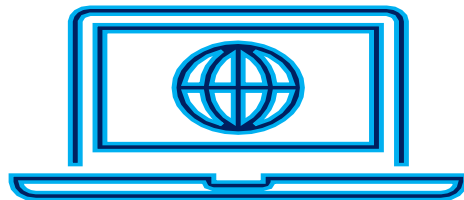# ATTENDANCE MANAGEMENT SYSTEM

SOFTWARE REQUIREMENTS SPECIFICATION

SCHOOL OF COMPUTER SCIENCE AND ENGINEERING

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1. Introduction

Attendance Management System has become important factors in modern education field. This system should help the institutional to streamline the administrative task and provide real-time access to the data. Building this system in web based interface will further help the ease of accessibility through any web browser. The study findings enable the definition of the project problem statement, its objectives, scopes and advantages of the Attendance Management System.

1.1 Purpose

The purpose this documents is to present a detailed description of the Attendance Management System. It will explain the purpose and features of the software, the interfaces of the software, what the software will do, the constraints under which it must operates and how the software will react to external stimuli. This document is intended for both the end users and the developers of the software.

1.2 Scope

This document covers the requirements for the Attendance Management System. This software will provide a graphical environment in which the users of the system will be able to perform various operations that are associated with storing, marinating, updating and retrieving Student information. The purpose of this is to guide developers in selecting a design that will be able to accommodate the full-scale application.The system will capture information about student's personal details lectures and the courses. Storing updating and retrieving in a fast and accurate way.

1.3 Definitions, Acronyms, and Abbreviations

The Attendance Management System has to handle records for many number of students and maintenance was difficult. Though it has used an information system, it was totally manual. Hence there is a need to upgrade the system with a computer based information system.

1.4 Overview

The purpose this documents is to present a detailed description of the Attendance Management System. It will explain the purpose and features of the software, the interfaces of the software, what the software will do, the constraints under which it must operates and how the software will react to external stimuli. This document is intended for both the end users and the developers of the software.

2. General Description

2.1 Product Perspective

The product Attendance Management System, is an independent product and does not depend on any other product or system. The product will automate various tasks associated with handling student details and better organizing the stored information and optimum performance, thus helping the Colleges to ensure smooth working of these processes.

2.2 Product Functions

Our system has two types of accessing modes,

1. Administrator
2. User
    2.1 Teacher
    2.2 Student

i) Administrator:

AMS is managed by Administrator. Administrator has to update and monitor the registered student details, add a new student etc., Administrator can update his profile, and also can give help to the teachers and students.

ii) User:

There are two users:

    a. **Student**:

        User can only view their personal details, course assigned, and edit their assigned course and can view their attendance.

    b. **Teache**r:

        User can add them onto the portal and view their schedules, marks attendance of the students, also can view the students details in graphical order, also of a single student and about the views from the students.

2.3 User Characteristics

This software gives access to two kinds of users.

1. **Administrator**: The personnel and College administrator will have administrator access to add, delete and modify information stored in the database.

2. **Authorized User**: Teaching staff will have access to only view the data stored in the database and can update the student's attendance in the form of formatted reports.

2.4 Assumptions and Dependencies

- We assume that the Office personnel do all the data entry based and the correct values obtained from forms and registers.

- Users with administrator access should be careful in deleting or modifying any information knowingly or unknowingly which will lead to inconsistency of the database.

- The end users of this software are assumed to have basic level of computer knowledge i.e. point and click.

3. Specific Requirements

3.1 External Interface Requirements

3.1.1 User Interfaces

- GUI along with meaningful Frames and buttons
- Reports are generated as per the requirement

3.1.2 Hardware Interfaces

Hardware Environment	Dual Core 2nd generation/
System Configuration	RAM-512 MB HDD-80GB
Operating system	Windows XP/Vista/7/8/8.1

3.1.3 Software Interfaces

Front End	PHP 5.3.0
Back End	MySQL 5.1.36

When invalid inputs are given to the modules then the error messages will be popped up in order to inform the user that the input provided is not taken by the database. When incomplete information is provided by the user and the user tries to submit the form in order to store the details in the database the system will pop up a message box asking the user to enter all the details required.

3.2 Functional Requirements

Attendance Management System involves the following functions

3.2.1 Student Registration:

- AMS provides online registration and status information to the student to view their status.
- AMS provides automatic student register number generation based on course and year.

