FUNCTIONAL   REQUIREMENTS   DOCUMENT

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Project Sponsor: *Vydehi Institute of Medical Science & Research Center*
Document Number : *FRD-BA-R0*
Date : *05/10/2024*

A) DOCUMENT REVESIONS

DATE	REVISION NUMBER	DOCUMENT CHANGES	REVIEWED BY

B) APPROVALS

DATE	ROLE	NAME	APPROVAL

KINDLY NOTE THAT ALL THE INFORMATION AND ELEMENTS DETAILED WITHIN THIS DOCUMENT ARE OPEN TO CUSTOMIZATION IN ALIGNMENT WITH THE PROJECT PLAN OR ANY SPECIFIC REQUIREMENTS THAT MAY ARISE. WE ARE COMMITTED TO TAILORING OUR APPROACH AND CONTENT TO BEST SUIT THE EVOLVING NEEDS OF THE PROJECT.

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OVERVIEW

❖ *The functional requirements document (FRD) is a formal statement of an application's functional requirements. The developers agree to provide the capabilities specified. The client agrees to find the product satisfactory if it provides the capabilities specified in the FRD.*

❖ *Quality is meeting requirements. For that reason, the FRD is the central document in system development. It is used for the following:*

- *Designing and developing tile application system.*
- *Evaluating the product in all subsequent phases of the life cycle.*
- *Determining the success of the project.*

❖ *The FRD has the following characteristics:*

- *It demonstrates that the application provides value to the State in terms of the business objectives and business processes.*
- *It contains a complete set of requirements for the application. It leaves no room for anyone to assume anything not stated in the FRD.*
- *It is solution independent. The FRD is a statement of what the application is to do—not of how it works. The FRD does not commit the developers to a design. For that reason, any reference to the use of a specific technology is entirely inappropriate in an FRD.*

❖ *A requirement is a condition that the application must meet for the customer to find the application satisfactory. A requirement has the following characteristics:*

- *It provides a benefit to the organization.*
- *It describes the capabilities the application must provide in business terms.*
- *It does not describe how the application provides that capability.*
- *It does not describe such design considerations as computer hardware, operating system, and database design.*
- *It is stated in unambiguous words. Its meaning is clear and understandable.*
- *It is verifiable.*

1 GENERAL

A. Project Description

❖ The HRMS (Human Resource Management System) application is designed to automate and streamline the HR functions of an organization.
❖ It offers a comprehensive suite of modules covering various HR activities such as recruitment, payroll, attendance management, leave administration, performance evaluation, and employee management.
❖ The interface allows seamless integration of HR processes, ensuring compliance with organizational policies and government regulations.
❖ Additionally, the system is built with enabling future module extensions or customizations as required by the organization.

B. Background

❖ The HRMS application has been initiated to address the need for a centralized system to manage employee data and HR operations efficiently.Previously, the organization relied on manual processes.
❖ The HRMS aims to bring all HR-related functions into a single platform, thereby improving employee engagement by offering self-service features, enabling employees to view and manage their leave, attendance, and salary details without HR intervention.

C. Purpose

❖ Business Objectives

The primary objectives of the HRMS are to
- Centralized management of employee records.
- Automation of recruitment, payroll, attendance, and leave processes.
- Real-time tracking and reporting of key HR metrics.
- Enhanced employee engagement through self-service portals.
- Compliance with local labor laws, tax regulations, and internal HR policies.
- Integration with other internal and external systems to streamline workflows.

❖ Business Processes Supported

- The HRMS (Human Resource Management System) is designed to support and streamline the HR functions of any organization.

