message for distribution group deletion

- Updated list of distribution groups

### 1.18 Set Reminder Task

\*\*Function Number: FR-18\*\*

\*\*Description\*\*: Users can set reminder tasks for schedules or tasks and choose the reminder time and method.

\*\*Input\*\*:

- User ID (UserID)

- Task or Schedule ID (TaskID or EventID)

- Reminder time (such as 1 hour in advance, 1 day in advance, etc.)

- Reminder method (such as pop-up, email notification, etc.)

\*\*Output\*\*:

- Reminder Task ID (TaskID)

- Success message for reminder task setting

- Reminder task added to the task queue

### 1.19 View Reminder Task

\*\*Function Number: FR-19\*\*

\*\*Description\*\*: Users can view set reminder tasks, including detailed information and status.

\*\*Input\*\*:

- User ID (UserID)

- Reminder Task ID (TaskID)

\*\*Output\*\*:

- Detailed reminder task information (including task or schedule ID, reminder time, reminder method, status, etc.)

- Success message for viewing

### 1.20 Delete Reminder Task

\*\*Function Number: FR-20\*\*

\*\*Description\*\*: Users can delete set reminder tasks and remove them from the task queue.

\*\*Input\*\*:

- User ID (UserID)

- Reminder Task ID (TaskID)

\*\*Output\*\*:

- Success message for reminder task deletion

- Updated list of reminder tasks

### 1.21 Manage Administrator Permissions

\*\*Function Number: FR-21\*\*

\*\*Description\*\*: Administrators can assign and manage permissions for users or shared accounts.

\*\*Input\*\*:

- Administrator ID (AdminID)

- Target User ID (UserID or AdminID)

- Permission type (such as email management, schedule management, contact management, distribution group management, reminder task management, etc.)

\*\*Output\*\*:

- Success message for permission management

- Updated permission configuration

### 1.22 Create Mailbox

\*\*Function Number: FR-22\*\*

\*\*Description\*\*: Users can create new mailbox accounts through the system and set initial information.

\*\*Input\*\*:

- User ID (UserID)

- Email Address (Email)

- Password (Password)

- First Name (FirstName)

- Distribution Group (Optional)

\*\*Output\*\*:

- Mailbox ID (MailboxID)

- Success message for mailbox creation

- Mailbox information saved to the user's mailbox list

### 1.23 Manage Mailbox Permissions

\*\*Function Number: FR-23\*\*

\*\*Description\*\*: Users or administrators can assign and manage permissions for mailbox accounts.

\*\*Input\*\*:

- User ID (UserID or AdminID)

- Mailbox ID (MailboxID)

- Permission type (such as send email, view email, manage folders, etc.)

- Target user or distribution group

\*\*Output\*\*:

- Success message for mailbox permission management

- Updated mailbox permission configuration

### 1.24 Delete Mailbox

\*\*Function Number: FR-24\*\*

\*\*Description\*\*: Users or administrators can delete created mailbox accounts and handle related data.

\*\*Input\*\*:

- User ID (UserID or AdminID)

- Mailbox ID (MailboxID)

\*\*Output\*\*:

- Success message for mailbox deletion

- Updated mailbox list

### 1.25 Create Shared Account

\*\*Function Number: FR-25\*\*

\*\*Description\*\*: Administrators can create shared accounts through the system and assign permissions.

\*\*Input\*\*:

- Administrator ID (AdminID)

- Shared Account Name (AccountName)

- Associated Email (Optional)

- Permission type (such as read-only, writable, administrator, etc.)

- Target user or distribution group

\*\*Output\*\*:

- Shared Account ID (AccountID)

- Success message for shared account creation

- Shared account information saved to the system

### 1.26 Manage Shared Account Permissions

\*\*Function Number: FR-26\*\*

\*\*Description\*\*: Administrators or users can assign and manage permissions for shared accounts.

\*\*Input\*\*:

- User ID (UserID or AdminID)

- Shared Account ID (AccountID)

- Permission type (such as read-only, writable, administrator, etc.)

