

Hamdard University
Department of Computing
Final Year Project



HR System for Hiring
(FYP-018/FL24)
Software Requirements Specifications

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Fall 2021

HR System for Hiring	Version: 1.0
Software Requirements Specifications	Date: 16-01-2021
FYP-018/FL24-SRS	

Document Sign off Sheet

Document Information

Project Title	HR System for Hiring
Project Code	FYP-018/FL24
Document Name	Software Requirements Specifications
Document Version	<1.0>
Document Identifier	FYP-018/FL24-SRS
Document Status	Draft
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Approver(s)	Aamir Hussain, Maaz Ahmed
Issue Date	16-01-2021

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Revision History

Date	Version	Description	Author
16-01-2025	1.0	First Draft	Ramiz Shahnawaz, Shayan Yar Khan

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Definition of Terms, Acronyms, and Abbreviations

Term	Description
HR	Human Resources
CV	Curriculum Vitae
GHz	Gigahertz
GB	Gigabyte
SSD	Solid-State Drives
HTTPS	Hypertext Transfer Protocol Secure
API	Application Programming Interface
PDF	Portable Document Format
DOC	Document
SHA-256	Secure Hash Algorithm (256-bit)

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1. Introduction

The HR System will serve as a platform that simplifies the hiring process providing a seamless experience for candidates, HR personnel, and companies, ensuring the right fit for each position. Our goal is to minimize the gap between organizations, HR professionals and job applicants by developing an easy-to-use virtual platform with advanced features that help organizations, HR personnels in receiving and assessing resumes and applications, scheduling interviews, conducting tests, and shortlisting applicants based on job requirements and for Organization by finding the right fit for their open position without spending vast amount of cost and manpower.

1.1 Purpose of Document

This document outlines the requirements, functionalities, and design constraints for the development of HR System. It serves as a guide for developers, testers, and stakeholders to understand the system specifications and ensure a successful implementation.

1.2 Intended Audience

The hiring practices followed today requires a vast amount of manual labor and time for gathering resumes, shortlisting candidates, and scheduling interviews, leading to inefficiencies, higher expenses, and longer hiring periods. Organizations struggle to find top talents, HRs are stressed out, and candidates aren't given enough opportunity during the hiring process.

- Project Team
- Supervisors
- End-users (Companies, HRs, Candidates)

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2. Overall System Description

2.1 Project Background

The hiring approach in today's workplace is time-consuming and demands a lot of resources. our goal is to simplifies these processes by bringing organizations, HR personnels and candidates on one platform.

2.2 Problem Statement

The hiring practices followed in today's workplaces includes gathering resumes, shortlisting candidates and scheduling interviews, which typically demands a vast amount of manual labor and time. This lengthy practice might result in increased cost, longer hiring period and inefficiencies.

Organizations usually waste time and man power in finding the best fit for the open position and HR personnel find it difficult to go through numerous resumes. Companies lack the resources to effectively hire top talent, HR personnel are left with little time to focus on other tasks, and Candidates often struggle with the lack of visibility and opportunities.

2.3 Project Scope

The following significant elements will be a part of the project.

1. Improving the overall efficiency of HR processes and procedures.
2. Simplifying and optimizing hiring processes.
3. Provide organization to manage job openings, hire HR professionals, and automate shortlisting.
4. Allow HR professionals and Organizations to conduct assessments and schedule interviews.
5. Allow candidates to apply for jobs, give assessment, and attend interviews.

2.4 Not In Scope

1. Salary negotiations between HR and companies.
2. Candidate evaluation based on non-quantifiable criteria (e.g., cultural fit).

2.5 Project Objectives

To design an efficient, system that connects candidates with job opportunities, facilitates HR tasks, simplify the hiring process for organizations and improve candidate management efficiency.

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2.6 Stakeholders & Affected Groups

❖ **Primary Stakeholders:**

- Companies.
- HR professionals.
- Job candidates.

❖ **Secondary Stakeholders:**

- Developers and project team.

2.7 Operating Environment

The system will operate in a browser-based environment and should support the following:

- **Browsers:** Chrome, Firefox, Safari.
- **Devices:** Desktop, laptop, tablet, and smartphone.

