Software Requirements Specification (SRS)

School Management System

Version 1.0

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Approved by: [Mr. Thanesh Kumar/ Lecturer]

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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:

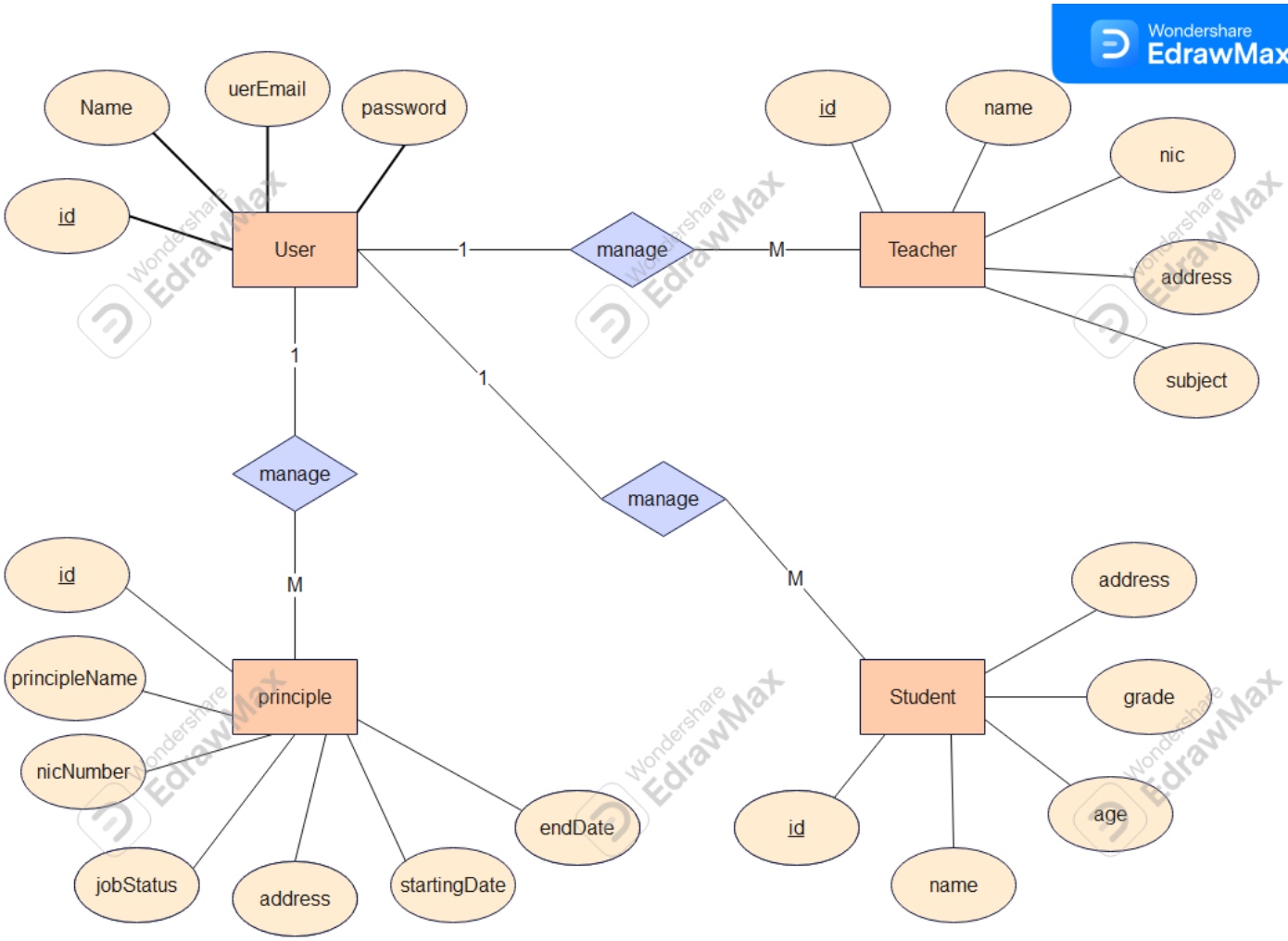
- JasperReports for PDF generation

4. SDLC TIMELINE

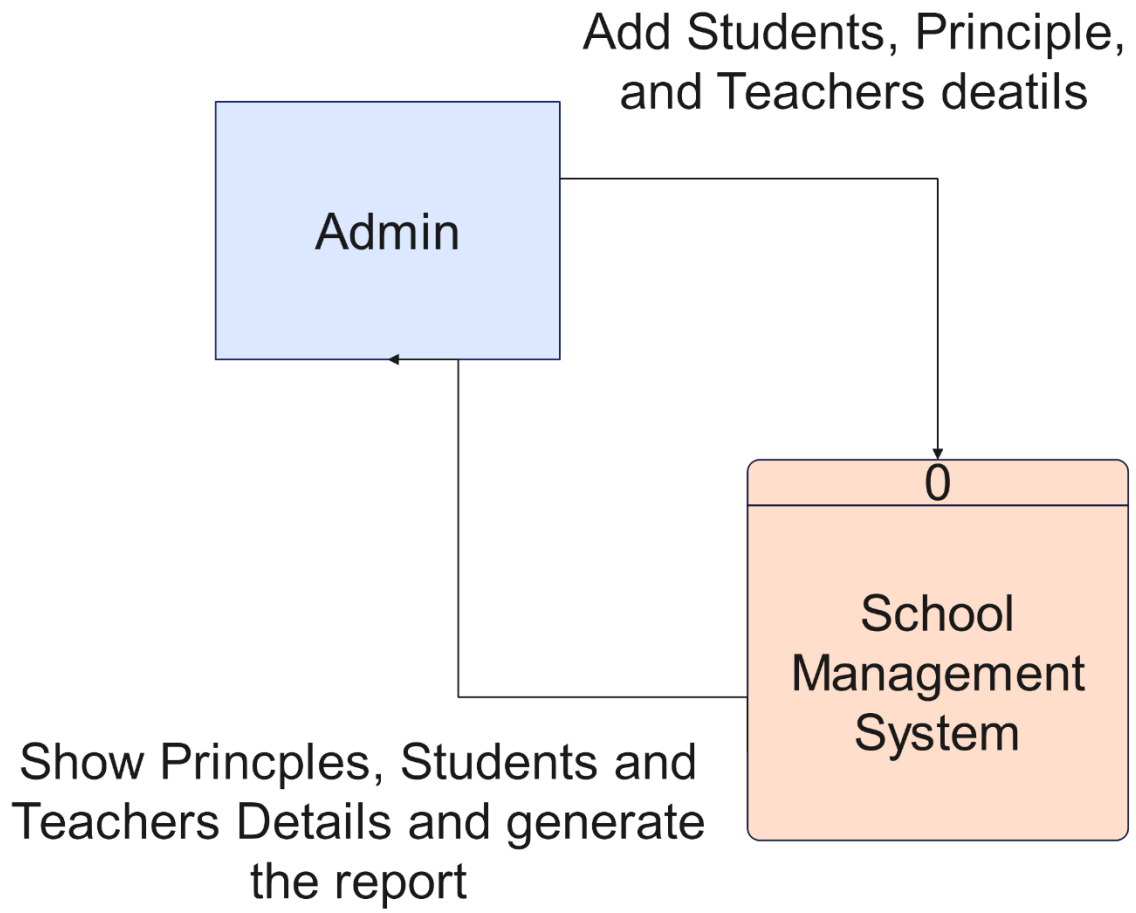
Phase	Duration	Deliverables
Requirement Analysis	**2 Weeks**	**SRS Document**
System Design	**3 Weeks**	**ER Diagrams, UI Mockups**
Implementation	**6 Weeks**	**Core System Development**
Testing	**3 Weeks**	**Unit & Integration Tests**
Deployment	**2 Weeks**	**Test Environment Setup**
Maintenance	**Ongoing**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

