Evaluation Management System	Software Requirement Specification
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Revision History

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1. Introduction

The Evaluation Management System is a software application designed to streamline the process of evaluating tasks and generating final scores based on a predefined weightage system. This system provides an efficient and centralized platform for managing evaluations, uploading marks, and calculating overall scores. It aims to simplify the evaluation process and ensure consistency and accuracy in assessing tasks.

1.1 Purpose

The purpose of the Evaluation Management System is to provide a comprehensive solution for managing evaluations, particularly in educational or organizational settings. The system allows administrators or instructors to assign tasks, assess them, and generate final scores based on a predefined weightage system. It eliminates the need for manual calculations and provides an organized and automated approach to evaluation management.

1.2 Scope

The Evaluation Management System encompasses the following features and functionalities:

1.2.1 Task Management

The system allows administrators or instructors to create and assign tasks to individuals or batches of participants.

Tasks can be categorized based on different criteria such as subject, type, or due date.

Task descriptions, instructions, and associated resources can be provided to participants.

1.2.2 Mark Upload

Participants can submit their task solutions through the system, either by uploading files or entering marks manually.

The system provides a secure and centralized repository for storing and managing task submissions.

1.2.3 Weightage System

Administrators or instructors can define a weightage system that assigns relative importance to different tasks or components within tasks.

The weightage system helps in calculating the overall score by considering the individual task scores and their respective weights.

1.2.4Evaluation and Score Calculation

The system allows administrators or instructors to evaluate task submissions and assign marks based on predefined criteria.

Marks can be entered directly or assessed using predefined rubrics or evaluation guidelines.

The system automatically calculates the overall score by applying the weightage system to the individual task scores.

1.2.5 Batch Management

The system provides features to manage batches or groups of participants.

Administrators can create and organize batches, assign tasks to specific batches, and track their progress and scores.

1.3 Intended Stakeholder

The BJIT Academy is the main Stack Holder of the project.

1.4 References

Reference	Location
Requirement Specification	

1.5 Definitions, Acronyms, and Abbreviations

Term/Acronym	Definition
APP	Abbreviation of Application
API	Application Programming Interface
SRS	Software Requirement Specification
EMS	Evaluation Management System
JWT	JSON Web Token

2. Overall Description

The Android cricket app is a comprehensive and up-to-date platform for cricket aficionados, including real-time scores, news, and analysis, as well as other cricket-related information. The app provides fans a comprehensive experience with a user-friendly layout and a variety of features, including live commentary, video highlights, and expert analysis. The application is performance-optimized, with effective data management, quick access to essential information, and the capacity to keep data offline. The application also fulfills security standards, protecting sensitive data from unauthorized access, use, modification, or disclosure. Download the Android cricket app to keep abreast of the most recent cricket events!

2.1 Overview

1. The Evaluation Management System is a robust software solution designed to streamline the process of assessing tasks, uploading marks, and generating final scores based on a predefined weightage system. This system provides a user-friendly and efficient platform for managing evaluations, ensuring accuracy and consistency in the assessment process.

2. The Evaluation Management System offers a range of features and functionalities to enhance the evaluation process. It provides administrators or instructors with the ability to create and assign tasks to individuals or batches of participants. Task descriptions, instructions, and associated resources can be easily shared with the participants through the system.

3. Participants can conveniently submit their task solutions through the system, either by uploading files or entering marks manually. The system securely stores and manages these submissions, providing a centralized repository for easy access and evaluation.

4. One of the key features of the system is the predefined weightage system. Administrators or instructors can define the relative importance of different tasks or components within tasks. This weightage system plays a crucial role in calculating the overall score by considering the individual task scores and their respective weights. The system automates the score calculation process, saving time and effort for the evaluators.

5. The Evaluation Management System also includes batch management capabilities, allowing administrators to create and organize batches or groups of participants. This feature enables efficient tracking of the progress and scores of different batches, providing a holistic view of the evaluation process.

   To ensure a smooth user experience, the system is optimized for performance. It effectively manages data, ensuring quick access to essential information and providing the ability to access data offline. The application adheres to security standards, safeguarding sensitive data from unauthorized access, use, modification, or disclosure.

6. In conclusion, the Evaluation Management System offers a comprehensive and user-friendly solution for managing evaluations. With its task management, mark upload, weightage system, and batch management features, the system simplifies the evaluation process, promotes consistency, and enhances overall efficiency. Whether in educational institutions or organizational settings, the Evaluation Management System is a valuable tool for accurate and streamlined evaluation management.