2.8 System Constraints

- Must operate within a web browser without requiring additional software.
- Support for up to 500 concurrent users.
- Limited initial budget and resources
- Tight development timeline for MVP launch
- Potential challenges in scaling the platform quickly

2.9 Assumptions & Dependencies

- Availability of qualified interviewers
- Reliable video conferencing and recording capabilities
- Timely feedback and cooperation from clients and candidates

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3. External Interface Requirements

3.1 Hardware Interfaces

- **Server Requirement**
 - Processor: 2 GHz or higher.
 - RAM: 8 GB minimum.
 - Storage: 100 GB SSD.
- **Client Requirement**
 - Any modern device that supports web browser.

3.2 Software Interfaces

- **Server Requirement**
 - **Backend:** Node.js, Express.js
 - **Database:** MongoDB (Mongoose for connection)
 - **Frontend:** React.js

3.3 Communications Interfaces

- Communication over HTTPS.
- APIs for assessment tools and scheduling services (if applicable).

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4. System Functions / Functional Requirements

4.1 System Functions

Ref #	Functions	Category	Attribute	Details & Boundary Constraints
R1.1	User registration and login for candidates, HRs, and organizations	Evident	Response time	User registration should complete within 5 seconds
R1.2	CV submission by candidates	Evident	Data storage	System should allow CV uploads in standard formats (PDF, DOC)
R1.3	Job posting and management by organizations	Evident	System availability	Accessible 24/7
R1.4	Shortlisting of CVs by HRs based on job criteria	Hidden	System processing	CV shortlisting to complete within 10 seconds for 100 resumes
R1.5	Scheduling and conducting assessments/interviews	Evident	Integration support	Supports integration with online assessment tools
R1.6	Hiring HRs temporarily for recruitment tasks	Hidden	User load	Supports concurrent access by at least 50 users

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4.2 Use Cases

4.2.1 List of Actors

The following are the key actors in the system

Candidates: Individuals who apply for jobs by sending in their resumes and taking part in assessments and interviews.

HRs: Human resource experts in managing recruitment, interviewing candidates, and shortlisting applications.

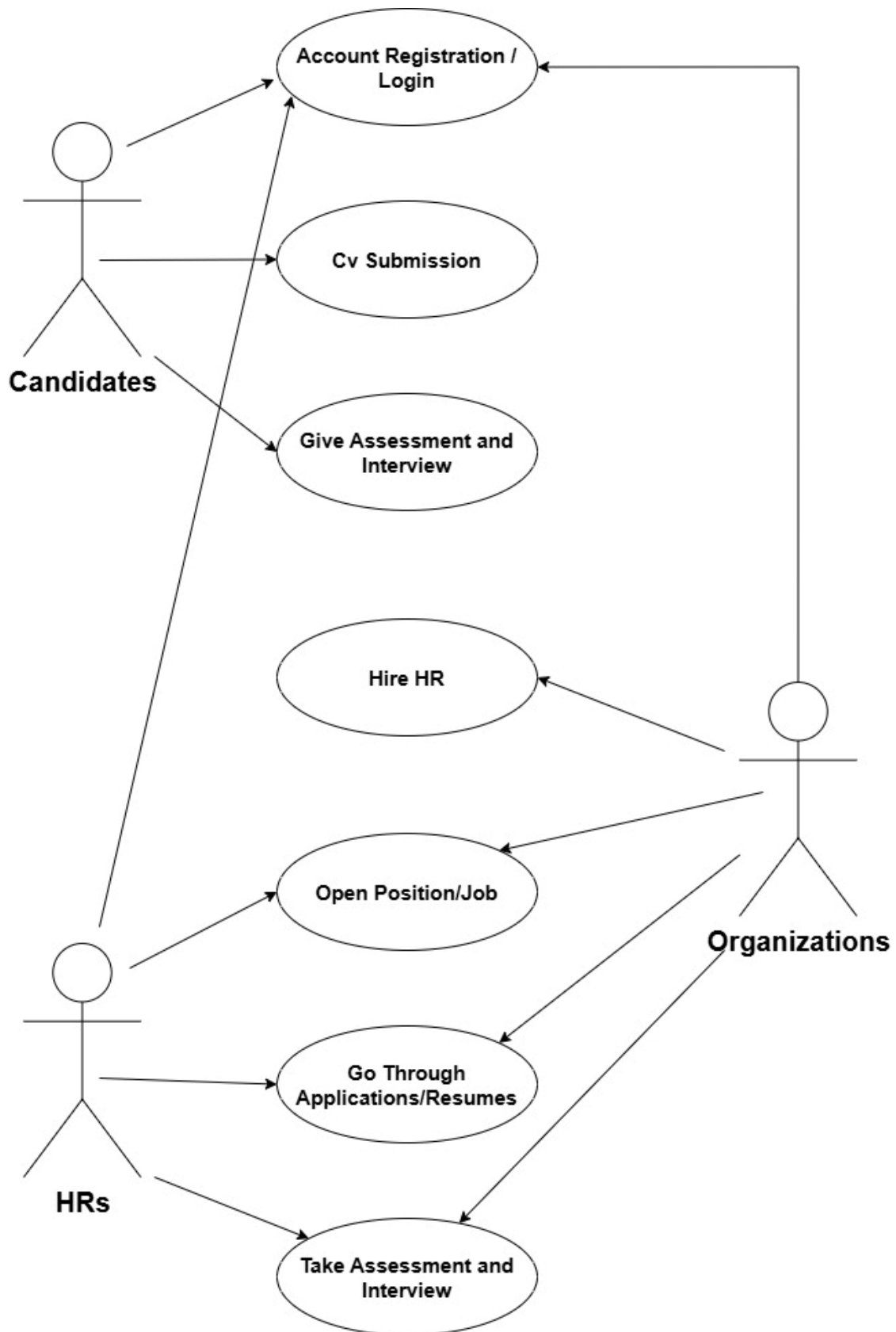
Organizations: Companies that post job openings, hire HR personnel, and manage the recruitment process.