- Target user or distribution group

\*\*Output\*\*:

- Success message for shared account permission management

- Updated shared account permission configuration

### 1.27 Delete Shared Account

\*\*Function Number: FR-27\*\*

\*\*Description\*\*: Administrators or users can delete created shared accounts and handle related data.

\*\*Input\*\*:

- User ID (UserID or AdminID)

- Shared Account ID (AccountID)

\*\*Output\*\*:

- Success message for shared account deletion

- Updated list of shared accounts

### 1.28 Personal Email Archiving

\*\*Function Number: FR-28\*\*

\*\*Description\*\*: Users can archive specified emails to their personal archive folder.

\*\*Input\*\*:

- User ID (UserID)

- Email ID (EmailID)

- Archiving type (such as personal archiving)

\*\*Output\*\*:

- Success message for archiving

- Email saved to the personal archive folder

### 1.29 Server Email Archiving

\*\*Function Number: FR-29\*\*

\*\*Description\*\*: The system can automatically archive emails to the server archive storage location according to preset policies.

\*\*Input\*\*:

- Email ID (EmailID)

- Archiving policy (such as by time, by email type, etc.)

- Archiving type (such as server archiving)

\*\*Output\*\*:

- Success message for archiving

- Email saved to the server archive storage location

### 1.30 Email Flow Capture Archiving

\*\*Function Number: FR-30\*\*

\*\*Description\*\*: The system can capture emails from the email flow and archive them to the specified location according to the policy.

\*\*Input\*\*:

- Email flow (including email content, metadata, etc.)

- Archiving policy (such as by time, by email type, etc.)

- Archiving type (such as email flow capture archiving)

\*\*Output\*\*:

- Success message for archiving

- Email saved to the specified archive location

### 1.31 Policy-Based Classification Archiving

\*\*Function Number: FR-31\*\*

\*\*Description\*\*: Users or administrators can classify and archive emails according to preset policies.

\*\*Input\*\*:

- User ID (UserID or AdminID)

- Archiving policy (such as by time, by email type, etc.)

- Archiving type (such as policy-based classification archiving)

\*\*Output\*\*:

- Success message for archiving

- Email saved to the specified archive folder or storage location

### 1.32 View Archived Email

\*\*Function Number: FR-32\*\*

\*\*Description\*\*: Users can view archived emails, including detailed information and attachments.

\*\*Input\*\*:

- User ID (UserID)

- Archived Email ID (ArchiveID)

\*\*Output\*\*:

- Detailed archived email information (including subject, sender, recipient, body content, attachments, etc.)

- Success message for viewing

### 1.33 Manage Archived Emails

\*\*Function Number: FR-33\*\*

\*\*Description\*\*: Users can manage archived emails, including restore, delete, and export.

\*\*Input\*\*:

- User ID (UserID)

- Archived Email ID (ArchiveID)

- Management operation (such as restore, delete, export, etc.)

\*\*Output\*\*:

- Success message for management operation

- Updated list of archived emails

### 1.34 Backup Data

\*\*Function Number: FR-34\*\*

\*\*Description\*\*: Users or administrators can back up data in the system and choose the backup method and storage path.

\*\*Input\*\*:

- User ID (UserID or AdminID)

- Data type (such as email, contacts, schedules, etc.)

- Backup method (such as local backup, cloud backup, etc.)

- Storage path

\*\*Output\*\*:

- Success message for backup

- Backup file path

- Backup log record

### 1.35 Restore Data

\*\*Function Number: FR-35\*\*

\*\*Description\*\*: Users or administrators can restore data from backup files and choose the restore target.

\*\*Input\*\*:

- User ID (UserID or AdminID)

- Backup file path

- Restore target (such as inbox, contact list, etc.)

\*\*Output\*\*:

- Success message for restore

- Updated data list

- Restore log record

### 1.36 View Backup Logs

\*\*Function Number: FR-36\*\*

\*\*Description\*\*: Users or administrators can view system backup logs, including detailed information about backup operations.

