项目文档

# Functional Requirement

Functional Requirements  
Requirement ID Description Inputs Outputs Functional Description  
FR-001 Send Email Sender, recipient(s), subject, message body, attachments Confirmation of successful delivery or error message User can compose and send an email with formatting options and attachments.  
FR-002 Receive Email Incoming email from external/internal source Notification and display of received email in inbox System receives and displays incoming emails in the user’s inbox.  
FR-003 Search Emails Search query (text, date range, sender, folder) List of matching emails Users can search through their emails using keywords, dates, and filters.  
FR-004 Organize Emails into Folders Folder name, list of selected emails Updated folder structure Users can create, rename, delete folders and move emails between them.  
FR-005 Format Emails Text selection, font style, size, color, bullet points, etc. Formatted text preview Supports rich-text formatting when composing emails.  
FR-006 Create Contacts Name, email address, phone number, company New contact entry Users can add and manage personal and shared contact entries.  
FR-007 Manage Distribution Groups Group name, member list Updated distribution group Users can create, edit, and delete groups for bulk email sending.  
FR-008 Schedule Meetings/Events Event title, time, participants, location Calendar event created Users can schedule meetings, set reminders, and invite others.  
FR-009 Set Task Reminders Task description, due date, frequency Reminder notifications Users can set recurring or one-time task reminders.  
FR-010 Create Email Accounts (Admin) Username, password, domain, role New user account Admins can create new user and shared email accounts.  
FR-011 Archive Emails Selection of emails, archive policy Archived emails stored Users can manually or automatically archive emails based on policies.  
FR-012 Server Archiving Policy rules (retention period, auto-archive triggers) Archived emails stored on server System archives emails based on predefined policies.  
FR-013 Recover Expired Emails Archive search, recovery request Restored email or notification of failure Users can recover expired emails within allowed retention periods.  
FR-014 Backup System Data Backup scope (file-level, database-level), timestamp Backup log and status System performs automated backups at scheduled intervals.  
FR-015 Restore Data Recovery point-in-time, scope (user/email/database) Data restored to specified state System allows restoring data to a specific point in time.  
FR-016 Audit Logs User actions, timestamps, affected resources Log files accessible to ad

# External Description

3. External Interfaces  
3.1 Hardware Interfaces  
Standard desktop/laptop computers  
Mobile devices (iOS, Android)  
Servers (for hosting email services and databases)  
3.2 Software Interfaces  
Web browser (Chrome, Firefox, Edge, Safari)  
Email clients (Outlook, Thunderbird)  
Operating systems (Windows, macOS, Linux)  
3.3 Communication Interfaces  
SMTP (Simple Mail Transfer Protocol) – for sending emails  
IMAP/POP3 – for retrieving emails  
RESTful APIs – for integration with other enterprise systems (e.g., CRM, ERP)  
LDAP – for directory service integration (user authentication)  
3.4 Database Interface  
SQL-based relational database (MySQL, PostgreSQL, SQL Server)  
NoSQL database (optional for scalability and performance)