

**Software Requirements**

**Specification**

**for**

**Automation of KCET Admission**

**Version 1.0 approved**

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# Revision History

| **Name** | **Date** | **Reason For Changes** | **Version** |
| --- | --- | --- | --- |
|  |  |  |  |
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# Introduction

## Purpose

*The purpose of this document is to specify the software requirements for the release version 1.0 of* ***KCET Admission Automation System,*** *where the automation of all activities related to admission to professional courses is done.This document will describe the functionality, performance requirements, objectives, and design constraints of the system to be developed.*

## Document Conventions

*Throughout this documentation, the following conventions have been used :-*

* *Font: Arial,Words in Bold are important terms, and have been formatted to grab the attention*

*of the reader*

* *Size 18 For Main Headings*
* *Size 14 For Sub Headings*
* *Size 11 For the Rest of the Document*

## Intended Audience and Reading Suggestions

*This document is intended for various stakeholders, including:*

* ***Developers:*** *To understand the technical specifications and implementation details.*
* ***Documentation Writers:*** *To create user manuals and help guides.*
* ***Testing Teams:*** *To derive test cases and validation criteria.*
* ***Administrators and Admission Officers:*** *To comprehend the system's functionality and how it will streamline admission processes.*
* ***Karnataka Examination Authority(KEA):*** *As a client to supervise and review the product.*

*This document is organized to facilitate different type of readers and suggest a sequence for reading. Readers are encouraged to start with the overview sections and then navigate to sections most relevant to their roles and interests.*

## Product Scope

*The system we are developing aims to automate the entire process of admission to professional courses through KCET. It includes features such as online application submission, document verification, merit list generation, seat allocation, and fee payment processing. The system's purpose is to:*

* *Simplify and streamline the admission process for applicants, educational institutions, and authorities.*
* *Provide real-time access to admission-related information.*
* *Reduce manual paperwork and administrative overhead.*
* *Enhance transparency in the admission process.*

## References

1. *KCET official website ,*[*"Karnataka Examinations Authority"*](http://kea.kar.nic.in/)*.*

[*https://cetonline.karnataka.gov.in/kea/*](https://cetonline.karnataka.gov.in/kea/)

1. *Student document, SRS reference/Details.*

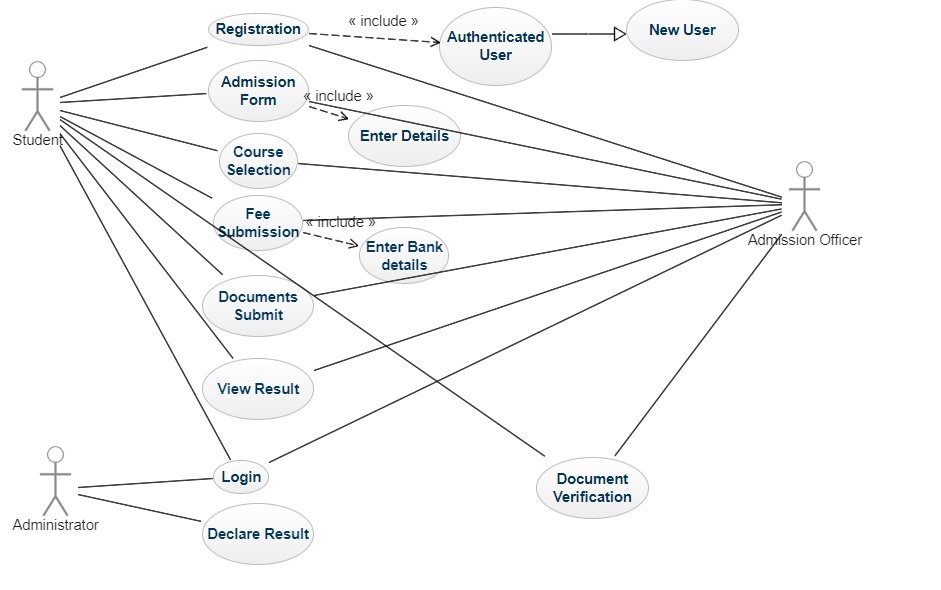
[*https://www.studocu.com/in/document/dhempe-college-of-arts-and-science/54534-bsc-in-arts-triology/srs-document/67618058*](https://www.studocu.com/in/document/dhempe-college-of-arts-and-science/54534-bsc-in-arts-triology/srs-document/67618058)