\*\*Input\*\*:

- User ID (UserID or AdminID)

- Filter conditions (such as operation time, operation type, operation user, etc.)

\*\*Output\*\*:

- Backup log list (including operation time, operation type, operation user, related mailbox, backup path, data type, etc.)

- Success message for viewing

### 1.37 View Restore Logs

\*\*Function Number: FR-37\*\*

\*\*Description\*\*: Users or administrators can view system restore logs, including detailed information about restore operations.

\*\*Input\*\*:

- User ID (UserID or AdminID)

- Filter conditions (such as operation time, operation type, operation user, etc.)

\*\*Output\*\*:

- Restore log list (including operation time, operation type, operation user, related mailbox, restore path, data type, etc.)

- Success message for viewing

### 1.38 Manage Archiving Policies

\*\*Function Number: FR-38\*\*

\*\*Description\*\*: Users or administrators can create, edit, and delete archiving policies and choose the archiving target.

\*\*Input\*\*:

- User ID (UserID or AdminID)

- Archiving policy operation (such as create, edit, delete)

- Archiving policy (such as by time, by email type, etc.)

- Archiving target (such as personal archiving, server archiving, etc.)

\*\*Output\*\*:

- Success message for archiving policy management

- Updated list of archiving policies

### 1.39 Delete Backup Logs

\*\*Function Number: FR-39\*\*

\*\*Description\*\*: Administrators can delete specified backup log records.

\*\*Input\*\*:

- Administrator ID (AdminID)

- Backup Log ID (LogID)

\*\*Output\*\*:

- Success message for backup log deletion

- Updated list of backup logs

### 1.40 Delete Restore Logs

\*\*Function Number: FR-40\*\*

\*\*Description\*\*: Administrators can delete specified restore log records.

\*\*Input\*\*:

- Administrator ID (AdminID)

- Restore Log ID (LogID)

\*\*Output\*\*:

- Success message for restore log deletion

- Updated list of restore logs

### 1.41 View Archiving Logs

\*\*Function Number: FR-41\*\*

\*\*Description\*\*: Users or administrators can view system archiving logs, including detailed information about archiving operations.

\*\*Input\*\*:

- User ID (UserID or AdminID)

- Filter conditions (such as operation time, operation type, operation user, etc.)

\*\*Output\*\*:

- Archiving log list (including operation time, operation type, operation user, related mailbox, archiving path, data type, etc.)

- Success message for viewing

### 1.42 Delete Archiving Logs

\*\*Function Number: FR-42\*\*

\*\*Description\*\*: Administrators can delete specified archiving log records.

\*\*Input\*\*:

- Administrator ID (AdminID)

- Archiving Log ID (LogID)

\*\*Output\*\*:

- Success message for archiving log deletion

- Updated list of archiving logs

### 1.43 Account Registration

\*\*Function Number: FR-43\*\*

\*\*Description\*\*: Users can register new accounts through the system and set initial information.

\*\*Input\*\*:

- Username (Username)

- Email (Email)

- Password (Password)

\*\*Output\*\*:

- Success message for account registration

- Account information saved to the user account database

- Registration log record

### 1.44 Set Administrator Permissions

\*\*Function Number: FR-44\*\*

\*\*Description\*\*: Administrators can assign administrator permissions to users or shared accounts.

\*\*Input\*\*:

- Administrator ID (AdminID)

- Target User ID (UserID or AdminID)

- Permission type (such as super administrator, regular administrator, etc.)

\*\*Output\*\*:

- Success message for administrator permission setting

- Updated permission configuration

### 1.45 Account Login

\*\*Function Number: FR-45\*\*

\*\*Description\*\*: Users can log in to their accounts through the system and obtain session information.

\*\*Input\*\*:

- Username (Username)

- Password (Password)

\*\*Output\*\*:

- Success message for login

- Session information (such as user ID, login time, IP address, etc.)

- Login log record