5. DIAGRAMS

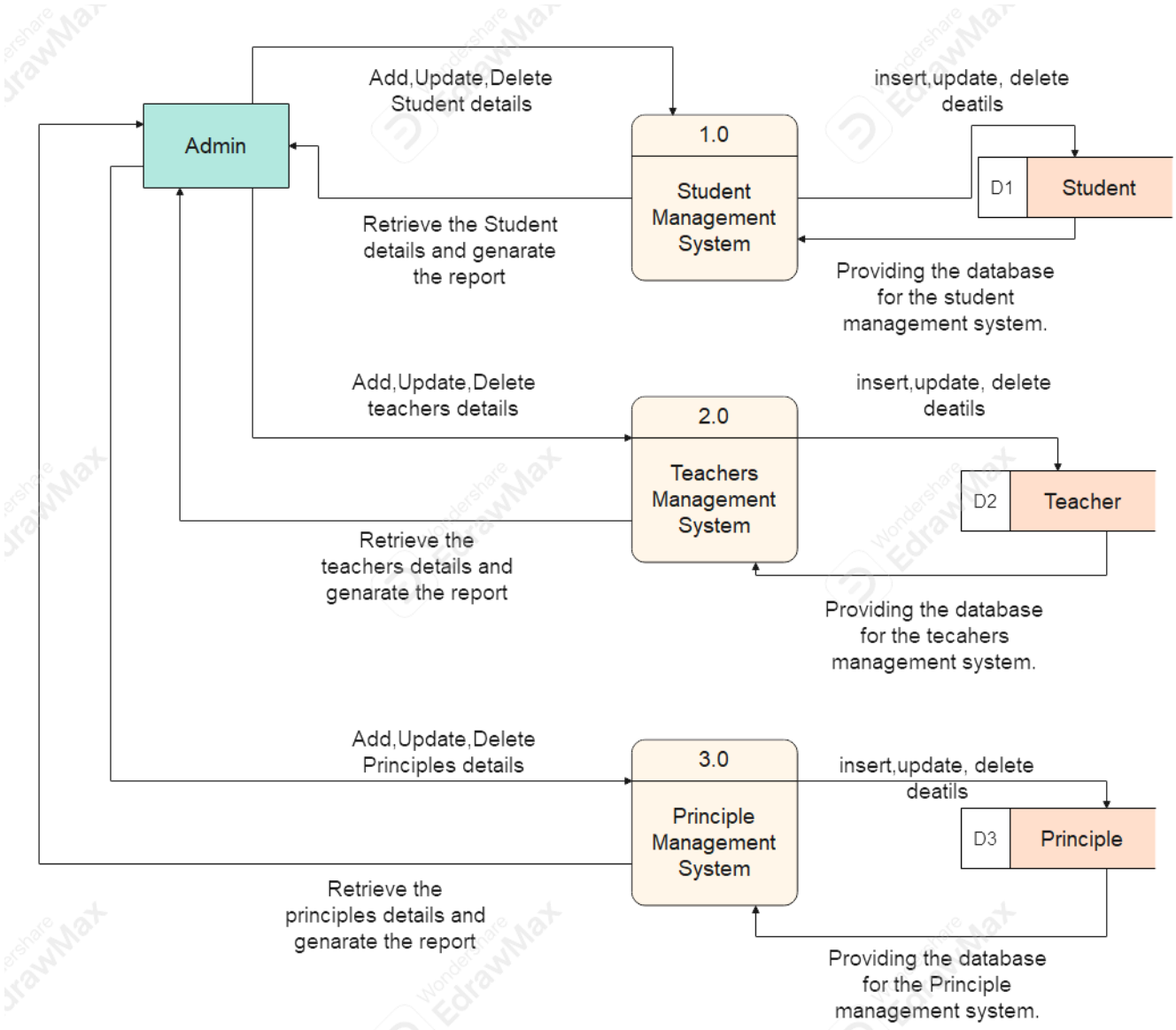
5.1 ER DIAGRAM



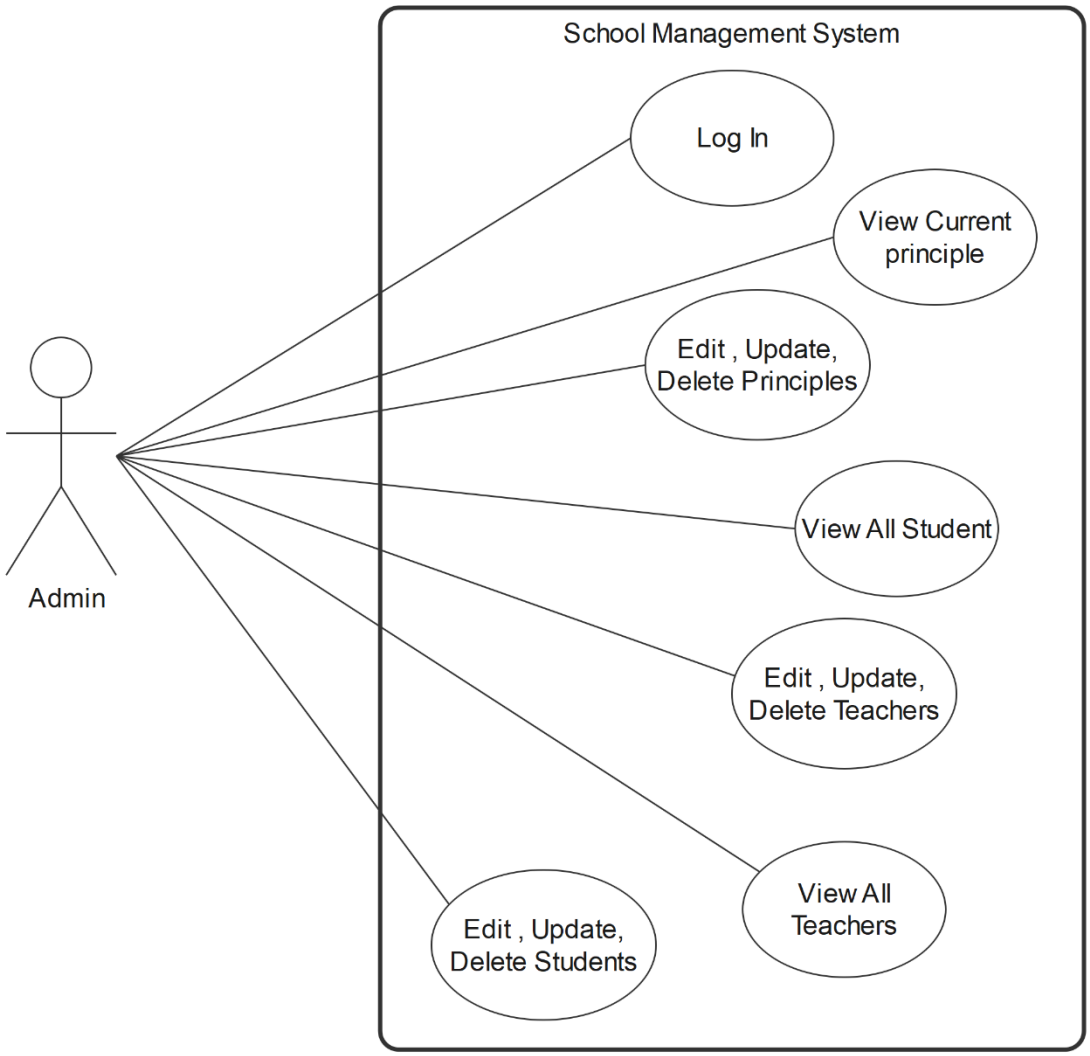
5.2 DFD LEVEL 0