2.2 Technical platform

The technical platform for the Evaluation Management System, when implemented as a web application, may include the following components:

1) Operating System: The web application can be developed to be compatible with multiple operating systems, such as Windows, macOS, or Linux, as it will be accessed through web browsers.

2) Development Environment: A suitable development environment, such as Spring Tool Suite or IntelliJ IDEA, can be utilized to develop and debug the web application.

3) Programming Languages: The backend of the web application can be built using Java, with the Spring Boot framework providing the necessary infrastructure. The frontend can be developed using Flutter Web, which utilizes the Dart programming language.

4) Frameworks and Libraries: Spring Boot provides various frameworks and libraries for building web applications, including Spring MVC for handling web requests and Thymeleaf for server-side templating. Flutter Web offers a range of widgets and libraries for building responsive and interactive user interfaces.

5) Database: MySQL can be used as the database management system to store and manage the evaluation-related data, including task details, participant information, and marks. Spring Data JPA can be utilized for seamless database integration and query operations.

6) API Integration: The web application can integrate with external APIs, if necessary, to retrieve additional data or services for evaluation purposes. For example, integration with an email service provider's API can enable automated notifications to participants.

7) Security: The web application can implement security measures, such as HTTPS for secure communication, user authentication, and authorization using Spring Security. Input validation and sanitization techniques should be applied to prevent security vulnerabilities, such as cross-site scripting (XSS) or SQL injection attacks.

8) User Experience: The frontend of the web application can be developed using Flutter Web, allowing for a responsive and visually appealing user interface. Best practices in web design and usability should be followed to ensure an intuitive and seamless user experience.

9) Browser Compatibility: The web application should be thoroughly tested and optimized to work well across different web browsers, including popular options such as Google Chrome, Mozilla Firefox, and Microsoft Edge.

10) By leveraging the Spring Boot framework on the backend, MySQL as the database management system, and Flutter Web with Dart for the frontend, the Evaluation Management System can be built as a robust and efficient web application. This technical platform selection aims to provide a secure, scalable, and user-friendly experience for administrators, instructors, and participants involved in the evaluation process.

These are some of the key technical components that may be part of the technical platform for the Android cricket app. The technical platform should be chosen and implemented in a way that ensures the app meets the needs and requirements of the end-users and stakeholders.

3. Functional Requirements

The functional requirements of the Evaluation Management System are the specific features and capabilities that the system should possess to fulfill the needs of its users. The following are some examples of the functional requirements:

Task Management :

- Administrators or instructors should be able to create and assign tasks to participants or batches.

- Tasks should include relevant details such as task descriptions, instructions, and associated resources.

Due dates or deadlines should be set for each task.

Mark Upload:

- Participants should be able to submit their task solutions through the system.

- The system should support file uploads or manual entry of marks.

- Participants should receive confirmation of successful submission.

Weightage System:

- Administrators or instructors should have the ability to define a weightage system for tasks or task components.

- The system should allow for assigning relative weights to different tasks or components.

- The weightage system should be configurable and adjustable as needed.

Evaluation and Score Calculation:

- Administrators or instructors should be able to evaluate task submissions and assign marks.

- The system should provide options for entering marks directly or using predefined rubrics or evaluation guidelines.

- The system should automatically calculate the overall score based on the assigned marks and the predefined weightage system.

Batch Management:

- The system should allow administrators to create and manage batches or groups of participants.

- Tasks can be assigned to specific batches, and progress and scores can be tracked at the batch level.

- Batch-specific reports or analytics may be available for evaluation purposes.

Participants can view notifications specifically for tasks in their dashboard, such as reminders for upcoming task deadlines or notifications when new tasks are assigned or marked as completed.

These functional requirements form the foundation for the Evaluation Management System, ensuring that it meets the needs of administrators, instructors, and participants in managing evaluations effectively and efficiently

3.1 Overview

This section summarizes the main functionalities or services provided by the Evaluation Management System, which will be detailed in the following subsections. The main features of the system are listed in the table below:

Serial No	Main Features	Description
1	Login/ Registration	User can either Register or Login with proper Credentials.
2	Task Management	Administrators or instructors can create and assign tasks to participants or batches and submit their task solutions through the system
3	Evaluation	Instructors can evaluate task submissions and assign marks Calculation
4	Batch Management	Administrators can create and manage batches or groups of participants.