# Overall Description

## Product Perspective

*The KCET admission automation system is designed as a standalone software product dedicated to revolutionize, modernize and automate all activities related to admission to professional courses through the Karnataka Common Entrance Test (KCET) system. It is not a follow-on member of a product family.*

*This software product interfaces with the existing KCET examination system and educational institutions offering professional courses. It will receive data from KCET exam results and interact with multiple educational institutions for the admission process.*

**

## Product Functions

* ***Online Application Submission:*** *Applicants can submit their applications online, providing personal and academic details.*
* ***Eligibility Criteria:*** *Sets the minimum requirements for candidates to take up the exam, ensuring that only eligible students can apply.*
* ***Document Verification:*** *The system verifies submitted documents to ensure accuracy and authenticity.*
* ***Merit List Generation:*** *Based on the applicant's academic performance and KCET exam scores, the system generates a merit list.*
* ***Seat Allocation:*** *Allocates seats in educational institutions according to merit and seat availability.*
* ***Fee Payment Processing:*** *Manages the payment of admission fees securely.*
* ***User Management:*** *Allows administrators to manage user roles and permissions.*
* ***Reporting and Analytics:*** *Provides insights and reports on the admission process.*

## User Classes and Characteristics

* ***Applicants:*** *Prospective students applying for professional courses. They may have varying levels of technical expertise and educational backgrounds.*
* ***Admission Officers:*** *Educational institution staff responsible for managing the admission process. They require system expertise and a deep understanding of admission procedures.*
* ***Administrators:*** *System administrators responsible for configuring and maintaining the software. They need technical skills and system management expertise.*

## Operating Environment

* ***Hardware Platform:*** *Standard servers and storage systems.*
* ***Operating System:*** *It will be Compatible with modern operating systems,The Product can be accessed across various operating systems such as Windows, Mac,Android, Linux.*
* ***Software Components:****It shall be accessible through modern web browsers including but not limited to Google Chrome, Mozilla Firefox, Microsoft Edge, and Safari, with support for the latest versions and updates. It shall have the capability to integrate with databases commonly used in educational institutions, such as MySQL to efficiently manage the details.*
* ***Interfaces:*** *Interfaces with the KCET examination system and educational institutions' systems.*

## Design and Implementation Constraints

* ***Regulatory Policies:*** *Adherence with educational and data protection regulations may limit certain design choices, security measures, and privacy considerations. The system must adhere to specific rules and guidelines set by regulatory authorities.*
* ***Interfaces:*** *Compatibility with existing systems and data formats like designing APIs and data standards that align with them, and ensure compatibility through testing and error handling.*
* ***Security Considerations:*** *Stringent security requirements, especially regarding the handling of sensitive applicant data which require extensive security measures, such as encryption and secure authentication.*
* ***Data Standards:*** *The system may need to adhere to specific data standards for data exchange with educational institutions, government authorities, or other entities. These standards could include data formats, data validation rules, and data sharing protocols.*
* ***Parallel Operations:*** *Handling simultaneous user interactions and parallel processing during peak admission periods requires efficient concurrency control and load-balancing solutions.*

## User Documentation

* *The system shall provide comprehensive guides (User manuals) for applicants, admission officers, and administrators keeping in mind the delivery formats and standards will follow industry best practices for user documentation.*
* *The system shall provide context-sensitive help (Online help) within the application.*
* *The system shall provide interactive tutorials to guide users through key processes*

## Assumptions and Dependencies

***Assumptions:***

* *Adequate hardware and network infrastructure will be in place.*
* *The availability and accuracy of KCET examination results data.*
* *Third-party components and libraries used in the development process will function as expected.*
* *The information given by the institutions are reliable and accurate.*

***Dependencies:***

* *The project depends on data interfaces with the KCET examination system and external educational institutions.*
* *Dependencies on any third-party software components or services required for implementation.*
* *Regulatory changes or policy updates may affect the project's requirements and scope.*

# External Interface Requirements

## User Interfaces

***Applicant Interface:***

*Applicants will interact with the system through a web-based user interface. It will include screens for:*