5.3 DFD LEVEL 1



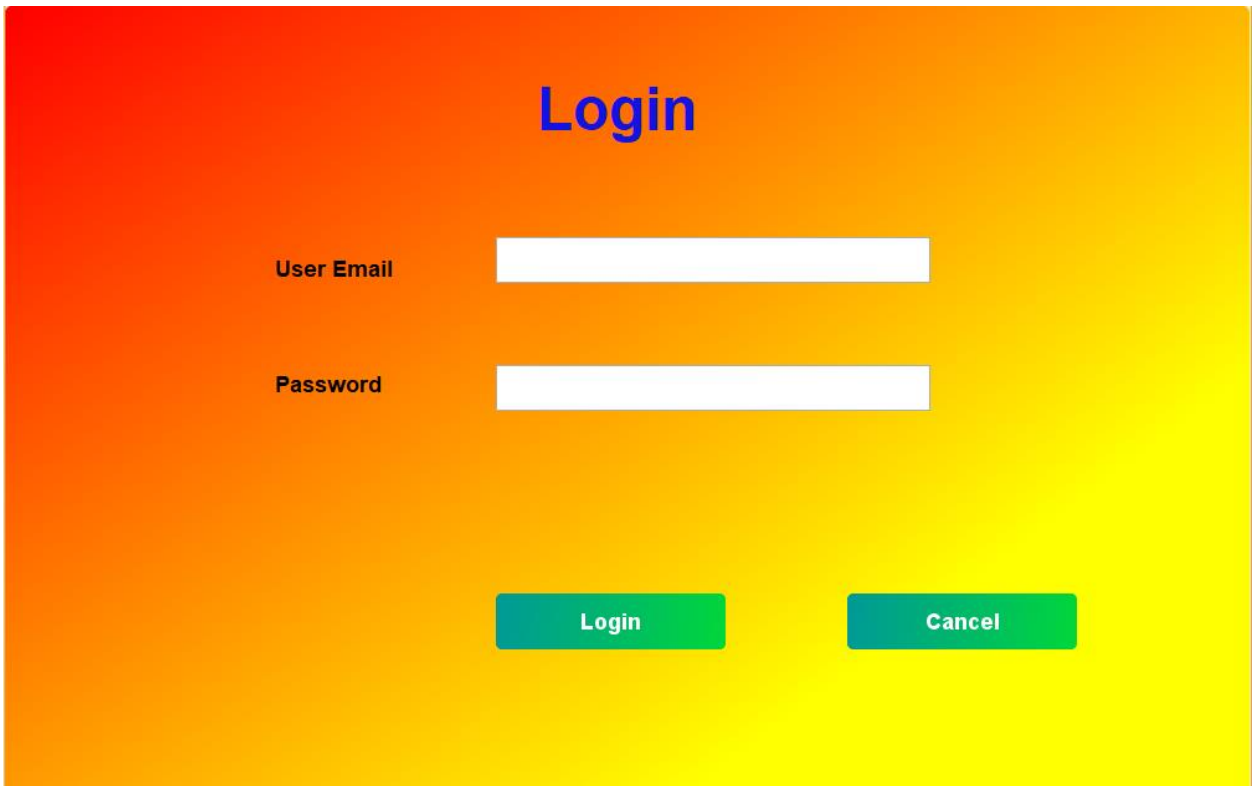
5.4 USE CASE DIAGRAM



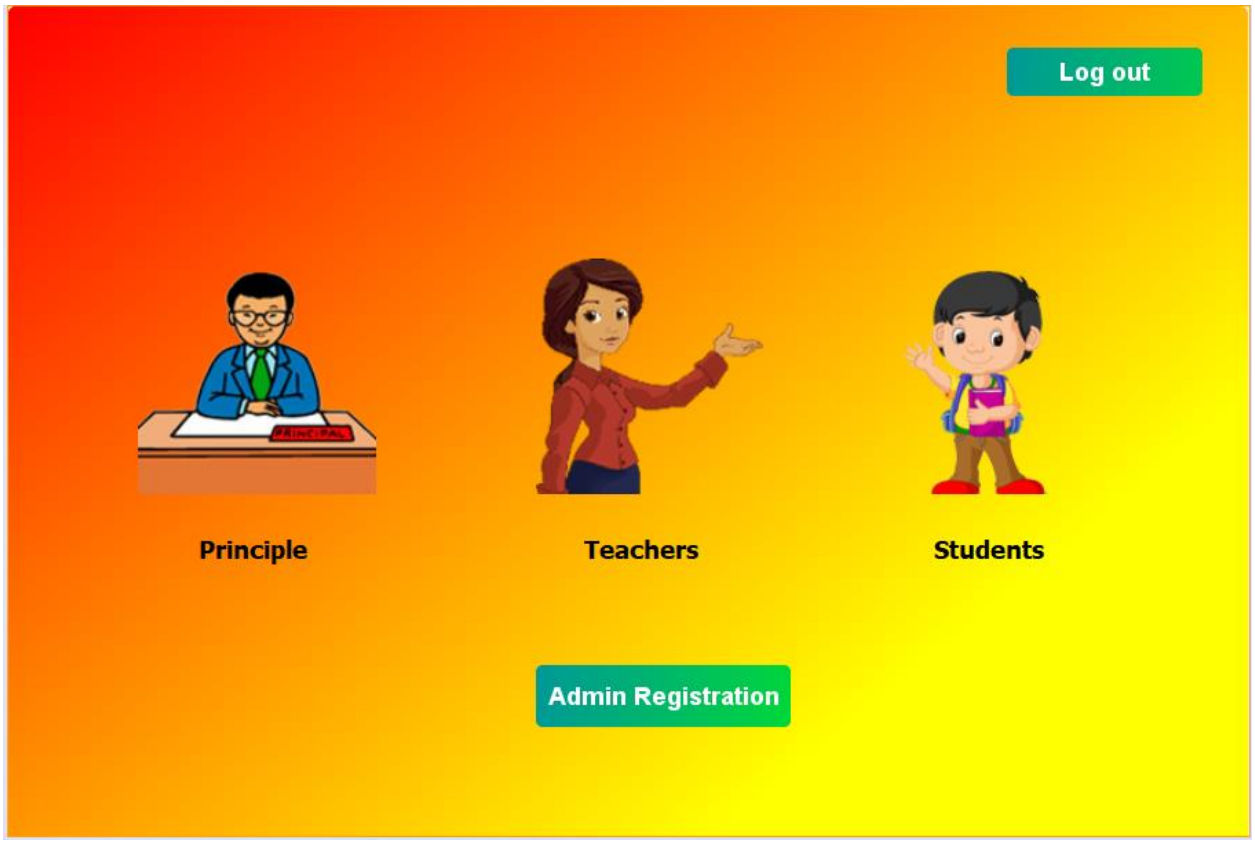