5	User Account	Participants can create user accounts to access personalized features and Personalization
6	Notifications	Participants can receive notifications for task-related updates in their dashboard.

3.1.1. Login/ Registration

The Login/Registration function of the Evaluation Management System (EMS) is a crucial component that allows users to access their individual information and preferences within the system. The procedure typically involves the following steps:

User registration: Users can initiate the registration process by providing the required information, such as their name, email address, and a password.The EMS may also request additional details like the user's role (administrator, instructor, or participant) or organizational affiliation.

Users may need to agree to the system's terms and conditions or privacy policy.

3.1.2. Login: Once registered, users can access the EMS login screen.Users will enter their registered email address and password to authenticate their identity.The EMS may include features like password recovery options or integration with single sign-on (SSO) systems for streamlined access.User Roles and Authentication:Upon successful login, the EMS will assign the appropriate role to the user based on their registered information.The user's role will determine the level of access and permissions they have within the system.To ensure secure access, the EMS may implement authentication mechanisms such as using JSON Web Tokens (JWT) for user session management.After authentication, the EMS will generate a JWT token that will be used for subsequent authorized requests made by the user.

3.1.3. Access and Personalization: With a valid JWT token, users can access their personalized dashboard or user interface within the EMS.The EMS may provide different functionalities and features based on the user's role, such as administrators having access to system configuration and management tools, instructors having access to task creation and evaluation modules, and participants having access to task submission and progress tracking.

3.1.4. Logout: Users can log out of their account at any time by clicking the logout button in the app's menu.

Requirements

REQUIREMNT ID	Requirement Description	Acceptability/ Completion Criteria	Limitations/ Constraints	Test case Identifier
EMS_001	A user can create a new account by providing basic information such as their name, email address, and password.	Essential	Server might not be available	TC_001
EMS_002	Once a user has created an account, they can log in using their email address and password.	Essential	Server might not be available	TC_002
EMS_003	Users can log out of their account at any time by clicking the logout button in the app's menu.	Essential	User may not be logged in	TC_003

3.1.5. Batch Management

Requirements

REQUIREMNT ID	Requirement Description	Acceptability/ Completion Criteria	Limitations/ Constraints	Test case Identifier
EMS_004	Admin should be able to create a new batch in the system. Essential The system should allow users to input batch details such as batch name, start date, end date, and any additional information	Essential	Need Admin user for access	TC_004
EMS_005	Admin should be able to update batch information. Essential The system should provide options for users to edit and modify batch details such as batch name, start date, end date, and any additional information	Essential	Need Admin user for access	TC_005
EMS_006	Admin should be able to add trainees to a batch. Essential The system should allow users to select and assign trainees to a specific batch	Essential	Need Admin user for access	TC_006
EMS_007	Users should be able to add trainers to a batch. Essential The system should allow users to select and assign trainers to a specific batch	Essential	Need Admin user for access	TC_007
EMS_008	Users should be able to view a list of all batches in the system. Essential The system should display a comprehensive list of all existing batches, including their names, start dates, end dates, and any additional information	Essential	Need to be logged in	TC_008

3.1.6. Task Upload and Submission

Requirements

REQUIREMNT ID	Requirement Description	Acceptability/ Completion Criteria	Limitations/ Constraints	Test case Identifier
EMS_009	Trainers should be able to create new tasks in the system. Essential The system should allow trainers to input task details such as task name, description, instructions, and any associated resources.	Essential	One task per day	TC_009
EMS_010	Trainers should be able to upload task files or provide links to external resources. Essential The system should support file uploads or URL input for trainers to attach task files or provide links to external resources for trainees' reference.	Essential	Will take single file/optional	TC_010
EMS_011	Trainers should be able to set a deadline for task submission. Essential The system should allow trainers to specify a deadline or due date for trainees to submit their task solutions.	Essential	None	TC_011
EMS_012	Trainees should be able to view and access assigned tasks. Essential The system should provide a user interface where trainees can access and view details of their assigned tasks, including task name, description, instructions, associated resources, and deadline	Essential	None	TC_012

EMS_013	Trainees should be able to submit their task solutions through the system. Essential The system should provide a file upload or input mechanism for trainees to submit their task solutions within the given deadline	Essential	Will take single file	TC_013
EMS_014	Trainers should be able to view and evaluate submitted task solutions. Essential The system should provide a user interface for trainers to access and evaluate the task solutions submitted by trainees, including options for entering marks or providing feedback	Essential	None	TC_014