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D. Assumptions & Constraints

Constraints

- **Training and Support***: Continuous training and support are essential to ensure staff proficiency and effective use of the system.*
- **Downtime and Maintenance:** *Scheduled and unscheduled maintenance may cause system downtime, impacting 'HR' operations.*
- **User Resistance:** *Organization may resist adopting the new system due to changes in workflows and processes.*
- **Infrastructure Requirements:** *The HRMS may require significant upgrades to the IT infrastructure, including servers, network bandwidth, and data storage.*
- **Implementation Timeline:** *The project must be completed within a specific time frame, which may be challenging given the complexity of the system.*

Assumptions

- **User Acceptance:** *Organization staff will be receptive to adopting the new HRMS and will participate in training sessions to ensure effective use of the system.*
- **Training and Support:** *Adequate training and support resources will be provided to staff to facilitate smooth transition and ongoing usage of the HRMS.*
- **Data Privacy:** *The system will include robust data privacy and security measures to protect employee information. (organizational security policies, including role-based access controls and encryption of sensitive data.)*
- **Stakeholder Engagement:** *Key stakeholders, including Organization management, staff, and IT personnel, will be actively involved in the project from planning through implementation and beyond.*
- **Project Timeline:** *The project timeline is realistic and allows for adequate planning, development, testing, and deployment phases.*

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E. **Interface & External Systems**

❖ **Payroll System**
- *The HRMS will exchange data with the payroll system to process salaries, tax deductions, and benefits.*

❖ **Attendance System**
- *Integration with biometric based attendance systems to pull real-time attendance data for employees.*

❖ **Government Systems**
- *Interfaces for tax submissions, such as Provident Fund (PF), Employee State Insurance (ESI), and Income Tax (TDS), enabling automatic filing.*

❖ **Email and Notification Systems**
- *To send automated emails for approvals, employee communications, and system-generated notifications.*

2 **FUNCTIONAL REQUIREMENTS**

A.   User Roles

❖ **HR Administrator**

- *Full access to all modules, including user management, payroll, attendance, and recruitment.*
- *Can create, modify, and delete records for employees, departments, and HR functions.*
- *Responsible for managing system settings, configurations, and user permissions.*

❖ **Department HOD**

- *Access to manage their department's employee information, attendance, leave approvals, and performance evaluations.*
- *Can view employee profiles and generate department-specific reports.*
- *Can initiate recruitment requests and participate in interview panels.*

❖ **Employee.**

- *Limited access to self-service functionalities, such as viewing payslips, applying for leave, and updating personal information.*
- *Can view attendance, leave balances, and submit performance reviews (if applicable).*
- *Access to training modules and employee self-appraisal features.*

❖ **Recruitment Admin.**

  ▪ *Access to all recruitment-related modules, including requisition forms, candidate profiles, applicant lists, and interview panels.*

  ▪ *Can schedule interviews and manage candidate information and offer letters.*

  ▪ *Responsible for managing the end-to-end recruitment process.*

❖ **Payroll Admin.**

  ▪ *Access to payroll-related modules, including salary component setup, pay process, payroll reconciliation, and salary structure management.*

  ▪ *Can generate payroll reports and tax-related filings, such as ESI, EPF, and IT declarations.*

  ▪ *Ensures accuracy and compliance of payroll processing.*

❖ **System Administrator.**

  ▪ *Access to the system configuration, user management, and menu permission settings.*

  ▪ *Responsible for managing role-based access control, security settings, and external system integration.*

B. **System Features**

  ● Human Resource Management.

Module	Screen	Features
● *Provides a comprehensive overview of employee and organizational data, such as employee count, leaves, payroll, and attendance.* ● *Customized dashboards for different roles to display relevant KPIs and metrics.*		
Dash Board	*ViewReport*	
	Dashboard : Overall	
	Employee Overview (Employee Life Cycle)	
	Leave Overview (Leave Management)	
	Pay-Roll Overview (Payroll Management)	

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Module	Screen	Features
	• *Define user roles and permissions, granting access to specific modules or screens.*	
	• *Manage user profiles, roles, and access rights through a centralized user list.*	
	• *Configure system menus and role-based permissions for streamlined navigation.*	
User Management	*Menu Permission*	
	User List	
	Roles List	
	Menu Management	