3.2.2 Student Attendance Management:

- Easily track attendance information of students.
- Quickly produce single or multiple day attendance bulletins.
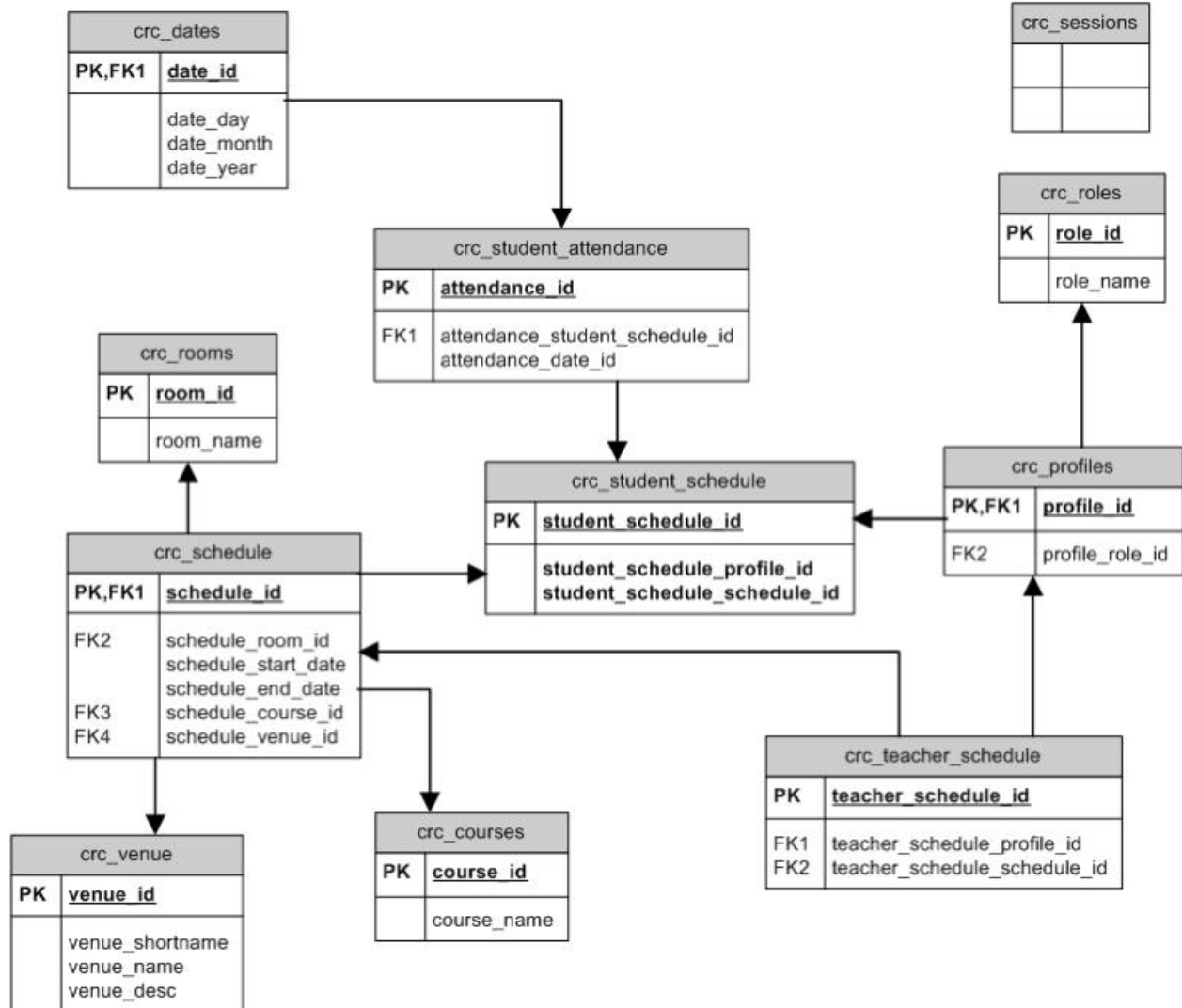
3.2.3 Opinion Management:

- AMS provides a comprehensive opinion scheduling based on course.
- Students can facilitate to give their opinions by giving the teacher rank.

3.3 Use Cases

3.4 Classes / Objects

crc_dates

PK,FK1	**date_id**
	date_day date_month date_year

crc_sessions

crc_roles

PK	**role_id**
	role_name

crc_student_attendance

PK	**attendance_id**
FK1	attendance_student_schedule_id attendance_date_id

crc_rooms

PK	**room_id**
	room_name

crc_student_schedule

PK	**student_schedule_id**
	student_schedule_profile_id student_schedule_schedule_id

crc_profiles

PK,FK1	**profile_id**
FK2	profile_role_id

crc_schedule

PK,FK1	**schedule_id**
FK2	schedule_room_id schedule_start_date schedule_end_date
FK3 FK4	schedule_course_id schedule_venue_id

crc_teacher_schedule

PK	**teacher_schedule_id**
FK1 FK2	teacher_schedule_profile_id teacher_schedule_schedule_id

crc_venue

PK	**venue_id**
	venue_shortname venue_name venue_desc

crc_courses

PK	**course_id**
	course_name

3.5 Non-Functional Requirements

3.5.1 Performance

Easy tracking of records and updating can be done. All the requirements relating to performance characteristics of the system are specified in the section below. There are two types of requirements.