* *Allow applicants to create accounts and log in securely and collect essential personal and contact information during registration.*
* *Upon login, A comprehensive application form with clear sections for academic details, choice of courses, and document uploads will be present along with tooltips and help text for guidance.*
* *A user dashboard interface to display application status, exam details, and payment information. It also include options for editing application data and tracking progress.*
* *A secured payment gateway interface for fee payment. After application submission and successful payment, the interface provides an on-screen confirmation message and generates a unique application ID.*

***Admission Officer Interface:***

*The Admission Officer Interface is accessible via web browsers and is designed to facilitate the work of admission officers responsible for verifying documents and managing applicant data.It will include screens for:*

* *An interface to log in where admission officers must log in using their credentials, which include a username and password in order to access this interface*
* *Upon login, admission officers are presented with a dashboard that provides an overview of their tasks and responsibilities. The dashboard includes shortcuts to common functions and access to applicant data.*
* *Interface that allows admission officers to retrieve and view applicant data, which includes personal details, academic records, and document verification status.*

***Administrator Interface:***

*The Administrator Interface is designed for system administrators responsible for configuring and maintaining the software.It will include screens for:*

* *The administrator interface requires secure login credentials to access. System administrators have elevated privileges such as defining admission deadlines, managing user roles and permissions, generation of exam results and customizing system behavior.*
* *An interface includes reporting and analytics tools that allow administrators to generate reports on system usage, application statistics, and performance metrics.*
* *An interface to access error logs and diagnostic tools to troubleshoot and resolve problems.*
* *An interface to customize the user interfaces, update text labels, and configure system messages and notifications.*
* *An interface for security settings, such as defining password policies, configuring data encryption options, and managing security certificates.*

## Hardware Interfaces

***Web Servers:***

* ***Hardware:*** *High-performance web servers and load balancers to handle web traffic efficiently.*
* ***Interface:*** *Servers should be configured to serve web pages, process form submissions, and handle SSL encryption for secure connections*

***Database Servers:***

* ***Hardware:*** *Robust database servers with sufficient storage, memory, and processing power to manage applicant data and records.*
* ***Interface:*** *Establish connections between the application and database servers to store, retrieve, and update data securely.*

***Storage Infrastructure:***

* ***Hardware:*** *Network-attached storage (NAS) or storage area network (SAN) for data storage and backups.*
* ***Interface:*** *Connect the application and database servers to the storage infrastructure for data storage and retrieval.*

## Software Interfaces

***Web Application Interface:***

* ***Software:*** *The web application itself, including the user interfaces for applicants, administrators, and other stakeholders.*
* ***Interface:*** *Develop user-friendly interfaces with clear navigation, form submissions, and secure login/logout functionality.*

***Database Management System (DBMS):***

* ***Software:*** *The DBMS used to store and manage applicant data, exam results, and other records.*
* ***Interface:*** *Implement database queries, transactions, and data retrieval mechanisms to interact with the DBMS.*

***Authentication and Authorization Systems:***

* ***Software:*** *Authentication services for verifying user identities and authorization systems for controlling access to specific features and data.*
* ***Interface:*** *Implement secure authentication protocols (e.g., OAuth, JWT) and role-based access controls within the application.*

***Payment Gateway Integration:***

* ***Software:*** *Payment gateway APIs or SDKs for processing financial transactions.*
* ***Interface:*** *Integrate payment gateway interfaces into the application to handle application fee payments securely.*

***Document Scanning and Verification Software:***

* ***Software:*** *OCR (Optical Character Recognition) and document verification tools for scanning, extracting data, and validating uploaded documents.*
* ***Interface:*** *Create interfaces to trigger document scans, validate document content, and flag discrepancies.*

***External Educational Institution Systems:***

* *The software will communicate with the systems of external educational institutions to exchange admission-related data. The format and protocols for data exchange will be standardized.*

## Communications Interfaces

* ***HTTP/HTTPS:***

*Web communication protocols will be used for user interactions with the system. HTTPS will be employed to ensure secure data transmission.*

* ***Email:***

*The system may send email notifications to applicants and admission officers. Standard email protocols (SMTP, IMAP) will be used for email communication.*

* ***Data Transfer:***

*Data transfer protocols like FTP or secure alternatives may be used for batch data transfer with external systems, including educational institutions.*

* ***APIs:***

*The system may provide APIs for integration with other applications or services, allowing third-party developers to access specific functionalities securely.*