Module	Screen	Features
	• *Manage organizational data such as departments, system codes, and document categories.*	
	• *Customize report templates and configure various HR-related templates (offer letters, forms).*	
	• *Maintain and visualize the organization's structure, with the flexibility to modify as needed.*	
Masters	*Report Setting*	
	Report Setting List	
	Template Creator	
	Department	
	System Code	
	Organisation Structure	
	Document Center	

Module	Screen	Features
	• *Configurable performance appraisal cycles for different departments or roles.*	
	• *Ability to set and track employee goals, self-assessments, and manager evaluations.*	
	• *Integration with salary increments, promotions, or career progression decisions.*	
Performance Management System (PMS)	*Employee PMS Master*	
	Employee Appraisal Link	

Module	Screen	Features
	• *Creation and tracking of manpower requisitions.* • *End-to-end applicant tracking, including candidate profiles, interview scheduling, and selection decisions.* • *Communication with candidates for interview updates and offer letter generation.*	
Recruitment Admin	*Manpower Requisition Form*	
	Candidate Profile	
	Applicant-list	
	Interview Panel	
	Scheduled MHC List	
	MHC List	

Module	Screen	Features
	• *Centralized employee master data, including personal details, job history, qualifications, and contact information.* • *Integration with attendance, payroll, and leave systems for accurate record-keeping.*	
Personnel Admin	*Employee Master*	
	Employee Probationary List	
	Employee Separation List	
	Resignation Request	
	No Dues List & Approvals	
	Ex-Employee	

Module	Screen	Features
	• *Centralized approval management for leave requests, recruitment, and payroll changes.* • *Configurable approval workflows with role-based hierarchies.*	
Authorization	*Authorization Approvals*	

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Module	Screen	Features
· Ability to define leave types, leave rules, and balances for different employee categories. *· Employees can apply for leave, and managers can approve or reject leave requests through the system.* *· Automatic calculation of leave balances and leave accruals.*		
Leave Admin	*Leave Type Rules Master*	
	Leave Category Master	
	Leave Opening Balance Entry	
	Leave Balance Query	
	Leave Process	
	Leave Apply Admin	

Module	Screen	Features
• *Integration with biometric systems for real-time attendance tracking.* • *Ability to regularize attendance discrepancies, such as missed punches or incorrect entries.* • *Monthly attendance processing for payroll and reporting purposes.*		
Attendance Admin	*Holiday List*	
	Monthly Attendance Process	
	Mark Attendance	
	Attendance Regularization Approval	
	Attendance Regularization	
	Attendace Reconciliation	

Module	Screen	Features
• *Define and manage shift timings for employees, including rotational, general, and night shifts.* • *Assign shifts to employees or departments, with tracking.* • *View and modify shift allocations based on business needs.*		
Duty Roaster Admin	*Shift Timings(Gen)*	
	Assign Shift to Employee	

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Module	Screen	Features

- *Setup of salary components, deductions, and benefits based on organizational policies.*
- *Automated payroll processing and generation of payslips.*
- *Compliance with tax regulations, including Provident Fund (PF), Employee State Insurance (ESI), Professional Tax (PT), and Income Tax (TDS) deductions.*

Module	Screen	Features
Salary Admin	*Salary Component Setup*	
	Pay Period Definition	
	Miscellaneous ER Entry	
	Pay Process	
	Payroll Reconciliation	
	Employee Salary Structure	
	Pay Slip	

Module	Screen	Features

- *Enable manual generation and uploading of Form 16 for tax compliance.*
- *Allow employees to submit IT declarations for tax deductions, with automated payroll integration.*
- *Approve or request updates for tax declarations, ensuring accuracy before processing.*

Module	Screen	Features
ITR	*Form 16 (Manual)*	
	IT Declaration	

Module	Screen	Features

- *Training module for managing training sessions, tracking employee participation, and assigning courses.*
- *Induction module to guide new hires through orientation, company policies, and procedures.*

Module	Screen	Features
Training & Induction	*Training/Induction Master*	
	Employee Training / Induction Details	