6. USER INTERFACES

6.1 LOADING

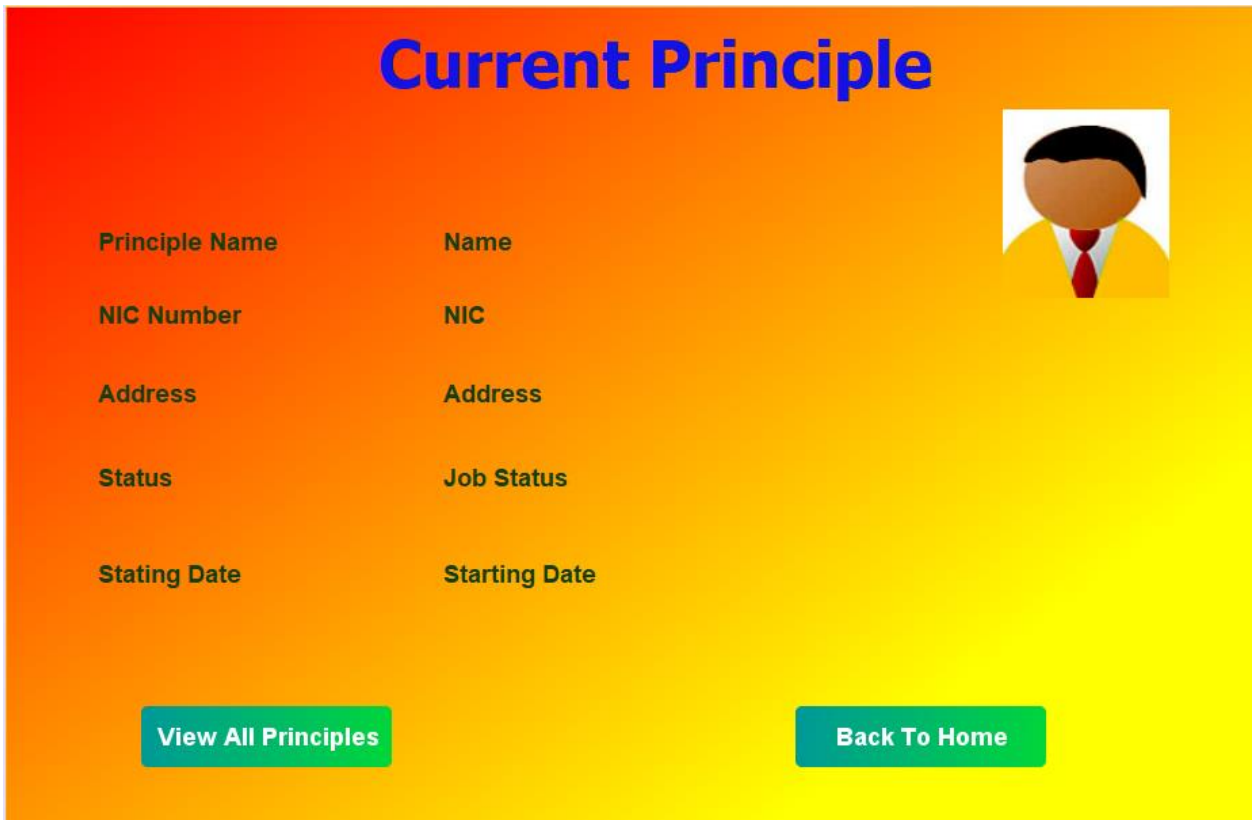
6.2 LOGIN



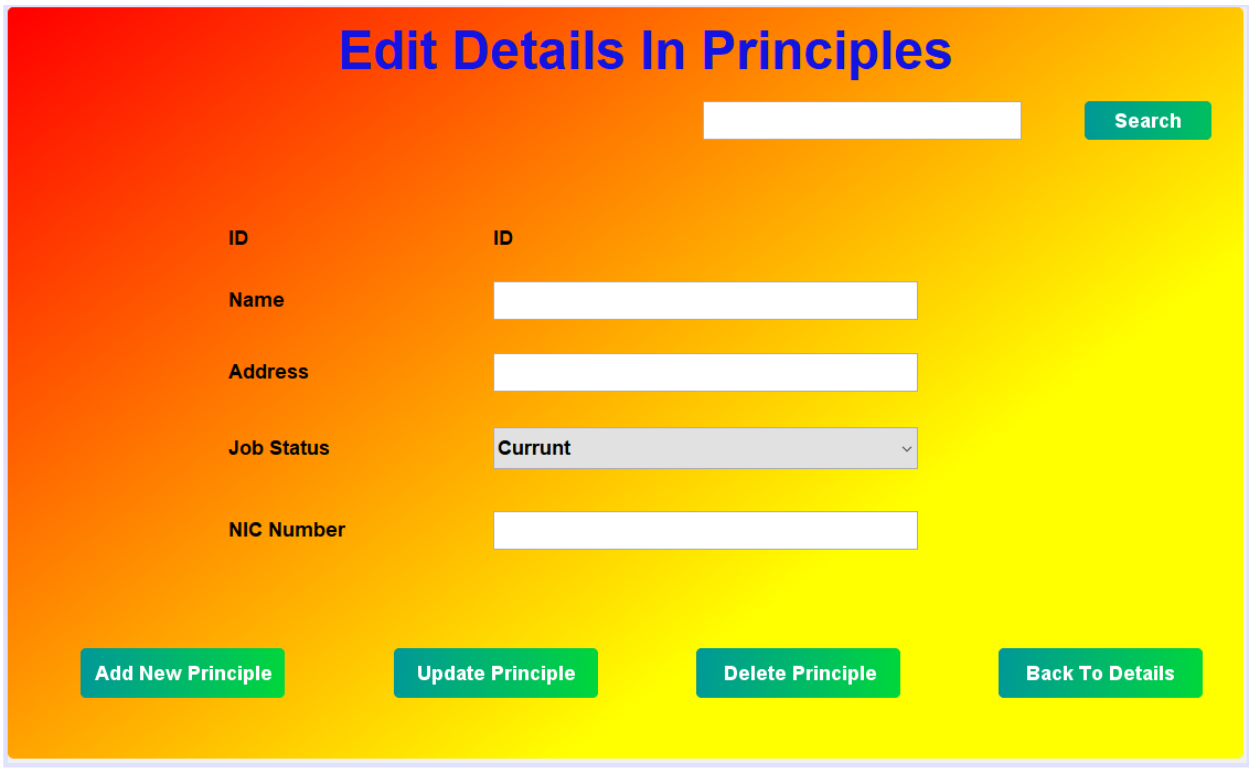