* ***Security and Encryption:***

*All communication interfaces will prioritize security and encryption to protect sensitive data. Data transfer rates and synchronization mechanisms will be optimized for performance.*

# System Features

## *Account Registration*

### *Description and Priority*

*Account Registration allows prospective applicants to create accounts within the system. It is of high priority as it serves as the initial step for applicants to access and use the system's features.*

### *Stimulus/Response Sequences*

* ***Stimulus:*** *Applicant accesses the registration page.*
* ***Response:*** *System displays the registration form, prompting the user to enter personal information.*

### *Functional Requirements*

### ***REQ-1:*** *The system shall provide a registration form with fields for username, password, email, and personal details.*

### ***REQ-2:*** *Usernames and email addresses must be unique and not already registered in the system.*

### ***REQ-3:*** *Passwords must meet security criteria, including minimum length and complexity requirements.*

### ***REQ-4:*** *Users must verify their email addresses by clicking a confirmation link sent to their provided email.*

### ***REQ-5:*** *After successful registration, the system shall redirect users to the login page for authentication.*

## *Account Login*

*4.2.1 Description and Priority*

*Account Login enables registered users to access their accounts securely. It is of high priority as it grants users access to the system's functionalities*

*4.2.2 Stimulus/Response Sequences*

* ***Stimulus:*** *User enters valid credentials and submits the login form.*
* ***Response:*** *System verifies the credentials and grants access if they are valid; otherwise, it displays an error message*

*4.2.3 Functional Requirements*

* ***REQ-6:*** *The system shall provide a login form with fields for username and password.*
* ***REQ-7:*** *Upon submission, the system shall authenticate users by verifying their credentials against stored data.*
* ***REQ-8:*** *After successful login, the system shall redirect users to their respective dashboard based on their roles (applicant, admission officer, or administrator).*
* ***REQ-9:*** *Failed login attempts shall trigger account lockout or introduce delays to prevent brute-force attacks.*

## *Online Application Submission*

*4.3.1 Description and Priority*

*This feature enables applicants to submit their applications online. It is of High Priority as it is a fundamental step in the admission process.*

*4.3.2 Stimulus/Response Sequences*

* ***Stimulus:***

1. *Applicant navigates to the online application page.*
2. *Applicant enters personal and academic information.*
3. *Applicant uploads required documents.*
4. *Applicant reviews the application.*
5. *Applicant submits the application.*

* ***Response:***

1. *System displays the application form.*
2. *System validates and stores applicant data.*
3. *System verifies document uploads.*
4. *System displays a summary of the application.*
5. *System acknowledges the successful submission.*

*4.3.3 Functional Requirements*

* ***REQ-10:*** *The system shall provide an intuitive web-based application form (HTML form) for applicants to fill in their personal details, academic information, and course preferences.*
* ***REQ-11:*** *The system shall support document uploads in common formats (e.g., PDF, JPEG) and validate uploaded documents for completeness and format compliance.*
* ***REQ-12:*** *Applicants shall have the ability to review and edit their application details before submission.*
* ***REQ-13:*** *The system shall generate a unique application ID for each submission.*
* ***REQ-14:*** *Upon successful submission, the system shall send a confirmation email to the applicant with their application details and ID.*

## *Applicant Dashboard*

*4.4.1 Description and Priority*

*The Applicant Dashboard is a central hub for applicants to manage their admission process. System also send automated notifications and messages to users that are visible in this dashboard. It is of high priority as it provides applicants with critical information and actions.*

*4.4.2 Stimulus/Response Sequences*

* ***Stimulus:***

1. *Applicant logs in and accesses the dashboard.*
2. *Various system events trigger notifications, such as document verification updates or application status changes.*

* ***Response:***

1. *The system displays an overview of the applicant's application status, including submitted documents, test scores, and payment status.*
2. *The system sends notifications to relevant users via email or in-app messages.*

*4.4.3 Functional Requirements*

* ***REQ-15:*** *The dashboard shall show a summary of the applicant's submitted data and current application status.*
* ***REQ-16:*** *Applicants can view and edit their personal information.*
* ***REQ-17:*** *The system shall provide a section for document upload, with the ability to track document verification status.*
* ***REQ-19:*** *Payment status for application fees shall be displayed, and applicants can initiate payments if required.*
* ***REQ-20:*** *The system shall have configurable notification templates for different types of messages.*
* ***REQ-21:*** *Notifications shall be sent via email, and a notification center within the system shall display in-app messages.*
* ***REQ-22:*** *Users can opt in or out of specific notification types and specify their preferred communication channels.*