3.1.7. Evaluation

Requirements

REQUIREMNT ID	Requirement Description	Acceptability/ Completion Criteria	Limitations/ Constraints	Test case Identifier
EMS_015	Trainers should be able to upload daily task marks for each trainee. Essential The system should provide a user interface for trainers to enter and upload daily task marks for each trainee	Essential	None	TC_015
EMS_016	Trainers should be able to upload mini project marks for each trainee. Essential The system should provide a user interface for trainers to enter and upload mini project marks for each trainee	Essential	None	TC_016

EMS_017	Trainers should be able to upload mid-project marks for each trainee. Essential The system should provide a user interface for trainers to enter and upload mid-project marks for each trainee	Essential	None	TC_017
EMS_018	Trainers should be able to upload final project marks for each trainee. Essential The system should provide a user interface for trainers to enter and upload final project marks for each trainee	Essential	None	TC_018
EMS_019	HR office should be able to upload HR evaluation marks for each trainee. Essential The system should provide a user interface for HR office personnel to enter and upload HR evaluation marks for each trainee	Essential	None	TC_019
EMS_020	Admin should be able to upload managerial evaluation marks for each trainee. Essential The system should provide a user interface for admin to enter and upload managerial evaluation marks for each trainee	Essential	None	TC_020
EMS_021	Admin should have the ability to generate the final score for each trainee based on the calculated overall scores. Essential The system should provide an admin interface to generate the final score for each trainee by considering the calculated overall scores and the weightage assigned to each evaluation component	Essential	Wightage needed to be decleared first	TC_021

3.1.8. User Account

Requirements

REQUIREMNT ID	Requirement Description	Acceptability/ Completion Criteria	Limitations/ Constraints	Test case Identifier
EMS_022	Users should be able to view their account information, including their name, email address, and role. Essential The system should provide a user interface for users to view their account information, which includes their name, email address, and role (administrator, trainer, or trainee).	Essential	Need to be logged In	TC_022
EMS_023	Users should be able to update their account information, such as their name and email address. Essential The system should provide a user interface for users to update their account information, allowing them to modify their name and email address	Essential	Need to be logged In	TC_023
EMS_024	Users should be able to change their account password. Essential The system should provide a user interface for users to change their account password, ensuring secure access to their account.	Essential	Need to be logged In	TC_024

4. User Interface

UI No.	UI Name	Related Function Requirement ID	Description	Test case Identifier
EMS_UI_001	Login	EMS_002	It should include a "Login" button to initiate the login process.	TC_025
EMS_UI_002	Register	EMS_001	It should include a "Register" button to initiate the registration process.The screen may also include options for users to agree to the terms and conditions or privacy policy	TC_026
EMS_UI_003	Profile	EMS_022	The profile screen should display relevant user account information, such as the user's name, email address, and role.It should provide options for users to view and update their account information.The screen may also include links or navigation to other sections of the system.	TC_027
EMS_UI_004	DailyTask	EMS_009	The DailyTask screen should display information related to the task creation for trainers and task details for trainees.It should allow trainers to create tasks with relevant details and instructions.	TC_028
EMS_UI_005	DailyTask Submission	EMS_010, EMS_011, EMS012,EMS_015	The DailyTask Submission screen should allow trainees to submit their task solutions. It should support file uploads or manual entry of task solutions. Trainees should receive confirmation of successful submission.	TC_029

EMS_UI_006	Mini project	EMS_016	The Mini project screen should display information related to the mini project for trainees and allow trainers to create and evaluate the mini project. For trainees, it should provide details about the mini project. For trainers, it should allow them to create and assign the mini project, as well as evaluate the submitted solutions.	TC_030
EMS_UI_007	Mid project	EMS_017	The Mid project screen should follow a similar structure as the Mini project screen, but specifically for the mid projectevaluation. It should display information related to the mid project for trainees and allow trainers to create and evaluate the mid project.	TC_031
EMS_UI_008	Final project	EMS_018	The Final project screen should display information related to the final project for trainees and allow trainers to create and evaluate the final project.	TC_032
EMS_UI_009	Managers Mark	EMS_019	This wll should display information related to the manafers for trainees and allow trainers to upload mark	TC_033
EMS_UI_010	Hr interview mark	EMS_020	The HR Interview Mark screen should display information related to the HR interview process for trainees.Trainees should be able to view their HR interview marks.Trainers or HR personnel should have the ability to upload HR interview marks for each trainee.	TC_034
EMS_UI_011	Final score mark	EMS_021	The Final Score Mark screen should display the final scores for trainees, calculated	TC_035

