GFZA IOP

SOFTWARE REQUIREMENTS SPECIFICATION (SRS)

System Name: GFZA Internal Operations Portal (IOP
Version: 1.0
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1. INTRODUCTION

1.1 Purpose

The **GFZA Internal Operations Portal(IOP)** is an internal enterprise system designed to digitize and streamline internal communication, HR operations, MIS workflows, asset management, conference room booking, and employee service processes.
It eliminates paper-based processes and provides a unified internal operations portal for staff communication, operations, notifications, and administrative workflows.

1.2 Scope

The system will support the following core modules:

1. HR Communication & Internal Memos
2. Electronic Meal Selection System
3. MIS Support/Troubleshooting Requests
4. Computer & Asset Lifecycle Management
5. Conference Room Booking System
6. Employee Directory & Email Auto-Creation
7. Email Notifications System
8. Modular API v1.x Architecture
9. Admin Dashboards for HR, MIS, and System Admins

The primary users:

- HR Department
- MIS Department
- General Staff
- Directors & Senior Management
- System Administrators

The platform will be built using:

- **Next Js and superbase or Mongo DB**
- **Mobile-first UI**
- **Clean minimalist interface**

2. SYSTEM OVERVIEW

The system acts as a **central internal portal** for all staff.
It replaces all paper-based processes such as memos, food selection sheets, MIS troubleshooting forms, computer assignment tracking, and room reservation logs.

The architecture is **modular**, allowing modules to be plugged in/out without breaking the core system.

API endpoints follow versioning:

- /api/v1/...
- /api/v2/... (future backward compatibility)

Notifications are sent **through only email**

3. SYSTEM FEATURES

3.1 Meal Selection System

Functional Requirements

- HR uploads the weekly meal plan (Mon–Fri).
- Employees select their preferred meals for the week
- HR Ticks after the user is given food. Can tick for a whole department. And statuses will show
- Staff members pay GHS 5 per meal, free for NSS personnel.
- Staff can pay for the whole week or in advance
- HR takes records of payments and makes accounts and reports
- reminders are sent when food is ready, could be sound playing on the user's pc.
- HR can view Daily food count summary and more info
- HR can download nad print A4 PDF for caterers to see how many meals to prepare under each meal
- HR can print a pdf that shows who selected what. Department by department, for each day.
- Prevent duplicate
- Record who selected what and what time

3.2 HR MODULE

3.1.1 Internal Memos

Functional Requirements

- HR can compose a memo and publish it to:
    - All staff
    - Selected departments
    - Selected individuals

- Staff receive **email notification** of new memos and sound play for each memo
- Memos appear in each user's dashboard.

- Memos can include attachments (PDF, Word, image, xls or other file types).
- HR can track:
    - Read/unread status
    - Recipients reached
- Searchable memo archive.

3.3 Employee Directory & Auto Email Creation

Functional Requirements

- When adding an employee, the system auto-generates an email:
    - {lastname first letter}.{firstname}@gfzaiop.com
    - If conflict, append number (e.g., mclement2@gfzaiop.com, mclement2@gfzaiop.com) for Clement Mensah
- MIS dashboard shows:
    - All system-generated emails
    - Status: *Created*, *Not Created*, *Activated*, *Not Activated*

- MIS marks email as:
    - **Created** (after creation in email server)
    - **Activated** (after user logs in on phone and enables notifications)

- System provides instructions for user activation.

3.4 MIS MODULE

3.4.1 Troubleshooting / IT Support Requests

Functional Requirements

- Staff submit IT issues through ticket form:
    - User name

    - Department
    - Floor
    - Device type
    - Device serial number
    - Issue description

- MIS receives email + ticket in dashboard.
- MIS assigns technician and updates status:
    - Open
    - In Progress
    - Resolved
    - Referred
- Full audit trail maintained.

3.4.2 Asset Lifecycle Management

Definition:

The system automatically tracks the **entire life** of each GFZA ICT asset (computer, laptop, printer, router, etc.) from purchase → assignment → usage → reassignment → retirement.