6.3 HOME



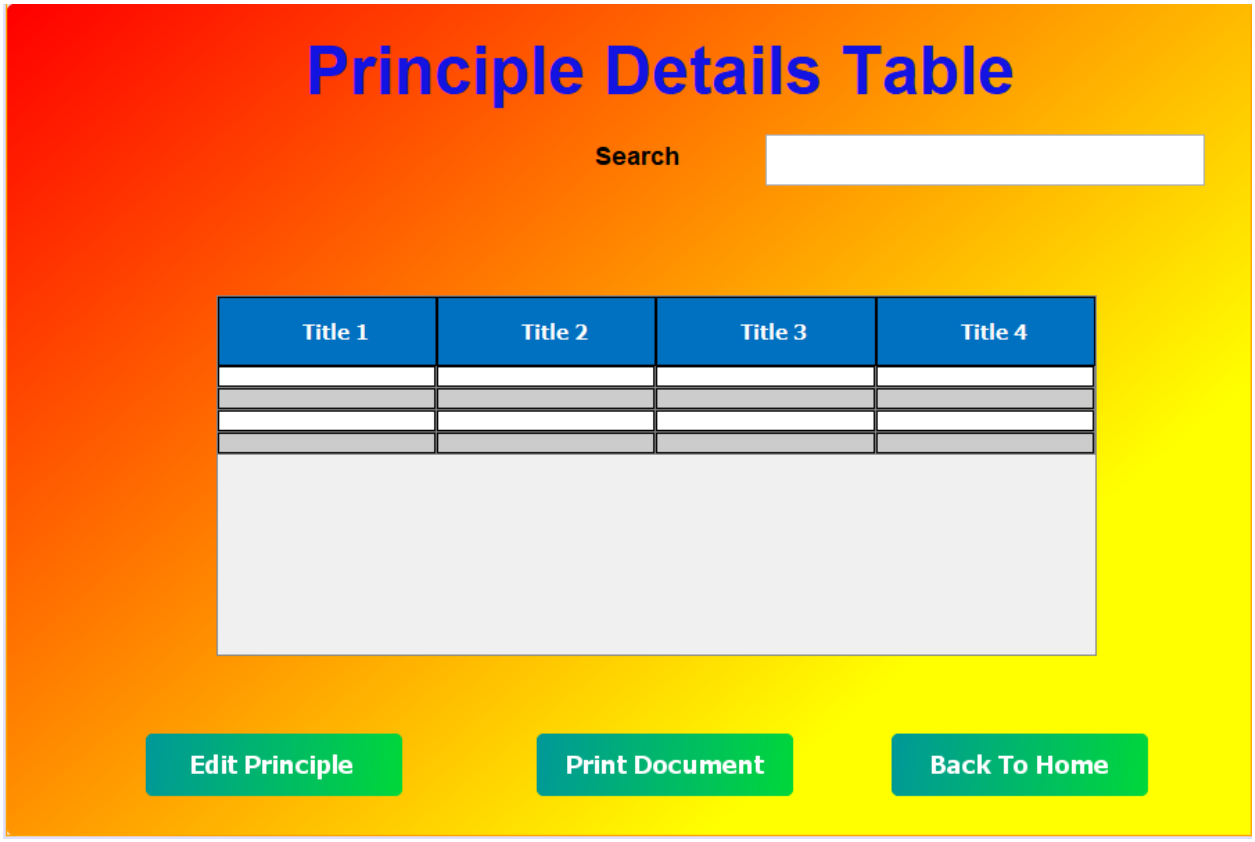
6.4 CURRENT PRINCIPLE



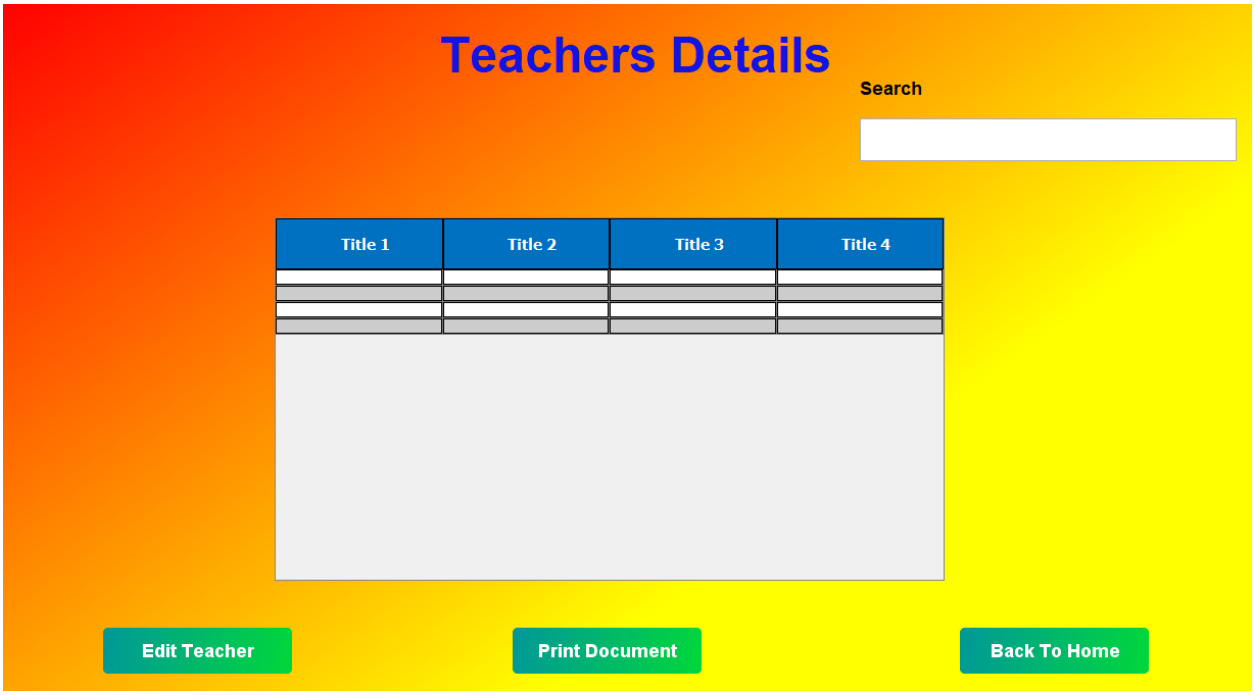
