**Software Requirements Specification**

# For

Result Processing System

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Students Signature Clients Signature Teachers Signature

# Result Processing System

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1. **Introduction**

This document aims at defining overall software requirement for Result Processing System. Efforts have been made to define the requirements exhaustively and accurately. The final product will be having only features/functionalities mentioned in this document and assumptions for any additional functionality/feature should not be made by any of the parties involved in developing/testing/implementing/using this product.

* 1. **Purpose**

This specification document describes the capabilities that will be provided by the software application Result Processing System. It also states the various constraints by which the system will abide. The intended audiences for this document are the development team, testing team and end users of the product.

* 1. **Scope**

The application will manage the information about various students enrolled in this course in different years, the subjects offered during different semesters of the course, the marks obtained by the various students in various subjects in different semesters.

The application will greatly simplify and speed up the result preparation and management process.

* 1. **Definitions, acronyms, and abbreviations**

SRS – System Requirement Analysis

DBMS – Database Management System

DBA – Database Administrator

OS – Operating System

SQL – Structured Query Language

* 1. **Overview**

The remainder of this document will discuss the requirements of the project. It will discuss the overall description of the product, to include its perspective and functions. It will also discuss the specific requirements such as functional requirements, performance requirements, and design constraints.

### Overall description

The application will have capability to maintain information about the students enrolled in the course, the subjects offered to students during different semesters, the marks obtained by the students in different subjects in various semesters. The software will also generate summary report regarding student information, semester wise marks list and performance reports.

* 1. **Product perspective**

The software requires a connection to a database server. The program will be executed as a standalone application on a single machine. The application may be executed on multiple machines simultaneously. The user will interact with the program via a GUI. The user will use both the mouse and keyboard for input and all information will be outputted to the monitor.

* 1. **Product functions**
  2. **User characteristics**

The user should have knowledge of how to operate in a Windows environment. They must be able to execute the program and then maneuver around the program. The user should have to know how to connect to the network in order to allow the program to connect to the database server. The user will not have to understand databases nor SQL.

* 1. **Constraints**

The program is designed to be executed on a PC running a Windows OS. The GUI will be implemented using Windows Forms.

* 1. **Assumptions and dependencies**

The program will be executed on a Windows OS platform. Connection to the server will be available for all times at which the program is to be used.

**3.1 Functional Requirement**

Different requirements both functional and non functional are described below

**Sign Up Function BY Office Staff**

Result Processing System will check this portion whether the User is valid to use the system or not. If he is not valid user, the system will determine that you are not eligible for the registration.

*Input:* First Name, Last Name, Email Id, password and Confirmation Password.

*Process:* The User information will check by author, and if they are valid system displays the successfully sign up message. Otherwise, an error message will display.

*Output*: Error message or successful Sign Up

.

**log in Function by Office Staff**

Only Register user can be “log in” in the system. If user is not registered the software will suggest to “Sign up”.

Input: “User name” and “Password”.

*Process:* The Username and password are checked from the database, and if they are valid user system displays the message “Login successfully”. Otherwise, an error message will warn the User.

*Output*: Error message or successful login

#### Logout Function by Office Staff

When user wants to sign out form the system, user will click the “Logout”.

Input: Nil

Process: When user will click the Logout button, system close all database.

Output: Successful logout

**Result Verification Function by Office staff**

Student can verify their result by this system.

Input: “Full name”, “session”, “Id” and “Department”.

Process: If anyone wants to verify anyone’s result, he give “Full name”, “session”, “Id”, “Department” to Office staff. Office staff clicks the “Result Verification” icon and the system prompts “Full name”, “session”, “Id”, “Department”. User click the ok button And system display the status of the student.

Output: system display status of the student.

**Syllabus entry function by office staff**

Input: “department”, “honor’s” or “master’s”, “year”, “subject and their credit”.

Process: The office staff activates the function and enters the data into the prompted filed. System saved the data into the database. System displays the confirmation message, or the System displays an error message.

*Output:* error message or confirmation message will be displayed.

**Result Entry by department**

Department office staffs can entry the result by this system.

Input: “Dept name”, “Year of result”, “Academic year”, “Student name”, “ID”, “Session”, “Marks of all courses”.

Process: The department’s office staff activates the function and enters the data into the prompted filed. System saved the data into the database. System displays the confirmation message, or the System displays an error message.

*Output:* error message or confirmation message will be displayed.

**Issue Transcript by exam control office**

Exam control officer can issue transcript by this software.

Input: “student’s full name”, “session”, “department”, “id”.

Process: The office staff clicks the “Issue Transcript” button and system prompts for data. user give the data and click the ok button.

Output: user sees a transcript or error massage.

**Fill up Form by student**

Student can fill up their exam form by this software. User ask to a form and system show a form and he fill this.

Input: “department name”, “session”, “year of the exam” “student name”, “id”, “session”.

Process: system prompts for data and student give one by one.

Output: Student’s see a successful massage or error massage.

**USE CASE**

**Use Case 1**: **Sign up**

Use case diagram:

Sign Up

*Office staff System Database*

*Primary Actor*: Office Staff

Pre Condition: Software must be installed

*Main Scenario:*

1. Start the application
2. Click the “Sign Up” button
3. System prompts “first name”, “last name”, “user name”, “email”, “password”, “confirm password”
4. User press the “Sign up” button
5. System show “wait sometime for verification by Author”
6. System display the “Successful massage” and put data in the database

*Post Condition:* System displays the home page

***Alternate Scenario:***

5. A verification fail

5. A.01 System show the user you are not eligible for the registration

6. A unsuccessful massage

6. A.01 Allow user re-enter the sign up. Give him 3 times

*Activity Diagram:*

**Use Case 2**: **Login**

Use case diagram:

*Primary Actor*: Office Staff, System Database

*Pre Condition*: User must be registered

*Main Scenario:*

1. Start the application

2. System prompts for “User Name” and “Password”

3. User gives the “User Name” and “Password”

4. System does authentication by comparing the user name and password with the response data in the database

1. System shows the successful message

*Post Condition:* System displays the home page

***Alternate Scenario:***

5a. Authorization fails

5a.01. Prompt the user to be registered

Activity Diagram:

Use case 3: log out

Use case diagram:

Actor: Officer

Pre-condition: Officer must be logged in the system.

