**Chapter 3:** Requirement Engineering

Chapter 3 is representing the requirement engineering, user requirement, system requirement, functional requirement and non-functional requirement. This chapter describes the methodology for the generation of software requirements for Automated Admission and Result Processing System for info care. It describes what needs to be done, how to manage the user of their system, managing their payment and also manage their all records.

**3.1 Requirement Engineering**

Requirement engineering refers to the process of defining, documenting and maintaining requirements and to the subfields of systems engineering and software engineering concerned with this process. Designing and building an elegant computer program that solves the wrong problem serves no one’s need. That’s why it is important to understand what the customer wants before we begin to design and build a computer-based system. Requirement engineering encompasses the tasks that lead to an understanding of what the business impact of the software will be, what the customer wants, and how end-users will interact with the software.

* User Requirements
* System Requirements
* Functional Requirements
* Non-Functional Requirements

**User and System Requirements:**

**User requirement#1:** Admin dashboard contains all options for changing the application content from admin dashboard.

**System requirement#1.1:** Admin panel will be accessed by admin.

**System requirement#1.2:** Admin Must login.

**System requirement#1.2:** Admin get some options to change the contents from admin dashboard.

**User requirement#2:** Admin can confirm new student admission through online.

**System requirement#2.1:** Admin must login through his/her valid username and password.

**System requirement#2.2:** After login admin get a option **New Admission**. Through this option admin can see all admission requests and see every applicant details.

**System requirement#2.3:** After checking applicant all information, Admin can confirm or cancel the request.

**System requirement#2.4:** If admin confirm the admission request then transaction will be confirmed and student must get a notification consisting new student ID (According to institution ID generation rules), Username and Password.

**System requirement#2.5:** If admin cancel the admission request, then also applicant get a notification with a explanation of what is the problem about his/her admission.

**User requirement #3:** Admin can publish result.

**System requirement #3.1:** Admin Must Login the system.

**System requirement #3.2:** After login admin get Result option. Through this option admin get a firm for student result entry.

**System requirement #3.2:** Admin can see and make all kind of result related reports.

**User requirement#4** Admin can deal with syllabus.

**System requirements # 4.1:** Admin Must Login the system.

**System requirements # 4.2:** Afterlogin the system, Admin get a option named **Syllabus.** Through this option admin can add, edit, delete any subject.

**User requirement #5:** Admin can handle student information in details.

**System requirement #5.1:** Admin must login the system.

**System requirement #5.2:** After login the system admin will get a option named student. Through this option admin can add, edit, and delete student information.

**System requirement #5.3:** Admin can make all kind of student related report according to his/her needs.

**System requirement #5.4:** Admin can send notice to specific student also.

**User requirement #6:** Admin can post notice.

**System requirement #6.1:** Admin must login the system.

**System requirement #6.2:** Admin will get a Notice option after login the system in admin dashboard**.**

**System requirement #6.3:** Admin can post new notice through notice option and can handle notice contents.

**User requirement #7:** Admin can publish research content.

**System requirement #7.1:** Admin must login the system.

**System requirement #7.2:** After login the system, Admin will get a option named Publication. Through this option admin can post research content.

**System requirement #7.3:** Admin also can handle research content.

## User requirement #8: Admin can add photos in gallery.

**System requirement #8.1:** Admin must login the system.

**System requirement #8.2:** After login the system, Admin will get a option named Gallery**.** Through this option admin can add new photos in galley.

**System requirement #8.3:** Admin can add or delete the photos also.

**User requirement #9:** Admin can receive job applications through online.

**System requirement #9.1** Admin must login the system.

**System requirement #9.2:** After login, Admin will get Job Applicants. Admin can see applicant details.

**System requirement #9.3:** Admin can invite the applicant for interview through email from his own dashboard.

**User requirement #10:** Anybody can apply for taking admission.

**System requirement #10.1** Students must fill up the admission form with valid information. Example- Masters ID, Marks Sheet, Institution details, Transaction details, Address, etc.

**System requirement #10.2:** After completing all the required information, student can submit the admin form.

**System requirement #10.3:** After submission student gets a message for 24 hours waiting.

**System requirement #10.4:** If admin confirm the admission request then transaction will be confirmed and student must get a notification consisting new student ID (According to institution ID generation rules), Username and Password.

**System requirement #10.5:** After getting confirmation email, Student can login his/her profile using ID, username, password.

**System requirement #10.6:** If admin cancel the admission request, then also applicant get a notification with a explanation of what is the problem about his/her admission.

**System requirement #10.7:** Students can try three times. After three applicant will be permanent block. After fill up the Master ID, Other field will block(read only).

**User requirement #10:** Every student will get a separate profile.

**System requirement #10.1** Every students must login through ID, username, password.

**System requirement #10.2:** After login, every student will get his/her own profile.

**System requirement #10.3:** Every **s**tudent can see own result only.

**System requirement #10.4:** Everystudentsee own syllabus, notice, responsibilities, etc.

**User requirement #10:** Online Certificate providing for alumni students.

**System requirement #10.1** Alumni must login the system.

**System requirement #10.2:** After login, Alumni will get his/her profile and in alumni profile there will be a option named Certificate.

**System requirement #10.3:** Alumni can take his/her Certificate softcopy thought online.

## 3.2 Functional Requirements:

A functional requirement document characterizes the usefulness of a system or one of its subsystems. It also relies on the type of software, expected users and the type of system where the software is used. The functional requirements of this system are given below.

* Add, update and delete cancel applications.
* Search Student details.
* Search result details.
* Search specific information about student or result.
* View student details with result and other information.
* View applicant details about student and job seeker.
* Calculate and process student id, password.
* Generate Reports.

## 3.3 Non Functional Requirements

Non-functional requirements are not straightforward requirement of the system rather it is related to usability, security, reliability, performance etc.

* Show error message during the wrong pass in admin and employee login.
* Give notification for every kind of mismatch information.
* Give notification of Letter of credit validity date during the available period.
* System will need all the username and password stored in database.
* System will need username and password information from the HR Admin.
* System will need payroll policy, employee attendance and employee categories.

**3.4 Specification of Each Requirement:**

**3.4.1 Admin specification:**

**Function:** Log in, add information, Permit/reject leave request

**Description:** All the access of the system

**Input:** Admin input his information in his criteria.

**Output:** Information submits successfully.

**Action:** Information accepted or rejected.

**Side effects:** None

**3.4.2User specification:**

**Function:** Log in, add information & send leave request

**Description:** Easily use the system for his useful purpose.

**Input:** User input his information in his criteria

**Output:** Information submits successfully.

**Action:** Request & information accepted or rejected.

**Side effects:** None

**3.4.3 Database specification:**

**Function:** Store whole information.

**Input**: assign data

**Output:** Progress and provide information

**Action:** Support Data

**Side effects**: none

**3.4 USE CASE Diagram of Automated and Result System:**

Admin

G. People

Student

Alumni

<<include>>

<<exclude>>

<<exclude>>

<<exclude>>