6.5 EDIT DETAILS IN PRINCIPLE



6.6 PRINCIPLE TABLE

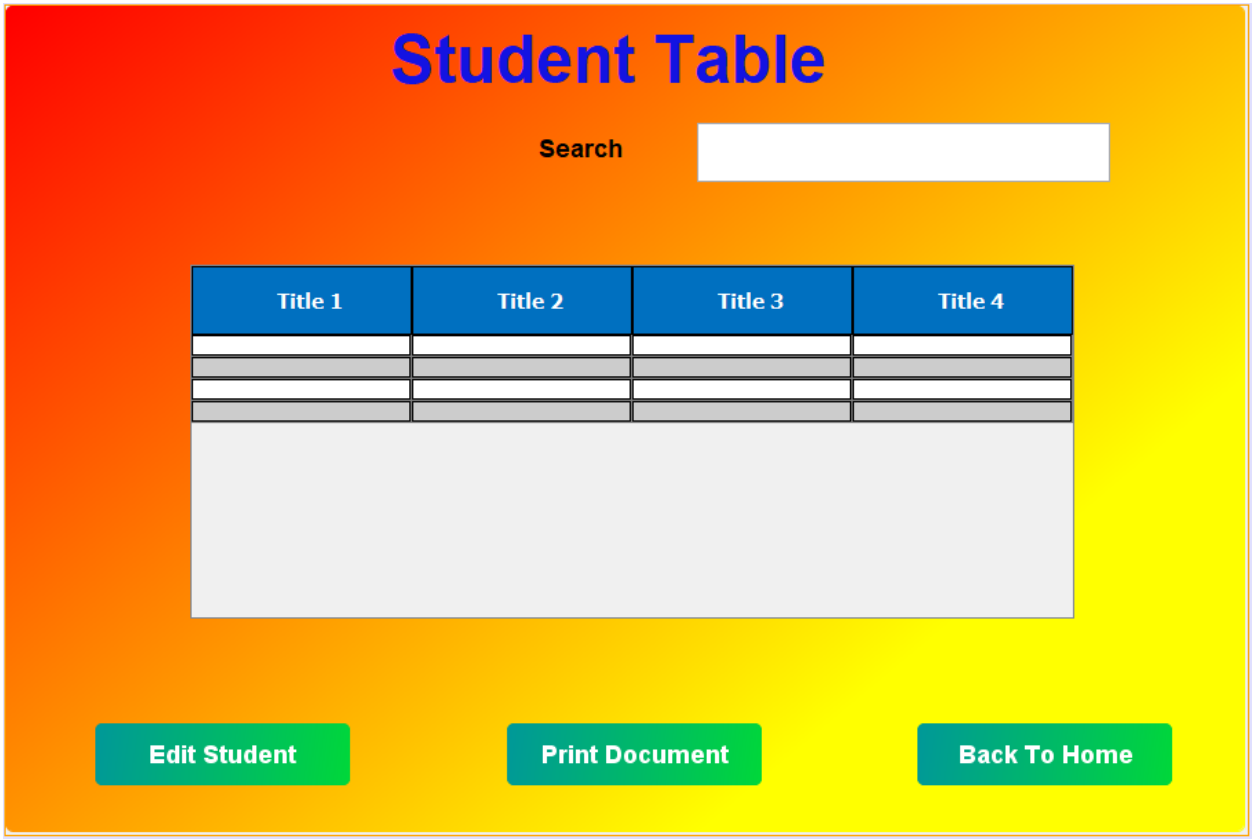


6.7 TEACHERS TABLE

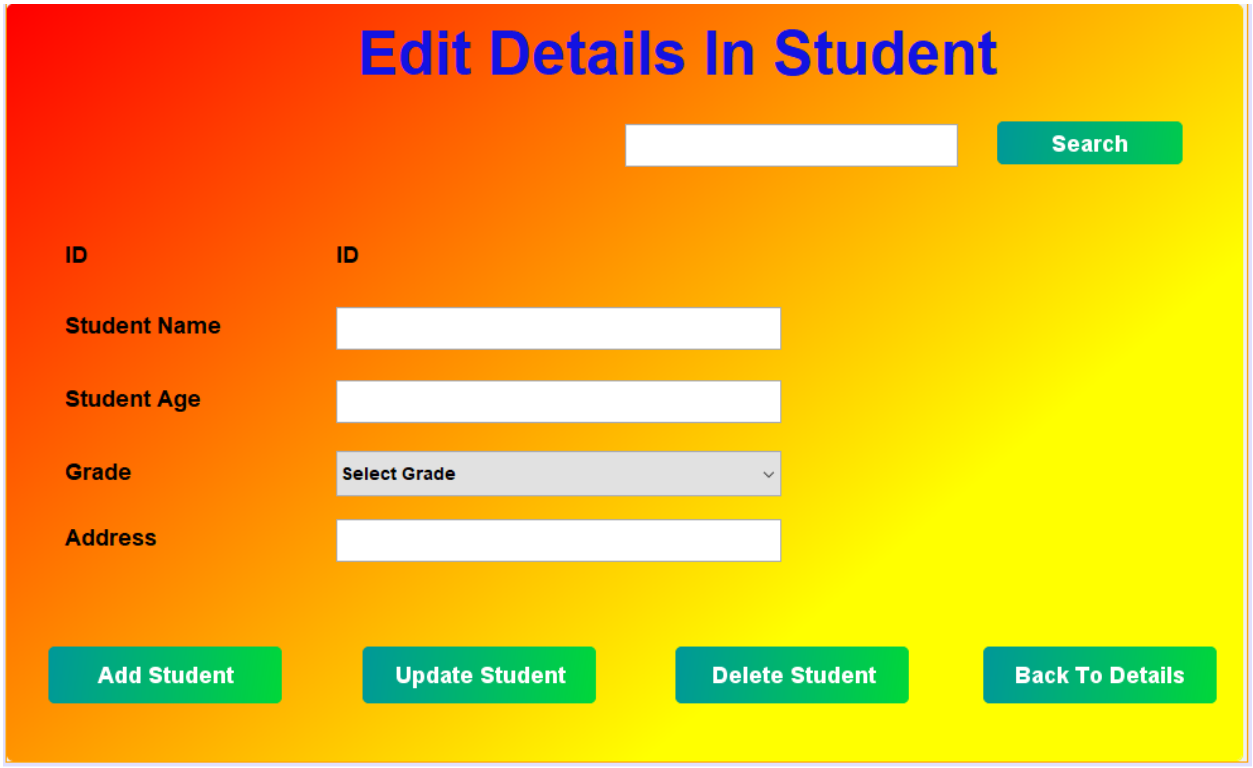