## *Merit List Generation*

*4.5.1 Description and Priority*

*This feature generates merit lists based on applicant academic performance and KCET exam scores. It is of High Priority as it directly impacts the admission selection process.*

*4.5.2 Stimulus/Response Sequences*

* ***Stimulus:***

1. *Admission officer initiates merit list generation.*

* ***Response:***

1. *System retrieves applicant data.*
2. *System applies merit calculation algorithms.*
3. *System generates and displays the merit list.*

*4.5.3 Functional Requirements*

* ***REQ-23:*** *The system shall use predefined algorithms to calculate applicant merit scores based on academic performance and KCET exam scores.*
* ***REQ-24:*** *The system shall generate merit lists for each course and category based on the calculated scores.*
* ***REQ-25:*** *The system shall allow admission officers to view and download merit lists in various formats (e.g., PDF, Excel).*
* ***REQ-26:*** *Merit lists shall be updated in real-time as new data becomes available.*

## *Document Upload and Verification Tracking*

*4.6.1 Description and Priority*

*Document Upload and Verification Tracking allows applicants to upload required documents and tracks the verification process. It is of high priority to ensure accurate and complete documentation.*

*4.6.2 Stimulus/Response Sequences*

* ***Stimulus:*** *Applicant accesses the document upload section.*
* ***Response:*** *The system displays a list of required documents and their verification statuses.*

*4.6.3 Functional Requirements*

* ***REQ-27:*** *The system shall provide a secure document upload interface with options for applicants to submit files.*
* ***REQ-28:*** *Uploaded documents shall be timestamped and linked to the respective application.*
* ***REQ-29:*** *Admission officers shall have tools to review and verify uploaded documents, with the ability to request additional information if necessary.*

## *Seat Allotment*

*4.7.1 Description and Priority*

*Seat Allotment is a critical feature that facilitates the allocation of available seats in courses to eligible applicants. It is of high priority as it directly impacts the final enrollment of students in various programs.*

*4.7.2 Stimulus/Response Sequences*

* ***Stimulus:*** *Admission officers initiate the seat allotment process for a specific course.*
* ***Response:*** *The system executes an algorithm to determine seat allocation based on predefined criteria and applicant rankings.*

*4.7.3 Functional Requirements*

* ***REQ-30:*** *The system shall support the configuration of seat allocation rules, considering factors like reservation categories, seat availability, and applicant preferences.*
* ***REQ-31:*** *Seat allocation shall be based on merit rankings and adhere to predefined admission policies.*
* ***REQ-32:*** *The system shall generate and display seat allotment results, indicating which applicants have secured seats in specific courses.*
* ***REQ-33:*** *Applicants who are allocated seats shall be notified automatically, and they shall have a defined timeframe to confirm or decline the allocated seat.*

## *Admission Officer Document Verification*

*4.8.1 Description and Priority*

*The Admission Officer Document Verification feature allows admission officers to review and verify applicant documents. It is of high priority to ensure the accuracy and completeness of applicant data.*

*4.8.2 Stimulus/Response Sequences*

* ***Stimulus:*** *Admission officer accesses the applicant's document verification section.*
* ***Response:*** *The system displays a list of documents to review and provides tools for verification.*

*4.8.3 Functional Requirements*

* ***REQ-34:*** *Admission officers can access applicant documents based on their assigned cases.*
* ***REQ-35:*** *The system shall provide tools for viewing, annotating, and marking documents as verified or requiring further review.*
* ***REQ-36:*** *Admission officers can leave comments or notes for internal communication and collaboration.*
* ***REQ-37:*** *The system shall update the applicant's document verification status accordingly.*

## *Payment of Fees and Admission*

*4.9.1 Description and Priority*

*Payment of Fees and Admission is a crucial feature that combines the payment of required fees with the finalization of the admission process for applicants who have been allotted seats. It is of high priority as it ensures the completion of the enrollment process.*

*4.9.2 Stimulus/Response Sequences*

* ***Stimulus:*** *Applicants who have been allocated seats confirm their acceptance.*
* ***Response:*** *The system prompts applicants to make the necessary payment to secure their admission.*