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Module	Screen	Features
• *Wide range of customizable reports, including attendance, payroll, leave, employee details, and statutory filings.* • *Export options for all reports in multiple formats (Excel, PDF, etc.).*		
Reports	*LEAVE LEDGERDETAIL REPORT*	
	LEAVE LEDGER SUMMARY REPORT	
	DEPARTMENT WISE EMPLOYEE LIST	
	MONTHLY ATTENDANCE REPORT	
	DAILY ATTENDANCE REPORT	
Reports	*LEAVE BALANCE YEAR WISE REPORT*	
	EMPLOYEE EARNING REPORT	
	EMPLOYEE DEDUCTION REPORT	
	SALARY REGISTER DEPARTMENT WISE	
	MONTHLY ATTENDANCE EMPLOYEE WISE REPORT	
Reports	*EMPLOYEE SALARY REGISTER*	
	EMPLOYEE SALARY COMPONENT STRUCTURE	
	EMPLOYEE DUTY ROASTER	
	ESI Report	
	EPF Report	
Reports	*PT Report*	
	IT / TDS Report	

HUMAN RESOURCE MANAGEMENT SYSTEM

MODULE : PERSONNEL ADMIN

SCREEN : EMPLOYEE MASTER

C.   Data Requirements

i.   Employee Data: Employee ID, name, contact information, job title, department, employment history, and qualifications.

ii.   Attendance Data: Daily attendance records, shift timings, attendance regularization requests, and holiday lists.

iii.   Leave Data: Leave types, leave balances, leave history, and leave approvals/rejections.

iv.   Payroll Data: Salary structure, deductions, benefits, tax declarations, and payslips.

v.   Recruitment Data: Manpower requisition forms, candidate profiles, interview results, and offer letters.

vi.   Performance Data: Performance appraisal records, goals, self-assessments, and manager evaluations.

vii.   Training Data: Training schedules, employee participation, and completion status.

D.   Technical Specification

i.   Technical Stack
    a)   The system will utilize a modern, scalable, and secure stack that includes:
    b)   **Front-end**: Web-based UI using HTML5, CSS3, JavaScript frameworks (React, Angular).
    c)   **Back-end**: RESTful APIs built on Java (Spring Boot), .NET, or Node.js.
    d)   **Database**: Relational database management systems (RDBMS) like MySQL, PostgreSQL, or Oracle.
    e)   **Cloud**: Deployed on cloud platforms like AWS or Azure for scalability and reliability.

ii.   Database Design
    a)   Structured in a normalized relational model, ensuring optimized storage and quick retrieval.
    b)   Includes key HR modules (Employee Data, Payroll, Leave, Attendance) with ER diagrams for clarity.
    c)   Features foreign key constraints to maintain data integrity across the system.

iii.   User Interface (UI) Design
    a)   Responsive, user-friendly interface designed with consistent layout, color schemes, and usability standards.
    b)   Follows a design approach, ensuring accessibility across devices.
    c)   Incorporates dashboards for quick insights, intuitive navigation, and modularity for ease of use.

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iv. Security Measures

a) Implements role-based access control (RBAC) for securing user data and restricting unauthorized access.

b) Encrypts sensitive data (e.g., employee records, payroll) both at rest and in transit using SSL/TLS.

c) Integrates multi-factor authentication (MFA) and follows OWASP security guidelines to prevent vulnerabilities.

v. Testing and Quality Assurance

a) Follows Agile testing methodology, including unit, integration, and user acceptance testing (UAT).

b) Automated test scripts for regression and functional testing.

c) Conducts regular load and performance testing to ensure system scalability under heavy user loads.

vi. Version Control and Collaboration Tools

a) Uses Git for version control, enabling collaboration and tracking of code changes.

b) Integration with CI/CD tools (Jenkins, GitLab CI) for automated deployment and testing workflows.

c) Code reviews and peer collaboration facilitated via GitHub or Bitbucket.

vii. Deployment and Hosting

a) Deployed in a scalable, cloud-based infrastructure (AWS, Azure), ensuring high availability.

b) Uses containerization (Docker, Kubernetes) for consistent deployment across environments.

c) Incorporates continuous monitoring and auto-scaling to handle varying system loads efficiently.