6.8 TEACHERS EDIT

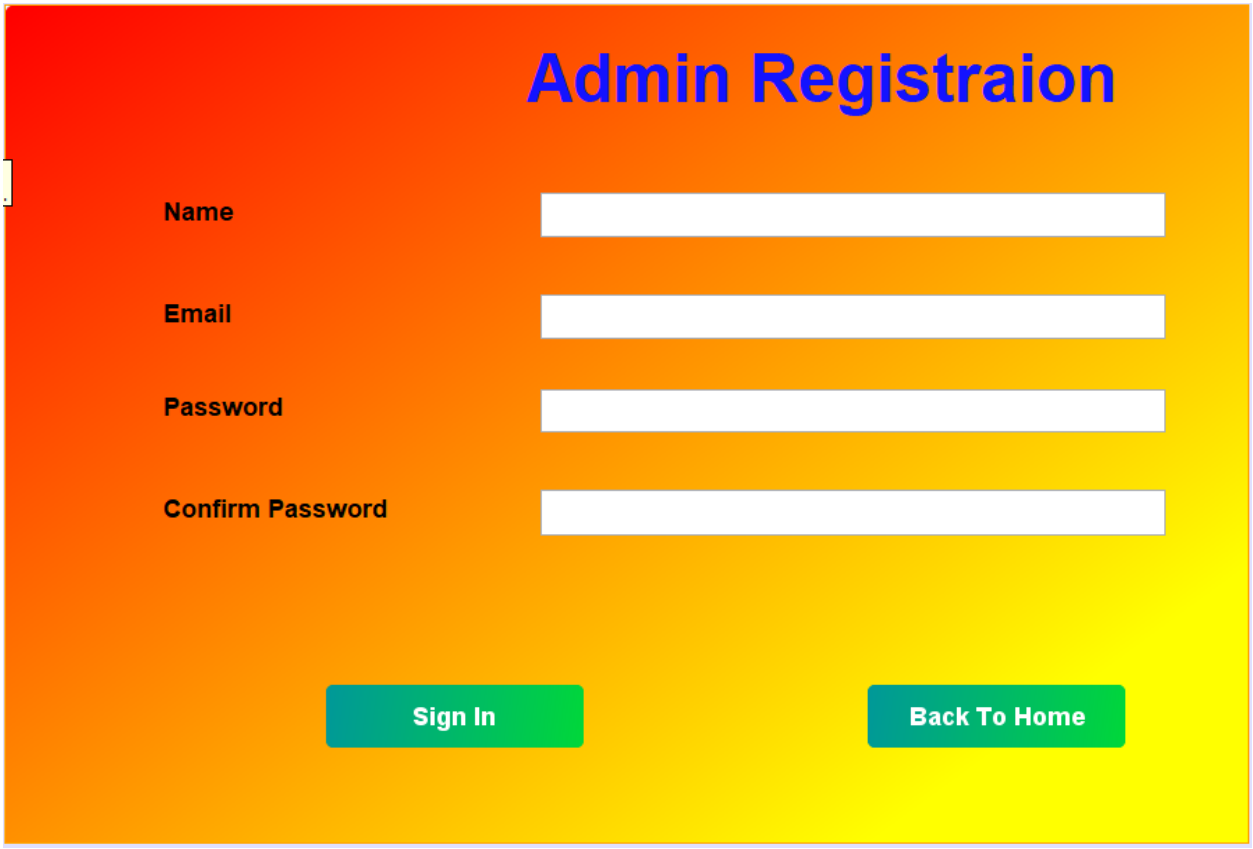
6.9 STUDENT TABLE



6.10 STUDENT EDIT



6.11 ADMIN REGISTRATION



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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