*4.9.3 Functional Requirements*

* ***REQ-38:*** *The system shall display a confirmation prompt to applicants upon seat allotment, asking if they accept the allocated seat.*
* ***REQ-39:*** *Applicants who accept the seat shall be directed to the payment section, where they can view and confirm the required fees.*
* ***REQ-40:*** *The system shall calculate the total amount due, including tuition fees, examination fees, and any applicable charges.*
* ***REQ-41:*** *Payment processing shall be seamlessly integrated, allowing applicants to make payments securely and receive instant confirmation of payment success.*
* ***REQ-42:*** *Upon successful payment, the system shall update the applicant's admission status to "confirmed" and issue an official admission letter.*

## *Application Withdrawal and Refund*

*4.10.1 Description and Priority*

*The Application Withdrawal and Refund feature allows applicants to withdraw their applications and request refunds where applicable. It is of medium priority, supporting applicant flexibility.*

*4.10.2 Stimulus/Response Sequences*

* ***Stimulus:*** *Applicant accesses the withdrawal and refund section.*
* ***Response:*** *The system provides options for withdrawal and guides applicants through the process.*

*4.10.3 Functional Requirements*

* ***REQ-43:*** *Applicants can initiate withdrawal requests, specifying reasons and refund eligibility.*
* ***REQ-44:*** *The system shall calculate refund amounts based on predefined rules and refund policies.*
* ***REQ-45:*** *Withdrawal requests shall undergo approval by admission officers or administrators.*

# Other Nonfunctional Requirements

## Performance Requirements

***Application Response Time:***

* ***Requirement:*** *The system shall respond to user interactions (e.g., form submissions, page loading) within an average of 1-2 seconds under normal load conditions.*
* ***Rationale:*** *Quick response times are essential to provide a smooth user experience during the application process.*

***Concurrent User Support:***

* ***Requirement:*** *The system shall support a minimum of 1000 concurrent users without any significant performance degradation.*
* ***Rationale:*** *Ensuring that the system can handle a large number of concurrent users is crucial during peak application submission periods.*

***Data Retrieval Time:***

* ***Requirement:*** *The system shall retrieve applicant data for admission officers within 2-3 seconds.*
* ***Rationale:*** *Quick data retrieval is necessary for efficient document verification and merit list generation.*

***Merit List Generation Time:***

* ***Requirement: T****he system shall generate merit lists for each course and category within 5 minutes of initiating the process.*
* ***Rationale:*** *Timely merit list generation is critical for the admission selection process.*

## Safety Requirements

***Data Privacy:***

* *Data privacy is a paramount concern. The system must safeguard against potential data loss through automated daily backups stored securely off-site, ensuring data recovery in case of system failures or disasters.*
* *The system shall encrypt sensitive applicant data both in transit and at rest using industry-standard encryption protocols, including HTTPS for data in transit and encryption algorithms for data at rest.*
* *User access to applicant data shall be role-based and strictly controlled. Only authorized personnel (admission officers and administrators) shall have access to specific data, and their access shall be logged and audited.*
* *The system shall aim to obtain relevant safety certifications related to data privacy and security, such as ISO 27001 certification, to demonstrate its commitment to data protection and security.*
* *Compliance with data privacy regulations, including the General Data Protection Regulation (GDPR) and local data protection laws, is mandatory to ensure lawful and ethical data handling.*

## Security Requirements

* ***User Authentication:***

*User authentication shall be enforced to ensure that only authorized personnel can access the system. Users shall be required to log in using a username and password, and strong password policies shall be enforced.*

* ***Data Integrity:***

*Role-based access control shall be implemented to restrict user access based on their roles. This ensures that users can only access functionalities and data relevant to their responsibilities.*

* ***Data Transmission Security:***

*All data transmitted between clients and servers shall be encrypted using HTTPS (Hypertext Transfer Protocol Secure) or equivalent secure protocols. The system shall comply with relevant security standards and regulations, such as ISO 27001 and other industry-specific security frameworks.*

* ***Regular checks:***

*Regular security audits and vulnerability assessments shall be conducted to identify and address potential security weaknesses and threats proactively.*

