



Software Requirements Specification (SRS)

School Management System

Version 1.0

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1. INTRODUCTION

1.1 PURPOSE

This document defines the functional and non-functional requirements for the School Management System (SMS), a desktop-based application designed to streamline student records, teacher data and principles data management for school administrators.

1.2 SCOPE

The School Management System (SMS) is a standalone desktop application that enables administrators to:

- Manage student enrollment, and grades
- Maintain teacher records and schedules
- Generate reports
- Ensure secure access via role-based authentication (admin-only)

Out of Scope:

- Mobile or web access
- Parent/student/teacher self-service portals

1.3 DEFINITIONS, ACRONYMS, AND ABBREVIATIONS

Term Definition

- | | |
|--------|----------------------------|
| • SMS | School Management System |
| • GUI | Graphical User Interface |
| • DBMS | Database Management System |
| • JRE | Java Runtime Environment |

1.4 REFERENCES

- IEEE Standard for Software Requirements Specifications (IEEE Std 830-1998)
- Oracle Java SE Documentation
- MySQL Official Documentation

2. OVERALL DESCRIPTION

2.1 PRODUCT PERSPECTIVE

Type:

- Standalone desktop application

Tech Stack:

- Frontend: Java Swing
- Backend: Java
- Database: MySQL
- IDE: NetBeans

Deployment:

- Windows & Linux

2.2 PRODUCT FUNCTIONS

Feature	Description
User Authentication	Secure login for administrators
Student Management	Add, update, delete, search student records
Teacher Management	Register, update, manage teacher data
Grade Management	Assign, store, and retrieve student grades
Reports & Logs	Export students/teachers/principles reports

2.3 USER CHARACTERISTICS

Primary Users:

- School administrators

Technical Skill:

- Basic to moderate computer proficiency

Access Control:

- No access for students, teachers, or parents

2.4 CONSTRAINTS

Platform:

- Windows & Linux only

Database:

- MySQL

Scalability:

- Single-school deployment (v1.0)

Security:

- Role-based access (admin-only)

3. SPECIFIC REQUIREMENTS

3.1 FUNCTIONAL REQUIREMENTS

ID	Requirement	Priority
FR1	Secure admin login system	High
FR2	CRUD operations for student records	High
FR3	Attendance tracking (daily/monthly)	Medium
FR4	Automated report generation (PDF/Excel)	Medium

3.2 NON-FUNCTIONAL REQUIREMENTS

ID	Requirement
NFR1	Supports 500+ concurrent users
NFR2	Response time < 2 sec for key operations
NFR3	Data encrypted in MySQL

3.3 EXTERNAL INTERFACE REQUIREMENTS

GUI:

- Java Swing

Database:

- MySQL 8.0+

Printing:

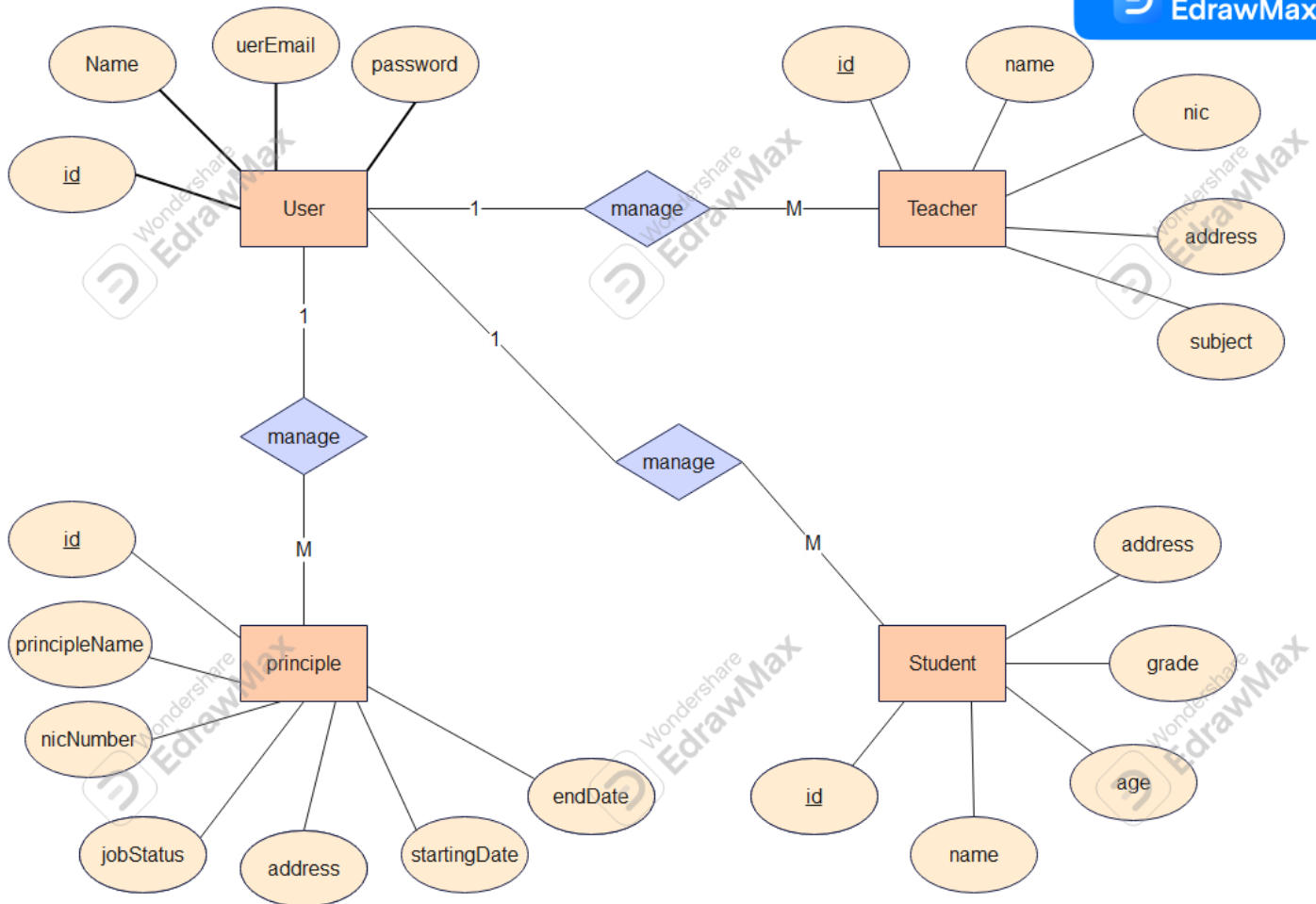
- JasperReports for PDF generation

4. SDLC TIMELINE

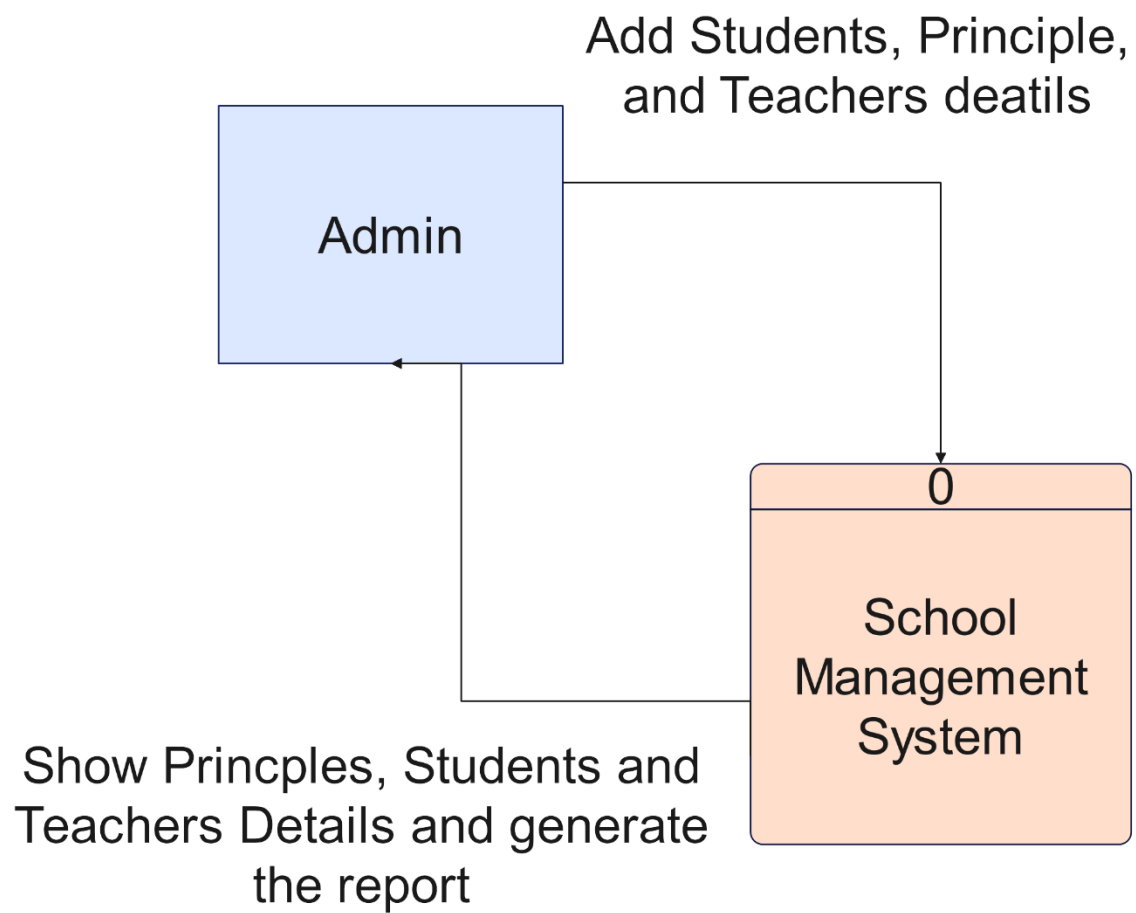
Phase	Duration	Deliverables
Requirement Analysis	2 Weeks	SRS Document
System Design	3 Weeks	ER Diagrams, UI Mockups
Implementation	6 Weeks	Core System Development
Testing	3 Weeks	Unit & Integration Tests
Deployment	2 Weeks	Test Environment Setup
Maintenance	Ongoing	Bug Fixes & Updates