EMS_UI_012	Weightage		The Weightage screen should allow administrators or managers to define the weightage for different tasks or evaluations. It should provide options for assigning relative weights to different tasks or components. Administrators or managers should have the ability to adjust the weightage as needed.	TC_036
EMS_UI_013	DashBoard	EMS_002 EMS_022	The Dashboard screen should provide an overview of the user's activities, including task progress, upcoming deadlines, and overall performance. It should display relevant information and statistics in a concise and user-friendly manner. The screen may include links or navigation to other sections of the system..	TC_037

5. Non-Functional Requirements

REQUIREMNT ID	Requirement Description	Acceptability/ Completion Criteria	Limitations/ Constraints	Test case Identifier
EMS_NFR_001	The EMS should have an intuitive and user-friendly interface that requires minimal training for users.	Users should be able to complete tasks without significant usability issues.	The system should follow UI design best practices.	TC_NFR_001
EMS_NFR_002	The EMS should handle multiple concurrent users and large data sets efficiently.	System response time should be under 2 seconds for user actions.	Performance may be influenced by server capacity and hardware limitations.	TC_NFR_002
EMS_NFR_003	The EMS should ensure the confidentiality, integrity, and availability of user data and system resources.	User data should be encrypted during transmission and storage.	The system should implement secure authentication mechanisms and role-based access control.	TC_NFR_003
EMS_NFR_004	The EMS should scale its capacity to accommodate an increasing number of users and data.	The system should support horizontal and vertical scaling.	Scalability may depend on infrastructure limitations and database design.	TC_NFR_004
EMS_NFR_005	The EMS should be designed and developed in a modular and maintainable manner.	The system code should follow coding best practices and be well-documented.	Maintainability can be affected by code complexity and lack of documentation.	TC_NFR_006

5.1 Performance Requirements

Performance requirements define the expected performance characteristics and metrics that the Evaluation Management System (EMS) should meet. These requirements ensure that the system performs efficiently and meets the performance expectations of its users. Performance requirements for the EMS:

- Response Time: The system should provide quick response times to user actions. The average response time for common tasks, such as loading pages or submitting forms, should be within 2 seconds.

- Concurrent Users: The EMS should be able to handle multiple concurrent users without significant degradation in performance. The system should support a minimum of 100 simultaneous users without impacting response time or functionality.

- Data Processing Speed: The system should efficiently process and handle large data sets. Operations such as generating reports or calculating scores should be completed within a reasonable timeframe, even with a substantial amount of data.

- Scalability: The EMS should be scalable to accommodate an increasing number of users and data. It should be able to scale horizontally by adding additional server resources or vertically by optimizing hardware capacity to maintain performance levels.

- Resource Utilization: The system should utilize system resources, such as memory and CPU, effectively and efficiently. It should be designed to minimize resource usage and optimize performance.

- Availability: The EMS should be available for users during normal operation. It should have a high uptime percentage, with planned maintenance windows communicated in advance to minimize disruption to users.

- These performance requirements ensure that the EMS delivers a responsive, reliable, and scalable performance to meet the demands of its users.

5.2 Safety Requirements

REQUIREMNT ID	Requirement Description	Acceptability/ Completion Criteria	Limitations/ Constraints	Test case Identifier
Safety_001	User Authentication must be implemented securely.	Users can successfully authenticate using valid credentials.	None	TC_SAFETY_001
Safety_002	Role-Based Access Control should be enforced.	Users can only access features and data based on their roles.	None	TC_SAFETY_002
Safety_003	Sensitive data should be encrypted during transmission and storage.	User personal information and evaluation scores are encrypted.	Compliance with encryption standards and algorithms.	TC_SAFETY_003
Safety_004	Secure file upload mechanism should be implemented	Only authorized file types are accepted.	Prevention of uploading malicious files and handling file uploads.	TC_SAFETY_004
Safety_005	Secure APIs should be implemented for integration with external systems.	APIs require authentication and authorization.	Compliance with security standards and protection of API endpoints.	TC_SAFETY_005

5.3 Security Requirements

These are some of the precautions that may be taken to prevent unauthorized or malicious access, use, modification, destruction, or disclosure of software. Depending on the type and scope of the app and the intended audience, the particular security needs may vary.

