**1. Introduction**

**1.1 Purpose**

This document outlines the software requirements for the e-Recruitment Management System (e-RMS). The system is designed to streamline the recruitment process by facilitating recruitment creation, application handling, result processing with subject prioritization, application verification, and appointment issuance.

**1.2 Scope**

The e-RMS is a web-based application that enables recruiters to manage the entire recruitment lifecycle. Key functionalities include:

* Recruitment creation with subject priority settings
* Online application submission by candidates
* Result entry with subject-wise marks and priority considerations
* Automatic ranking based on aggregate scores, subject priorities, and date of birth
* Application verification before appointment issuance
* Secure document management

*Note: Features such as multi-location support, applicant location preferences, hierarchical recruiter roles, and third-party recruitment agency integration are planned for future versions.*

**1.3 Definitions, Acronyms, and Abbreviations**

* **Recruiter**: Authorized user responsible for managing recruitment processes.
* **Recruitee**: Individual applying for a recruitment opportunity.
* **RecruitmentID**: Unique identifier for each recruitment.
* **ApplicationID**: Unique identifier for each application submitted by a recruitee.
* **e-RMS**: e-Recruitment Management System.
* **SRS**: Software Requirements Specification.

**1.4 References**

* IEEE Std 830-1998, IEEE Recommended Practice for Software Requirements Specifications.
* IEEE Software Requirements Specification Template

**1.5 Overview**

This document is structured to provide a comprehensive overview of the e-RMS, including its general description, specific requirements, external interface requirements, and other relevant information.

**2. Overall Description**

**2.1 Product Perspective**

The e-RMS is a standalone web application developed using PHP (with PDO) and MySQL. It features a responsive frontend (e.g., React-based), RESTful APIs, and secure document access mechanisms.

**2.2 Product Functions**

* **Recruitment Management**: Create and manage recruitment notices with subject priorities.
* **Application Handling**: Allow recruitees to submit applications and upload necessary documents.
* **Result Processing**: Enter and manage subject-wise marks with priority considerations.
* **Ranking Generation**: Automatically generate applicant rankings based on aggregate scores, subject priorities, and date of birth.
* **Application Verification**: Verify applications before issuing appointment letters.
* **Appointment Issuance**: Generate and dispatch appointment letters to selected candidates.
* **Document Management**: Securely store and manage documents with hashed filenames.

**2.3 User Classes and Characteristics**

* **Recruiter**: Manages recruitment processes, including creation, result entry, application verification, and appointment issuance.
* **Recruitee**: Applies for recruitment opportunities and tracks application status.

**2.4 Operating Environment**

* **Server**: PHP 8.x, MySQL 8.x
* **Client**: Modern web browsers (e.g., Chrome, Firefox, Edge)
* **Platform**: Web-based application accessible via internet

**2.5 Design and Implementation Constraints**

* Use of PHP and MySQL for backend development.
* Secure document storage with hashed filenames.
* Role-based access control for different user types.

**2.6 User Documentation**

User manuals and help guides will be provided for both recruiters and recruitees, detailing system functionalities and usage instructions.

**2.7 Assumptions and Dependencies**

* Users have access to the internet and compatible web browsers.
* The system will be hosted on a secure server with regular backups.

**3. Specific Requirements**

**3.1 Functional Requirements**

**3.1.1 User Authentication**

* The system shall provide secure login functionality for recruiters and recruitees.
* Passwords shall be stored using secure hashing algorithms.

**3.1.2 Recruitment Management**

* Recruiters shall be able to create recruitment notices with details such as position title, requirements, deadlines, and subject priorities.
* Each recruitment shall be assigned a unique RecruitmentID.

**3.1.3 Application Submission**

* Recruitees shall be able to submit applications online, including uploading required documents.
* Each application shall be assigned a unique ApplicationID.

**3.1.4 Result Entry**

* Recruiters shall be able to enter subject-wise marks for each application.
* Subject priorities shall influence the weight of each subject during ranking.

**3.1.5 Ranking Generation**

* The system shall generate applicant rankings based on:
  1. Aggregate subject scores
  2. Priority-weighted subject scores
  3. Date of birth (used as a tiebreaker)

**3.1.6 Application Verification**

* Recruiters shall be able to verify applications before issuing appointment letters.

**3.1.7 Appointment Issuance**

* Recruiters shall be able to generate and dispatch appointment letters to selected candidates.

**3.1.8 Document Management**

* The system shall store uploaded documents with hashed filenames for security.
* Documents shall be accessible only to authorized users.

**3.2 Performance Requirements**

* The system shall handle high volumes of applications without performance degradation.
* Response times for user actions shall not exceed 2 seconds under normal load.

**3.3 Security Requirements**

* The system shall implement role-based access control.
* All data transmissions shall be encrypted using HTTPS.
* Regular security audits shall be conducted to identify and mitigate vulnerabilities.

**3.4 Software Quality Attributes**

* **Reliability**: The system shall have 99.9% uptime.
* **Maintainability**: The system shall be modular to facilitate easy updates and maintenance.
* **Usability**: The user interface shall be intuitive and user-friendly.
* **Portability**: The system shall be compatible with major web browsers.

**4. External Interface Requirements**

**4.1 User Interfaces**

* Responsive web interface accessible via modern web browsers.
* Separate dashboards for recruiters and recruitees.

**4.2 Hardware Interfaces**

* The system shall be hosted on a server with the following minimum specifications:
  + CPU: Quad-core processor
  + RAM: 16 GB
  + Storage: 500 GB SSD

**4.3 Software Interfaces**

* Backend: PHP 8.x with PDO
* Database: MySQL 8.x
* Frontend: React.js or equivalent

**4.4 Communication Interfaces**

* RESTful APIs for communication between frontend and backend.
* Secure email notifications for application status updates.

**5. Other Requirements**

**5.1 Backup and Recovery**

* Daily backups of the database and uploaded documents.
* Recovery procedures shall be documented and tested regularly.

**5.2 Future Enhancements**

* Multi-location office support for recruiters.
* Location preference handling for applicants.
* Hierarchical recruiter role model (e.g., sub-offices).
* Third-party recruitment agency integration.
* Notification system (SMS/email).
* Analytics and reporting dashboards.