**CEBU INSTITUTE OF TECHNOLOGY**

**UNIVERSITY**

COLLEGE OF COMPUTER STUDIES

**Functional Requirements and Specification Document**

for

Workforce Hub – HR Information System

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# Introduction

## Purpose

* *Describe the purpose of the SRS;*
* *Specify the intended audience for the SRS.*

## Scope

* *Identify the software product(s) to be produced by name (e.g., Host DBMS, Report Generator, etc.);*
* *Explain what the software product(s) will, and, if necessary, will not do;*
* *Describe the application of the software being specified, including relevant benefits, objectives, and goals;*
* *Be consistent with similar statements in higher-level specifications (e.g., the system requirements specification), if they exist.*

## Definitions, Acronyms and Abbreviations

* *provide the definitions of all terms, acronyms, and abbreviations required to properly interpret the SRS*

## References

* *Provide a complete list of all documents referenced elsewhere in the SRS;*
* *Identify each document by title, report number (if applicable), date, and publishing organization;*
* *Specify the sources from which the references can be obtained.*

# Overall Description

## Product perspective

* *Put software product into perspective with other related products. If the product is independent and totally self-contained, it should be so stated here. If the SRS defines a product that is a component of a larger system, as frequently occurs, then this subsection should relate the requirements of that larger system to functionality of the software and should identify interfaces between that system and the software.*
* *A block diagram showing the major components of the larger system, interconnections, and external inter- faces can be helpful.*
* *Describe the modular decomposition of the components using the format below:*

*Module 1*

*Transaction 1.1*

*Transaction 1.2*

*Module 2*

*Transaction 2.1*

*Transaction 2.2*

*. . .*

## User characteristics

* *Describe all user types and their roles and privileges in the system*

## 2.4. Constraints

* *Provide a general description of any other items that will limit the developer’s options.*
* *Regulatory policies;*
* *Hardware limitations (e.g., signal timing requirements);*
* *Interfaces to other applications;*
* *Parallel operation;*
* *Audit functions;*
* *Control functions;*
* *Reliability requirements;*
* *Criticality of the application;*
* *Safety and security considerations.*

## 2.5. Assumptions and dependencies

*This subsection of the SRS should list each of the factors that affect the requirements stated in the SRS. These factors are not design constraints on the software but are, rather, any changes to them that can affect the requirements in the SRS. For example, an assumption may be that a specific operating system will be available on the hardware designated for the software product. If, in fact, the operating system is not avail- able, the SRS would then have to change accordingly.*

# Business Overview

## Background and Objectives

### 3.1.1. Hardware interfaces

*This should specify the logical characteristics of each interface between the software product and the hard- ware components of the system. This includes configuration characteristics (number of ports, instruction sets, etc.). It also covers such matters as what devices are to be supported, how they are to be supported, and protocols. For example, terminal support may specify full-screen support as opposed to line-by-line support.*

### 3.1.2. Software interfaces

*This should specify the use of other required software products (e.g., a data management system, an operating system, or a mathematical package), and interfaces with other application systems (e.g., the linkage between an accounts receivable system and a general ledger system).*

### 3.1.3. Communications interfaces

*This should specify the various interfaces to communications such as local network protocols, etc.*

## Target Users

# Specific Requirements

## External interface requirements

### Hardware interfaces

### Software interfaces

### Communications interfaces

## Functional requirements

### User Roles and Permissions

1. HR Staff

* Permissions
* View and update their own profiles.
* Request time off and view attendance records.
* View their training progress and certifications.
* Respond to surveys and feedback requests.
* Access to their personal dashboard.

1. Employees

* Permissions
* View and update their own profiles.
* Request time off and view attendance records.
* View their training progress and certifications.
* Respond to surveys and feedback requests.
* Access to their personal dashboard.

1. System Administrator

* Permissions
* View and update their own profiles.
* Request time off and view attendance records.
* View their training progress and certifications.
* Respond to surveys and feedback requests.
* Access to their personal dashboard.

### Use Cases

**Web Application Use Cases:**

1. **Login:**

* Actor: HR Staff, Employees, Managers.
* Description: Users log in using their credentials (username/email and password) with optional two-factor authentication (2FA) or OAuth integration.
* Preconditions: User must have valid credentials.
* Postconditions: User is redirected to their respective dashboard.

1. **Employee Profile Management:**

* Actor: HR Staff, Employees.
* Description: HR staff can create, update, and view employee profiles. Employees can view and update their own profiles.
* Preconditions: HR staff must have the necessary permissions. Employees must be logged in.

1. **Attendance and Leave Management:**

* Actor: HR Staff, Employees.
* Description: Employees can request time off and view their attendance records. HR staff can approve or deny leave requests and view attendance records.
* Preconditions: Employees must be logged in. HR staff must have the necessary permissions.
* Postconditions: Leave requests are processed, and attendance records are updated.

1. **Recruitment and Applicant Tracking:**

* Actor: HR Staff.
* Description: HR staff can post job openings, manage applications, and track candidate progress.
* Preconditions: HR staff must have the necessary permissions.
* Postconditions: Job openings are posted, and candidate data is updated.