REQUIREMENT ID	Requirement Description	Acceptability / Completion Criteria	Limitations/ Constraints	Test case Identifier
Security_001	User passwords must be stored securely.	Passwords are hashed and salted before storage.	Compliance with industry-standard password hashing algorithms.	TC_SECURITY_001
SECURITY_002	ACCESS TO SENSITIVE DATA SHOULD BE RESTRICTED BASED ON ROLES.	ONLY AUTHORIZED USERS WITH SPECIFIC ROLES CAN ACCESS THE DATA.	PROPER IMPLEMENTATION OF ROLE-BASED ACCESS CONTROL.	TC_SECURITY_002
SECURITY_003	SYSTEM SHOULD HAVE MEASURES TO PREVENT UNAUTHORIZED ACCESS.	UNAUTHORIZED USERS ARE NOT ABLE TO GAIN ACCESS TO THE SYSTEM.	IMPLEMENTATION OF AUTHENTICATION AND SESSION MANAGEMENT.	TC_SECURITY_003
SECURITY_004	SECURE TRANSMISSION OF DATA SHOULD BE ENSURED.	DATA IS ENCRYPTED DURING TRANSMISSION USING SECURE PROTOCOLS.	COMPLIANCE WITH SSL/TLS PROTOCOLS.	TC_SECURITY_004
SECURITY_005	PROTECTION AGAINST CROSS-SITE SCRIPTING (XSS) ATTACKS.	USER INPUTS ARE PROPERLY VALIDATED AND ENCODED TO PREVENT XSS.	IMPLEMENTATION OF INPUT VALIDATION AND OUTPUT ENCODING.	TC_SECURITY_005
SECURITY_006	PROTECTION AGAINST SQL INJECTION ATTACKS.	USER INPUTS ARE PROPERLY SANITIZED TO PREVENT SQL INJECTION.	IMPLEMENTATION OF PARAMETERIZED QUERIES AND PREPARED STATEMENTS.	TC_SECURITY_006
SECURITY_007	PROTECTION OF SENSITIVE USER INFORMATION.	PERSONAL INFORMATION IS STORED SECURELY AND ENCRYPTED.	COMPLIANCE WITH DATA PROTECTION REGULATIONS.	TC_SECURITY_007

SECURITY_008	REGULAR SECURITY ASSESSMENTS AND AUDITS.	SYSTEM UNDERGOES PERIODIC SECURITY TESTING AND AUDITS.	CONDUCTING VULNERABILITY ASSESSMENTS AND PENETRATION TESTING.	TC_SECURITY_008
SECURITY_009	SECURE HANDLING OF FILE UPLOADS.	UPLOADED FILES ARE SCANNED FOR VIRUSES AND MALICIOUS CONTENT.	IMPLEMENTATION OF FILE TYPE VALIDATION AND VIRUS SCANNING.	TC_SECURITY_009
SECURITY_010	PROPER LOGGING AND MONITORING OF SECURITY EVENTS.	SECURITY-RELATED EVENTS AND ACTIVITIES ARE LOGGED AND MONITORED.	IMPLEMENTATION OF ROBUST LOGGING AND MONITORING MECHANISMS.	TC_SECURITY_010

These security requirements ensure that the Evaluation Management System maintains the necessary security measures to protect user data, prevent unauthorized access, and mitigate potential security risks.

6. Design Constraints

Design constraints are the limitations or restrictions that impact the design and development of a system. Here are some examples of design constraints for the Evaluation Management System:

1. Technology Constraints: The system must be developed using specific technologies or frameworks that are compatible with the existing infrastructure or meet the organization's technology standards.
2. Time Constraints: The system development process must adhere to a predefined timeline or project schedule, requiring efficient design and development practices.
3. Resource Constraints: The availability of resources such as hardware, software, and skilled personnel may impose limitations on the system's design and development.
4. Scalability Constraints: The system should be designed to accommodate future growth and handle an increasing number of users, tasks, and data without compromising performance.
5. Integration Constraints: The system may need to integrate with existing systems or external services, requiring compatibility and adherence to integration protocols or APIs.
6. User Interface Constraints: The system's user interface design should follow specific guidelines, branding requirements, or accessibility standards.
7. Security Constraints: The system must comply with security policies and standards, ensuring the confidentiality, integrity, and availability of data.
8. Performance Constraints: The system should meet performance requirements, such as response time, throughput, and resource utilization, within the given hardware and network limitations.