5. DIAGRAMS

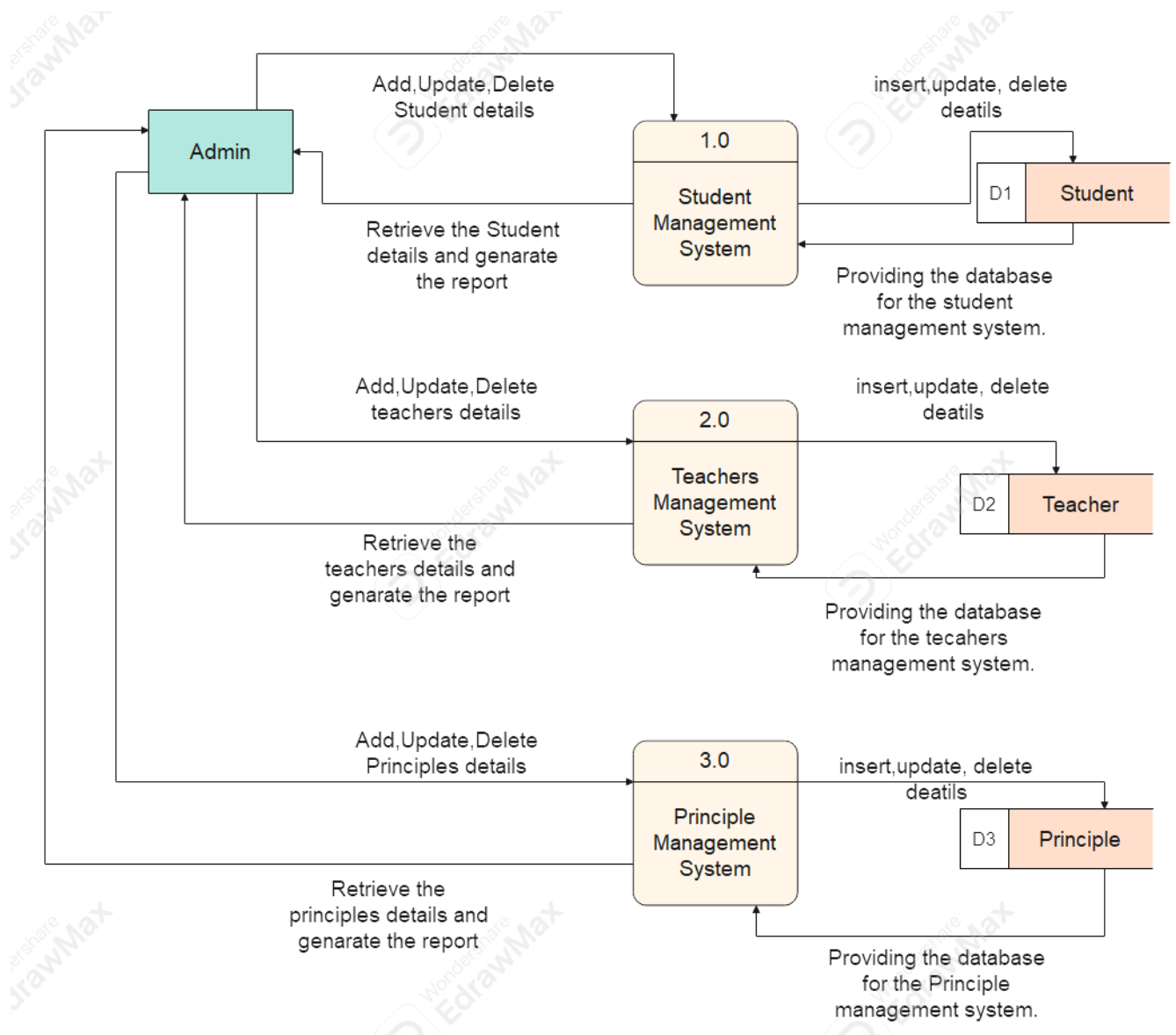
5.1 ER DIAGRAM



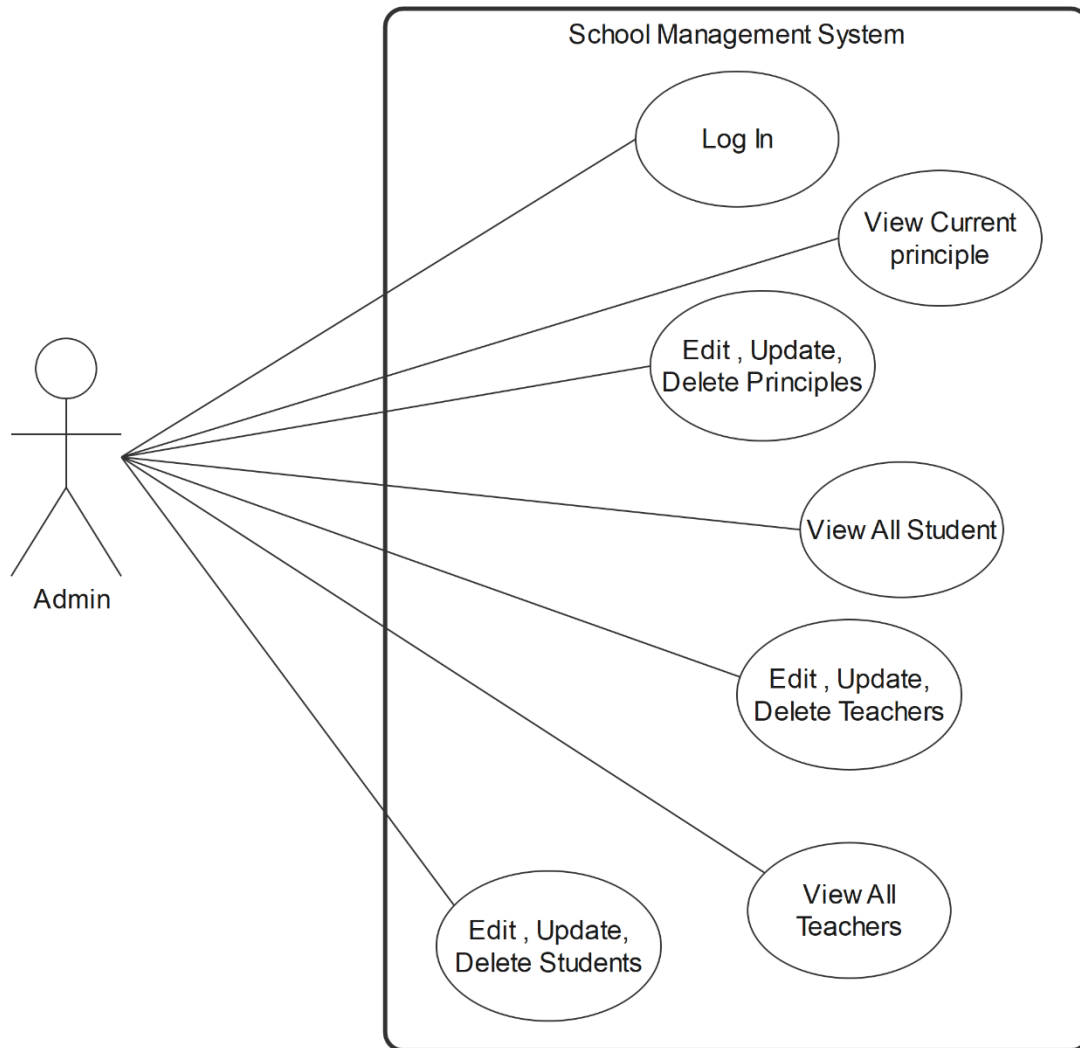
5.2 DFD LEVEL 0



5.3 DFD LEVEL 1



5.4 USE CASE DIAGRAM



6. USER INTERFACES

6.1 LOADING

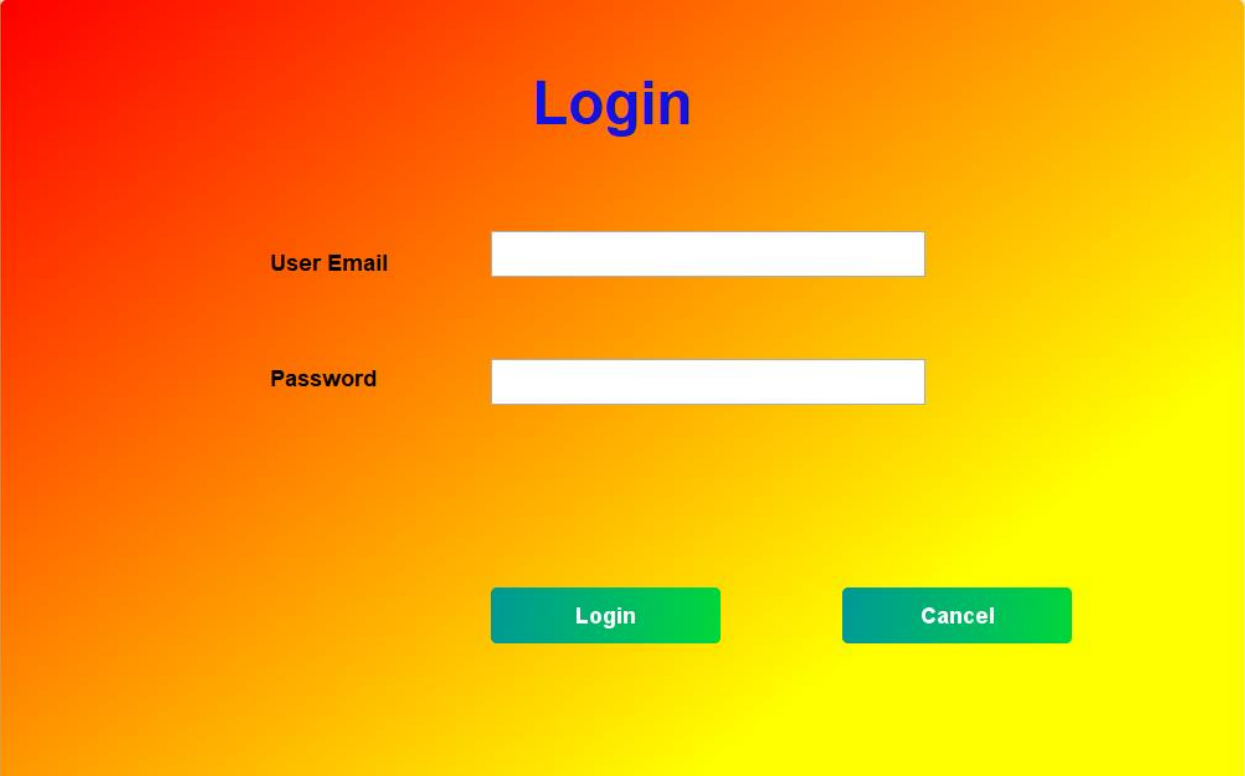
School Management System



Loading...

0%

6.2 LOGIN



Login

User Email

Password

The login form is presented on a rectangular card with a background gradient transitioning from red on the left to yellow on the right. The title 'Login' is centered at the top in a bold blue font. Below the title, the labels 'User Email' and 'Password' are aligned to the left of two white input fields. At the bottom, two green buttons with white text, labeled 'Login' and 'Cancel', are positioned side-by-side.

6.3 HOME

[Log out](#)