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3   OPERATIONAL REQUIREMENTS

i.   HR Processes

a) *The HRMS must automate routine HR tasks such as employee on boarding, payroll processing, leave management, and attendance tracking, ensuring efficiency across all HR operations.*

ii.   User Support

a) *The system should support a high number of concurrent users (employees, HR admins, managers) with no degradation in performance, especially during critical periods like payroll processing.*

iii.   Multi-location Operations

a) *The system should support organizations with multiple office locations, allowing HR operations to be handled independently at each location while maintaining centralized oversight.*

iv.   Data Synchronization

a) *Real-time data synchronization across all HR modules (payroll, attendance, recruitment) is essential to ensure accurate and up-to-date information.*

v.   Scalability

a) *The HRMS should be Scalable to accommodate organizational growth, allowing the addition of more users, employees, and operational functions without system downtime or performance issues.*

vi.   Integration with Other Systems

a) *The system should integrate with third-party applications like biometric attendance devices allowing seamless data flow across systems.*

vii.   Workflows

a) *HR workflows, such as approval processes for leave or expense reimbursement, should be Customizable according to the organization's policies and practices.*

viii.   Backup and Recovery

a) *Regular data backups should be automated, with defined recovery protocols to minimize the impact of system failures or data loss.*

4 **SECURITY**

i. Role-Based Access Control (RBAC)

a) *Only authorized personnel should have access to specific modules based on their role (e.g., HR Admin, Employee, Manager), with granular control over who can view or modify data.*

ii. Encryption

a) *Sensitive data (e.g., employee salary, personal information) must be encrypted both at rest and in transit, using industry-standard encryption protocols (such as AES-256 for data at rest and SSL/TLS for data in transit).*

iii. Multi-factor Authentication (MFA)

a) *Implement MFA to add an additional layer of security for accessing the HRMS, ensuring that even if credentials are compromised, unauthorized access is prevented.*

iv. Data Masking

a) *Sensitive information (such as tax identification numbers or social security numbers) should be masked when displayed to unauthorized users, ensuring that personal data is protected.*

v. Session Timeout

a) *User sessions should automatically time out after a specified period of inactivity, reducing the risk of unauthorized access if a workstation is left unattended.*

vi. Incident Response Plan

a) *A clear incident response plan must be in place to manage security breaches. This includes notifying affected users, shutting down the breach, and applying corrective measures to prevent future occurrences.*

vii. Secure Data Disposal

a) *When employee records or other sensitive data are no longer needed, they should be securely deleted from the system in compliance with data protection regulations (e.g., GDPR, CCPA).*

viii. Compliance with Regulations

a) *The system should adhere to data protection and privacy laws (e.g., GDPR, HIPAA), ensuring that the organization's use of personal data is lawful and that employee rights are protected.*

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5 RELIABILITY

i. Redundancy
a) The HRMS should have redundant systems (servers, databases) to ensure high availability.
b) In the event of hardware failure, the backup system should take over with minimal downtime.

ii. Data Integrity
a) Mechanisms must be in place to ensure that data remains accurate and consistent across all modules (e.g., leave data should automatically update payroll processing).

iii. Disaster Recovery
a) The system should include a disaster recovery plan, with defined procedures to restore operations in case of catastrophic failures (e.g., server crash, data corruption).

iv. Data Backup
a) Regular backups should be automated and stored in multiple locations (on-site and off-site), ensuring that data can be restored in the event of a failure or data corruption.

v. Error Handling
a) The system should include error handling mechanisms to manage exceptions and failures without compromising system stability.

vi. Version Control
a) System updates and patches should be managed using version control to prevent errors and conflicts, and rollback mechanisms should be in place in case of issues during updates.

vii. Service-Level Agreements (SLAs)
a) Clear SLAs should define the expected uptime and performance of the system, ensuring that any service disruptions are resolved within agreed time frames.