1. **Employee Training and Development Tracking:**

* Actor: HR Staff, Employees.
* Description: HR staff can track employee training programs and certifications. Employees can view their training progress.
* Preconditions: HR staff must have the necessary permissions. Employees must be logged in.
* Postconditions: Training records are updated or viewed.

1. **Notification System:**

* Actor: HR Staff, Employees.
* Description: Notifications are sent to users regarding leave approvals, upcoming training, policy updates, and HR-related events.
* Preconditions: Users must be logged in.
* Postconditions: Notifications are delivered to users.

**Mobile Application Use Cases:**

1. **Login:**

* Actor: HR Staff, Employees, Managers.
* Description: Users log in using biometric authentication (fingerprint/face recognition) or regular credentials.
* Preconditions: User must have valid credentials or biometric data registered.
* Postconditions: User is redirected to their respective dashboard.

1. **Employee Profile Management:**

* Actor: HR Staff, Employees.
* Description: HR staff can view and update employee profiles. Employees can view their own profiles.
* Preconditions: HR staff must have the necessary permissions. Employees must be logged in.
* Postconditions: Employee profiles are updated or viewed.

1. **Attendance and Leave Management:**

* Actor: HR Staff, Employees.
* Description: Employees can request time off and view their attendance records. HR staff can approve or deny leave requests and view attendance records.
* Preconditions: Employees must be logged in. HR staff must have the necessary permissions.
* Postconditions: Leave requests are processed, and attendance records are updated.

1. **In-app Survey and Feedback Collection:**

* Actor: HR Staff, Employees.
* Description: HR staff can create and distribute surveys. Employees can respond to surveys.
* Preconditions: HR staff must have the necessary permissions. Employees must be logged in.
* Postconditions: Survey responses are collected and analyzed.

1. **Notification System:**

* Actor: HR Staff, Employees.
* Description: Notifications are sent to users regarding leave approvals, upcoming training, policy updates, and HR-related events.
* Preconditions: Users must be logged in.
* Postconditions: Notifications are delivered to users.

### Business Rules

1. **Login and Authentication**:

* Users must log in with valid credentials.
* Two-factor authentication (2FA) is optional but recommended for enhanced security.
* OAuth integration is available for simplified login using work emails.

1. **Employee Profile Management**:

* HR staff can create, update, and delete employee profiles.
* Employees can only view and update their own profiles.
* Role-based access control (RBAC) ensures data security.

1. **Attendance and Leave Management**:

* Employees can request time off within their allowable leave balances.
* HR staff can approve or deny leave requests based on company policies.
* Attendance records are updated in real-time.

1. **Recruitment and Applicant Tracking**:

* HR staff can post job openings on external job boards (e.g., LinkedIn) via API integration.
* Candidate data is protected with role-based access control.

1. **Employee Training and Development Tracking**:

* HR staff can track employee training programs and certifications.
* Employees can view their training progress but cannot modify records.

1. **Notification System**:

* Notifications are sent based on user roles and actions taken within the system.
* Notifications can be delivered via push notifications, email, or SMS.

1. **Mobile Application**:

* Biometric authentication is available for mobile login.
* Employees can view their profiles and attendance records but cannot edit them on mobile.
* HR staff can update employee data, but some fields are restricted on mobile due to screen size limitations.

### UI/UX Design and Wireframes

### API Endpoints

**Authentication:**

* POST /api/auth/login - User login (web and mobile).
* POST /api/auth/signup - User signup (HR staff only).
* POST /api/auth/logout - User logout.
* POST /api/auth/2fa - Enable/disable two-factor authentication.

**Employee Profile Management:**

* GET /api/employees - Get all employee profiles (HR staff only).
* GET /api/employees/{id} - Get a specific employee profile (HR staff and employee).
* POST /api/employees - Create a new employee profile (HR staff only).
* PUT /api/employees/{id} - Update an employee profile (HR staff and employee).
* DELETE /api/employees/{id} - Delete an employee profile (HR staff only).

**Attendance and Leave Management:**

* GET /api/attendance - Get attendance records (HR staff and employee).
* POST /api/attendance/leave - Request time off (employee).
* PUT /api/attendance/leave/{id} - Approve/deny leave request (HR staff).

**Recruitment and Applicant Tracking:**

* GET /api/recruitment/jobs - Get all job postings (HR staff).
* POST /api/recruitment/jobs - Create a new job posting (HR staff).
* GET /api/recruitment/applicants - Get all applicants (HR staff).
* POST /api/recruitment/applicants - Add a new applicant (HR staff).

**Employee Training and Development Tracking:**

* GET /api/training - Get all training records (HR staff and employee).
* POST /api/training - Add a new training record (HR staff).
* PUT /api/training/{id} - Update a training record (HR staff).

**Notification System:**

* GET /api/notifications - Get all notifications (HR staff and employee).
* POST /api/notifications - Send a notification (HR staff).

**Survey and Feedback Collection:**

* GET /api/surveys - Get all surveys (HR staff and employee).
* POST /api/surveys - Create a new survey (HR staff).
* POST /api/surveys/{id}/response - Submit a survey response (employee).

## System Architecture and Design

### System Overview

### Technology Stack

### Database Schema

### Entity-Relationship Diagram (ERD)

## 4.4 Non-functional requirements

### Performance

### Security

### Reliability