Main Scenario:

1. The system is running
2. User wants to come out from the system.
3. Click the” log out” button.
4. System displays successful message.

Post-condition: System displays home page.

Alternative scenario:

2a. User comes out from system without log out.

2a.01. Resume @ 2, 3.

Activity Diagram:

Use Case 4: **Result Verification**

Use case diagram:

Primary Actor: Officer

Pre Condition: Student full name, session, department, Id, CGPA are available

Main Scenario:

1. Start the application
2. <<include Login>>
3. System displays Homepage
4. Click verification icon
5. System prompts student’s full name, session, department, id and CGPA
6. User gives the student full name , session, department, id,
7. Click the “OK” button.

Pre Condition: User see the status of the student

Alternate Scenario:

4a. failure filling prompted box

4a.01. Prompt the user that he didn’t fill the \* mark box

4a.02. Allow him to re-fill the box

**Activity Diagram:**

Use Case 5: Syllabus entry

Use case diagram:

Primary actor: Office Staff

Pre condition: user must be login into the system.

Main Scenario:

1. System prompts the icon “Syllabus entry”
2. Click the syllabus entry icon
3. System prompts to give “department”
4. User gives “Department” and Click ok button
5. User prompted for “honor’s” or “master’s”
6. Click “honor’s” or “master’s” button
7. System prompts for “department” and “year”
8. User gives “department” and “year”. Click “OK” button
9. User prompts to give subject and their credit
10. User Give all subjects and their credit
11. Click “OK” button
12. User see a massage

Alternate Scenario:

12a.See error massage

12a.01. Click ok button

12a.02. Resume @10

Activity Diagram:

Use Case 6: **Result Entry**

**Use case diagram:**

*Primary Actor*: Officer of exam control office

*Pre Condition*: Officer must be “log in” the system

*Main Scenario*:

1. Press “Result Entry” on the Menu

2. System prompts user for getting “Dept name”, “Year of result”, “Academic year”

3. User click enter

4. System prompts to the user “Student name”, “ID”, “Session”, “Marks of all courses”

5. Click button “OK”

6. User see a massage

*Pre Condition*: User see a page

*Alternate Scenario*:

4a. Authorization fails

4a.01.System prompts the user that he fail to enter the result

4a.02. Allow him to re-enter the Result.

Activity Diagram:

Use Case 7: Issue Transcript

Use case diagram:

Primary Actor: User

Pre Condition: User must be log in the System, Student full name, session, department, Id, CGPA are available.

Main Scenario:

1. Click Result Entry the icon: User prompted student full name, session, department, id, GPA
2. User gives the “student full name” , “session”, “ department”, “id”, “ GPA”
3. Click the “Ok” button

Post condition: User see a page

Alternate Scenario:

4a. failure filling prompted box

4a.01. Prompt the user that he didn’t fill the \* mark box.

4a.02. Allow him to re-fill the box.

Activity Diagram:

Use Case 8: Fill up Form

Use case diagram:

Primary actor: User

Pre condition: user must be login into the system.

Main Scenario:

* 1. User prompted the icon “Fill up Form”
  2. Click this icon
  3. System prompts to give “department name”, “session”, “year of the exam”
  4. Click “OK” button
  5. System prompts for honor’s or master’s
  6. Click “honor’s” or “master’s” button
  7. User is prompted “student” “name” , “id” , “session”
  8. Click “OK” button
  9. User is prompted to give subject and their credit
  10. User give all subjects and their credit
  11. Click “OK” button
  12. System show a massage

Pre condition: User see a page

Alternate Scenario:

12a. see error massage

12a.01. Resume @ 8

Activity Diagram:

**3.3 Non Functional Requirements:**

**3.3.1 File System**

The file setup.info will be used to store setup information about the program and database server.

**3.3.2 User Interface**

The user will utilize the GUI to input required information. The user will be able to click on-screen buttons to maneuver around the program. The user will also be able to click on fields to enter text into the fields. The user will be able to use the tab key to move between fields.

**3.3.3 Performance Requirements**

The program should run at such a speed that the user can move at his/her own pace, without noticing interruption due to processing.

**3.3.4 Design Constraints**

The program is designed for and will operate under the Windows OS.

**3.3.5 Attributes**

**3.5.1 Reliability**

The software should not have any reliability issues. The software will be thoroughly tested andany issues resolved.The Result Processing system has to operate .999,over the time period , the system is available for 99.99% of the time.

**3.5.2 Availability**

The software will execute as a standalone system so as long as the machine is running, the program will be available. The key to maintaining availability will be by ensuring a connection to the database server is available. Failure to connect to the database will make data unavailable.

**3.5.3 Security**

This software is intended to communicate over an internal network, therefore security is of little concern. The user will have to enter the username and password so the program can connect to the database server. The username and password will not be stored because encryption of such information is outside the scope of the project.

**3.5.4 Maintainability**

The software will be composed of various modules decreasing the complexity of expansion.

**3.5.5 Portability**

As states previously, this software will only run under the Windows OS. The setup file, setup.info, can be copied to multiple machines so that each program does not have to be setup separately.

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