## Software Quality Attributes

* ***Usability:***

*The system shall adhere to industry best practices for user interface design, ensuring a user-friendly and intuitive experience.A user-friendly interface reduces user errors and enhances user satisfaction.Usability testing and user feedback are essential for achieving high usability.*

* ***Maintainability:***

*As admission requirements evolve and new features are requested, the system must be designed and structured to allow for efficient maintenance and enhancements.The system's code shall be well-documented, modular, and follow coding standards to facilitate ease of maintenance and future enhancements.*

* ***Reliability:***

*The system shall have a mean time between failures (MTBF) of at least 500 hours, ensuring high system availability. Reliability is crucial to prevent disruptions during the admission process.*

* ***Interoperability:***

*Interoperability is crucial because it may need to integrate with educational institution databases, third-party document verification services, and external authentication systems.  
This is facilitated by Standards-based APIs and data exchange formats.*

* ***Adaptability:***

*The system's ability to accommodate changes and enhancements with minimal disruption.This includes the ability to easily configure application deadlines, admission rules, and user roles through administrative interfaces, reducing the need for extensive coding changes.*

## Business Rules

* ***Application Deadlines:***

*The system shall prevent late submissions and ensure that applications are accepted only within the specified timeframe. Additionally, it may allow for extensions under certain conditions.*

* ***Merit List Generation:***

*The system shall implement the predefined calculation rules for generating merit lists based on academic performance and KCET scores. It must implement these rules accurately to create fair and transparent merit lists that reflect applicant qualifications.*

* ***Admission Eligibility:***

*The system enforces the eligibility criteria for applicants. These rules may include minimum academic qualifications, age limits, residency requirements, and specific course prerequisites.Applicants must adhere to these rules to qualify for admission.*

* ***Seat Allocation:***

*Once merit lists are generated, factors like reservation categories (e.g., quotas for different social groups), seat availability, and applicant preferences come into play to allocate available seats in courses.The system shall follow these rules to allocate seats equitably.*

* ***Withdrawal and Refund Policies:***

*These policies or rules specify the timeframe within which applicants can withdraw, conditions for refund eligibility, and refund processing timelines. Compliance with these rules is essential to manage withdrawals and refunds efficiently.*

* ***Payment Processing:***

*These rules define payment deadlines, accepted payment methods, and penalties for late or non-payment.*

# Other Requirements

***Database Management System (DBMS):*** *The system shall use a database management system (DBMS) to store and manage applicant data, exam results, and other records. MySQL will be used as the preferred DBMS.*

***Internationalization Requirements:****The system shall provide support for multiple languages, including English and the official languages of Karnataka, such as Kannada and others as required. Users should be able to switch between languages as per their preference.*

***Performance Testing:****The system must be able handle a significantly increased number of concurrent users beyond the specified minimum requirement without significant performance degradation.*

# Appendix A: Glossary

***KCET (Karnataka Common Entrance Test):*** *A common entrance examination conducted in Karnataka for admission to professional courses.*

***KEA: Karnataka Examinations Authority:*** *The authority responsible for conducting the KCET examination and overseeing the admission process.*

***SRS: Software Requirements Specification:*** *A formal document that describes the software system's requirements, including its functionality, performance, and design constraints.*

***API: Application Programming Interface:*** *A set of rules and protocols that allows different software applications to communicate and interact with each other.*

***OCR (Optical Character Recognition):*** *The technology that converts scanned documents or images into machine-readable text.*

***SMTP(Simple Mail Transfer Protocol):*** *A protocol used for sending email messages between email servers.*

***IMAP( Internet Message Access Protocol):*** *A protocol used for retrieving email messages from an email server.*

***FTP(File Transfer Protocol):*** *A protocol used for transferring files between a client and a server over a network.*

***NAS(Network-Attached Storage):*** *A dedicated file storage device that provides data access to clients over a network.*

***SAN (Storage Area Network):*** *A high-speed network that connects and provides shared block-level data storage to multiple devices.*

***HTTPS (Hypertext Transfer Protocol Secure):*** *A secure version of HTTP used for encrypted communication over a computer network, typically the internet.*

***JWT (JSON Web Token):*** *A compact and self-contained way to transmit information between parties as a JSON object, often used for authentication and authorization.*

# Appendix B: Analysis Models

***TBD***

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# Appendix C: To Be Determined List

* *Analysis Models*