4.2.2 List of Use Cases

The system supports the following use cases:

Use Case #	Name	Brief Description
UC1	Account Registration / Login	Allows organizations, HRs, and candidates to register or login to their accounts.
UC2	CV Submission	Candidates can upload their CVs in standard formats for job applications.
UC3	Open Position / Job	Organizations and HR personnels can post new job openings for candidates to apply.
UC4	Go Through Applications / Resumes	Organizations and HR personnels can review resumes based on job requirements.
UC5	Take Assessment and Interview	Organizations and HR personnels can schedule assessments and interviews for candidates.
UC6	Hire HR	Organizations can hire HRs temporarily to handle specific recruitment tasks.

4.2.3 Use Case Diagram



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4.2.4 Description of Use Cases

Section: Main			
Name:		Account Registration / Login	
Actors:		Candidates, HRs, Organizations	
Purpose:		To allow users with a secure account to access the system.	
Description:		Users can create an account or log in using valid credentials.	
Cross References:		Functions: R1.1	
Pre-Conditions		User must have valid email and password for login or registration information.	
Successful post-conditions		Upon a successful login, the user is taken to their dashboard.	
Failure post-conditions		Login fails and error message is displayed.	
Typical Course of Events			
Actor Action		System Response	
1	User enters registration details or login credentials.		System verifies the credentials and redirects to the appropriate dashboard.
2	Incorrect credentials are provided.		System displays an error message and asks the user to retry or reset password.

Section: Main			
Name:		CV Submission	
Actors:		Candidates	
Purpose:		To allow candidates to upload their CVs.	
Description:		Candidates can upload CVs in standard file formats for job applications.	
Cross References:		Functions: R1.2	

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5. Non - Functional Requirements

5.1 Performance Requirements

- Every operation should have a response time of less than two seconds.

5.2 Safety Requirements

- All data transmission over HTTPS.
- Passwords encrypted using SHA-256.

5.3 Security Requirements

- All user data (e.g., CVs, job postings, candidate test results) must be stored securely and protected from unauthorized access.
- Require two-factor authentication.

5.4 Reliability Requirements

- System uptime: 99.5%

5.5 Usability Requirements

- Simple and interactive user interfaces for all users.

5.6 Supportability Requirements

- The system must be scalable to handle a growing user base without significant performance degradation.
- Incorporate cloud-based solutions for dynamic resource allocation.
- The system must adapt to different screen sizes (responsive design) for mobile and desktop users.
- Use version control systems (e.g., Git) to manage source code and track changes.

5.7 User Documentation

Candidates:

- Guide on creating an account and submitting CVs.
- Instructions for participating in scenario-based tests and attending interviews.

HR Professionals:

- Overview of dashboard functionalities for shortlisting candidates, scheduling tests, and interviews.
- Steps for defining job requirements and managing candidate data.

Companies:

- Instructions for hiring HR professionals, posting jobs, and managing recruitment processes.

Answers to common questions (e.g., "How do I reset my password?").

- Troubleshooting steps for common issues like login problems or file upload errors.

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Help Desk Support:

- Contact details for technical support.
- Support hours and escalation procedures for unresolved issues.