9. Compliance Constraints: The system may need to adhere to legal or regulatory requirements, industry standards, or privacy regulations.

10. Budget Constraints: The system's design and development should consider budget limitations, optimizing costs without compromising the required functionality and quality.

These design constraints shape the design decisions and influence the development process to ensure that the Evaluation Management System meets the necessary constraints and fulfills the project's objectives.

7. Software Quality Attributes

REQUIREMNT ID	Requirement Description	Acceptability/ Completion Criteria	Limitations/ Constraints	Test case Identifier
SQ_001	RELIABILITY	THE SOFTWARE SHOULD HAVE A SYSTEM UPTIME OF AT LEAST 99.9% WITHOUT UNEXPECTED FAILURES.	LIMITED DOWNTIME FOR MAINTENANCE PURPOSES.	TC_001
SQ_002	PERFORMANCE	THE SOFTWARE SHOULD RESPOND TO USER REQUESTS WITHIN 2 SECONDS UNDER NORMAL LOAD CONDITIONS.	PERFORMANCE DEGRADATION MAY OCCUR UNDER HIGH USER LOAD.	TC_002
SQ_003	SCALABILITY	THE SOFTWARE SHOULD SUPPORT A USER BASE OF UP TO 10,000 CONCURRENT USERS WITHOUT SIGNIFICANT PERFORMANCE DEGRADATION.	LIMITED SCALABILITY DUE TO HARDWARE OR INFRASTRUCTURE LIMITATIONS.	TC_003
SQ_004	USABILITY	THE SOFTWARE SHOULD HAVE AN INTUITIVE USER INTERFACE AND BE EASY TO LEARN AND NAVIGATE.	USER SATISFACTION SURVEYS INDICATE A HIGH LEVEL OF USABILITY.	TC_004
SQ_005	MAINTAINABILITY	THE SOFTWARE CODE SHOULD BE WELL-STRUCTURED AND MODULAR, ALLOWING FOR EASY BUG FIXING AND FUTURE ENHANCEMENTS.	CODE COMPLEXITY AND LACK OF DOCUMENTATION MAY IMPACT MAINTAINABILITY.	TC_005

SQ_006	PORTABILITY	THE SOFTWARE SHOULD BE COMPATIBLE WITH MAJOR OPERATING SYSTEMS SUCH AS WINDOWS, MACOS, AND LINUX.	CERTAIN HARDWARE OR PLATFORM DEPENDENCIES MAY LIMIT PORTABILITY.	TC_006
SQ_007	SECURITY	THE SOFTWARE SHOULD IMPLEMENT ROBUST AUTHENTICATION AND ENCRYPTION MECHANISMS TO PROTECT USER DATA.	REGULAR SECURITY AUDITS AND NO MAJOR SECURITY BREACHES.	TC_007
SQ_008	TESTABILITY	THE SOFTWARE SHOULD HAVE A COMPREHENSIVE SUITE OF TEST CASES AND BE EASY TO DEBUG AND ANALYZE.	TEST COVERAGE OF AT LEAST 80% AND LOW DEFECT DENSITY.	TC_008
SQ_009	INTEROPERABILITY	THE SOFTWARE SHOULD SEAMLESSLY INTEGRATE WITH THIRD-PARTY SYSTEMS OR APIS.	ADHERENCE TO INDUSTRY STANDARDS AND SUCCESSFUL INTEROPERABILITY TESTS.	TC_009
SQ_010	EXTENSIBILITY	THE SOFTWARE SHOULD ALLOW FOR EASY ADDITION OF NEW FEATURES OR FUNCTIONALITIES WITHOUT MAJOR CODE MODIFICATIONS.	WELL-DEFINED EXTENSION POINTS AND MINIMAL IMPACT ON EXISTING FUNCTIONALITY.	TC_010

These software quality attributes help define the expectations and criteria for evaluating the quality of the Evaluation Management System, ensuring that it meets the desired standards and objectives.

8. Other Requirements

REQUIREMNT ID	Requirement Description	Acceptability/ Completion Criteria	Limitations/ Constraints	Test case Identifier
EMS_025				TC_025
EMS_026				TC_026
EMS_027				TC_027
EMS_028				TC_028