6 SYSTEM AVAILABILITY

i. 24/7 Availability
a) The HRMS should be accessible to users at all times (24/7), especially for critical functions like attendance marking, leave requests, and payroll processing.

ii. Cloud Hosting
a) Hosting the system on a cloud platform (e.g., AWS, Azure) ensures scalability, high availability, and redundancy, allowing the system to handle fluctuations in usage.

iii. Uptime Guarantee
a) The system should aim for a minimum of 99.9% uptime, with downtime limited to scheduled maintenance periods during off-peak hours.

iv. Auto-scaling
a) The system should automatically scale up resources (e.g., server capacity) during periods of high demand, such as payroll deadlines or end-of-month reports.

v. Scheduled Maintenance
    a) *All system maintenance should be scheduled outside of business hours and communicated to users well in advance, minimizing impact on operations.*

vi. Network Connections
    a) *The system should have multiple network connections to ensure that if one fails, another can take over, preventing disruptions in service.*

vii. Disaster Recovery Protocols
    a) *Regular testing of disaster recovery protocols should be performed to ensure that, in case of system failure, services can be restored with minimal downtime.*

7 PERFORMANCE

i. Response Time
    a) *The system should load pages and respond to user inputs within 2-3 seconds, ensuring that users can quickly complete tasks like applying for leave or viewing payslips.*

ii. Scalability
    a) *The system must be able to scale up to support increasing numbers of users, transactions, and data without affecting performance (e.g., during payroll or appraisal periods).*

iii. Database Optimization
    a) *The database should be optimized for performance, including indexing, query optimization, and caching, ensuring quick data retrieval.*

iv. Efficient Resource Utilization
    a) *The system should efficiently use CPU, memory, and bandwidth resources, ensuring high performance even with limited infrastructure.*

v. Load Testing
    a) *Regular load testing should be conducted to simulate peak usage scenarios (e.g., payroll processing, year-end reporting), ensuring that the system performs well under heavy loads.*

vi. Caching
    a) *Frequently accessed data (e.g., employee lists, payroll history) should be cached to reduce load times and minimize the need for repetitive database queries.*

vii. Minimized Downtime During Updates
    a) *System updates should be designed to minimize downtime and should ideally be deployed in a way that doesn't interrupt user activity.*

viii. Optimized User Interface
    a) *The UI should be optimized for performance, ensuring that large datasets (e.g., employee directories, reports) load quickly and that navigation is smooth.*

ix. Performance Monitoring
    a) *Tools like Application Performance Monitoring (APM) should be implemented to track system performance in real time and identify bottlenecks or slow-downs.*

x. Bandwidth Efficiency
   a) *The system should be designed to work efficiently in low-bandwidth environments, ensuring that employees in remote locations can access it without issues.*

8 REQUIREMENTS TRACEABILITY MATRIX

❖ *The RTM ensures that each functional and non-functional requirement is met by a corresponding design, development, and testing activity.*
❖ *It helps maintain project scope by preventing any missed or out-of-scope work and ensures that changes are properly controlled.*

9 *CONTACTS US*

❖ *Email: [Your Email Address].*

❖ *Phone: [Your Phone Number].*

❖ *Mailing Address: [Your Mailing Address].*

10 SIGN OFF

[Project Name]
[FRD Sign-Off Date]

We, the undersigned, hereby acknowledge and confirm our approval of the Functional Requirements Document (FRD) for [Project Name]. This document outlines the functional specifications and requirements that will guide the development and implementation of the project.

By signing this document, we indicate that we have thoroughly reviewed the contents of the FRD and find it to be comprehensive, accurate, and reflective of our project requirements and objectives.

We understand that the FRD will serve as the foundation for the project's design, development, and testing phases. Any changes or deviations from these requirements will require formal change control procedures.

We also acknowledge our responsibility for providing timely clarification and feedback to the project team in case of any ambiguity or questions regarding the requirements outlined in this document.

Signatures:

[Client's Name or Representative]   *[Project Manager's Name or Representative]*

[Client's Title or Company]   *[Project Manager's Title or Company]*

[Date]   *[Date]*