Principle



Teachers



Students

[Admin Registration](#)

6.4 CURRENT PRINCIPLE

Current Principle



Principle Name

Name

NIC Number

NIC

Address

Address

Status

Job Status

Stating Date

Starting Date

[View All Principles](#)

[Back To Home](#)

6.5 EDIT DETAILS IN PRINCIPLE

Edit Details In Principles

ID	<input type="text"/>
Name	<input type="text"/>
Address	<input type="text"/>
Job Status	<div>Current</div>
NIC Number	<input type="text"/>

6.6 PRINCIPLE TABLE

Principle Details Table

Search

Title 1	Title 2	Title 3	Title 4

Edit Principle

Print Document

Back To Home

6.7 TEACHERS TABLE

Teachers Details

Search

Title 1	Title 2	Title 3	Title 4

Edit Teacher

Print Document

Back To Home

6.8 TEACHERS EDIT

Edit Deatail In Teachers

ID

Name

Address

Subject

NIC Number

Search

Insert Teacher

Update Teacher

Delete Teacher

Back To Details

6.9 STUDENT TABLE

Student Table

Search

Title 1	Title 2	Title 3	Title 4

Edit Student

Print Document

Back To Home

6.10 STUDENT EDIT

Edit Details In Student

ID	ID
Student Name	<input type="text"/>
Student Age	<input type="text"/>
Grade	<div>Select Grade</div>
Address	<input type="text"/>

6.11 ADMIN REGISTRATION

Admin Registraion

Name

Email

Password

Confirm Password

Sign In

Back To Home

7. APPENDICES

- Glossary

- Abbreviations
- Version History

8. FINAL NOTES

This document serves as the single source of truth for the School Management System development. Any modifications must be reviewed and version-controlled.

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