Functional Requirements

- MIS registers each asset:
    - Type [Enum] more can be added
    - Serial number
    - Date of purchase
    - Warranty details
    - Cost
    - Vendor
    - Current condition

- System tracks:
    - Which employee currently owns/uses the asset
    - Assignment date

    - Transfer history between departments
    - Maintenance & repair logs
    - Issues linked to specific assets
    - End-of-life and replacement timeline

- When an employee leaves:
    - MIS marks the asset as “Available for reassignment.”
    - MIS reassigns the asset to the new user
    - Historical logs remain intact

This completely solves the “we don’t know who owns this device" problem.

3.5 Conference Room Booking

Functional Requirements

- Users view available rooms + time slots.
- Users book rooms with:
    - Purpose
    - Meeting type
    - Start/End time
    - Required facilities (TV, projector, etc.)
- Prevent double booking.
- Email confirmation upon successful reservation.
- HR/Admin can:
    - Override or cancel bookings
    - View daily/weekly schedule
    - Generate usage reports

3.6 Community Chat (to be added to future features)

Functional Requirements

- Single communication feed (like Slack #general).
- All staff can post and read messages.
- HR and Management have “priority announcement” posts.
- Users can:
    - Comment
    - Tag departments
    - Upload simple files/images
- Email notification summary for important posts only.

4. NON-FUNCTIONAL REQUIREMENTS

4.1 Performance

- Portal must load under 2 seconds on 4G.
- Optimized ui
- Cache frequently used pages.
- Database indexing for large data.

4.2 Security

- Role-Based Access Control (RBAC).
- Encrypt sensitive data.
- Server-side validation for all forms.
- Audit trail of all admin actions.

4.3 Availability

- 99% uptime during working hours.
- Daily automated backups.

4.4 Scalability

- Modular architecture allows new modules to be added without downtime.

4.5 Usability

- Mobile-first design.
- Simple, clean interface.
- Accessible for non-technical staff.

5. SYSTEM ARCHITECTURE

5.1 Modular Design

Each module acts independently:

- HR Module
- MIS Module
- Meal Management Module
- Asset Management Module
- Chat Module
- Email Notification Service
- User Management Module
- Booking Module

Modules can be disabled/enabled without affecting the system.

6. API REQUIREMENTS

6.1 Versioned API

All endpoints start with:

/api/v1/

Examples:

- /api/v1/dashboard/hr
- /api/v1/dashboard/mis
- /api/v1/employees/create
- /api/v1/assets/assign
- /api/v1/chat/messages

Future versions will use /api/v2/...

7. USER ROLES & PERMISSIONS

7.1 Admin

- Full access
- Manage modules
- Add or memove roles
- View system logs

7.2 HR

- Manage memos
- Manage meal selections
- Manage employee records (excluding MIS functions)

7.3 MIS

- Manage troubleshooting tickets
- Manage asset lifecycle
- Manage system-generated emails
- Track email creation/activation
- Oversee IT infrastructure records

7.4 General Staff

- Read memos
- Select meals
- Submit IT issues
- Book rooms
- Join community chat

8. EMAIL NOTIFICATION SYSTEM

Triggers:

- New memo
- Meal reminder
- IT ticket updates
- Room booking confirmation
- HR announcements
- Community chat priority messages

Emails must be queued to improve performance.

Notification sounds on dashboards

9. DATABASE REQUIREMENTS

All modules require structured relational tables:

- Employees
- Departments
- Memos
- Meals
- Tickets
- Assets
- Asset history
- Rooms
- Bookings

- Chat messages
- Email status logs

10. CONSTRAINTS

- Must use Nextjs
- Must be mobile-first.
- Must be minimalistic in UI.
- Must use email only for notifications.
- Must comply with internal IT security practices.

Can enable and disable email notifications.
Email config can be done in code and in the admin dashboard as well.