A. Static Requirements

These requirements do not impose any constraints on the execution characteristics of the system. They are:

1) Number of Terminals:

The software makes use of an underlying database that will reside at the server, while the front end will be available online to the administrative and departmental computers as well as students and teachers.

2) Number of Users:

The number of users may vary, as this software finds applications in almost all department of the organization.

B. Dynamic Requirements

These specify constraints on the execution characteristics of the system. They typically include response time and throughout of the system. Since these factors are not applicable to the proposed software, it will suffice if the response tine is high and the transactions are carried out precisely and quickly.

3.5.2. Availability

The software will be available only to authorized users of the colleges like teachers to mark the students attendance, student to view their enrolled course, admin to add an update students records

3.5.3 Security

The security requirements deal with the primary security. The software should be handled only by the administrator and authorized users. Only the administrator has right to assign permission like creating new accounts and generating password. Only authorized users can access the system with username and password.

3.5.4 Maintainability

Backups for database are available.

3.5.5 Portability

The Software is a web-based application and is built in PHP and MYSQL so it is platform independent and is independent of operating system.

3.6 Design Constraints

This software provides security. The login form prevents the system from being misused by unauthorized users. Only an authorized operator will be granted rights to modify as per requirements. This software is also reliable and fault tolerant. The system developed is designed to handle invalid inputs. Since reliability is major area of concern the system has a backup to avoid data loss. The user should know the programming language very well that is used to develop a software.
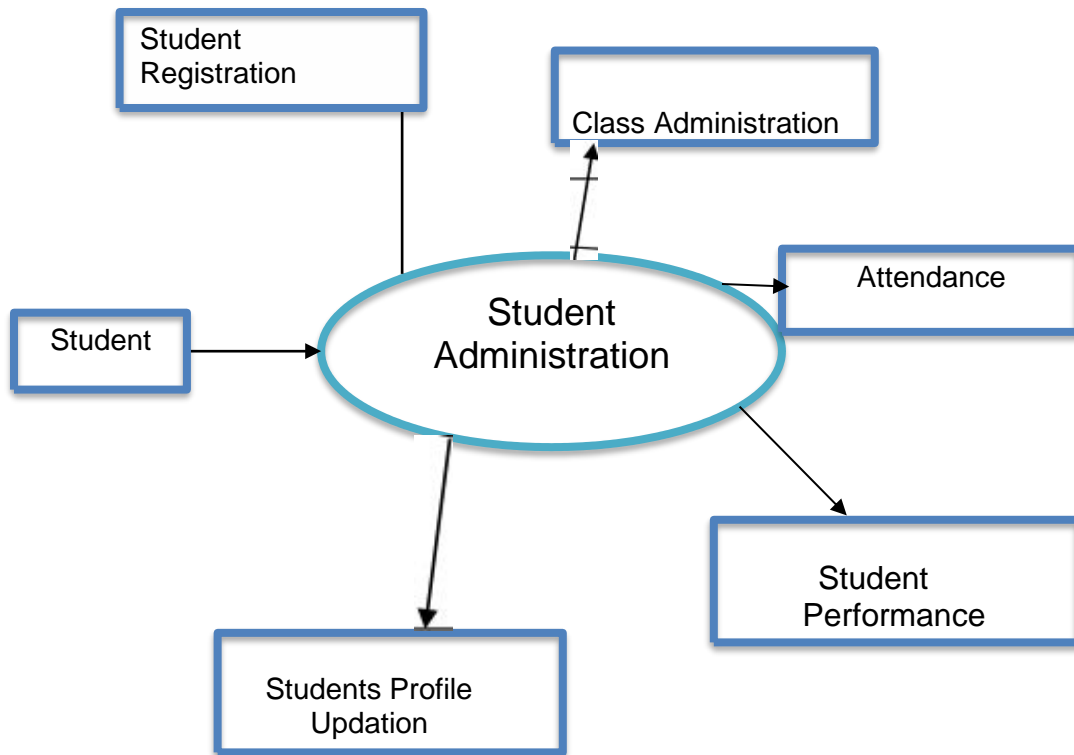
3.7 Other Requirements

Database

All the data will be stored in a relational database

4. Analysis Models

4.1 Sequence Diagrams

Student Registration

Class Administration

Student

Student Administration

Attendance

Student Performance

Students Profile Updation

USERS:

ADMIN

- Add a new user to DB
- Delete a user from DB.
- Update values to the DB.
- Backup DB.
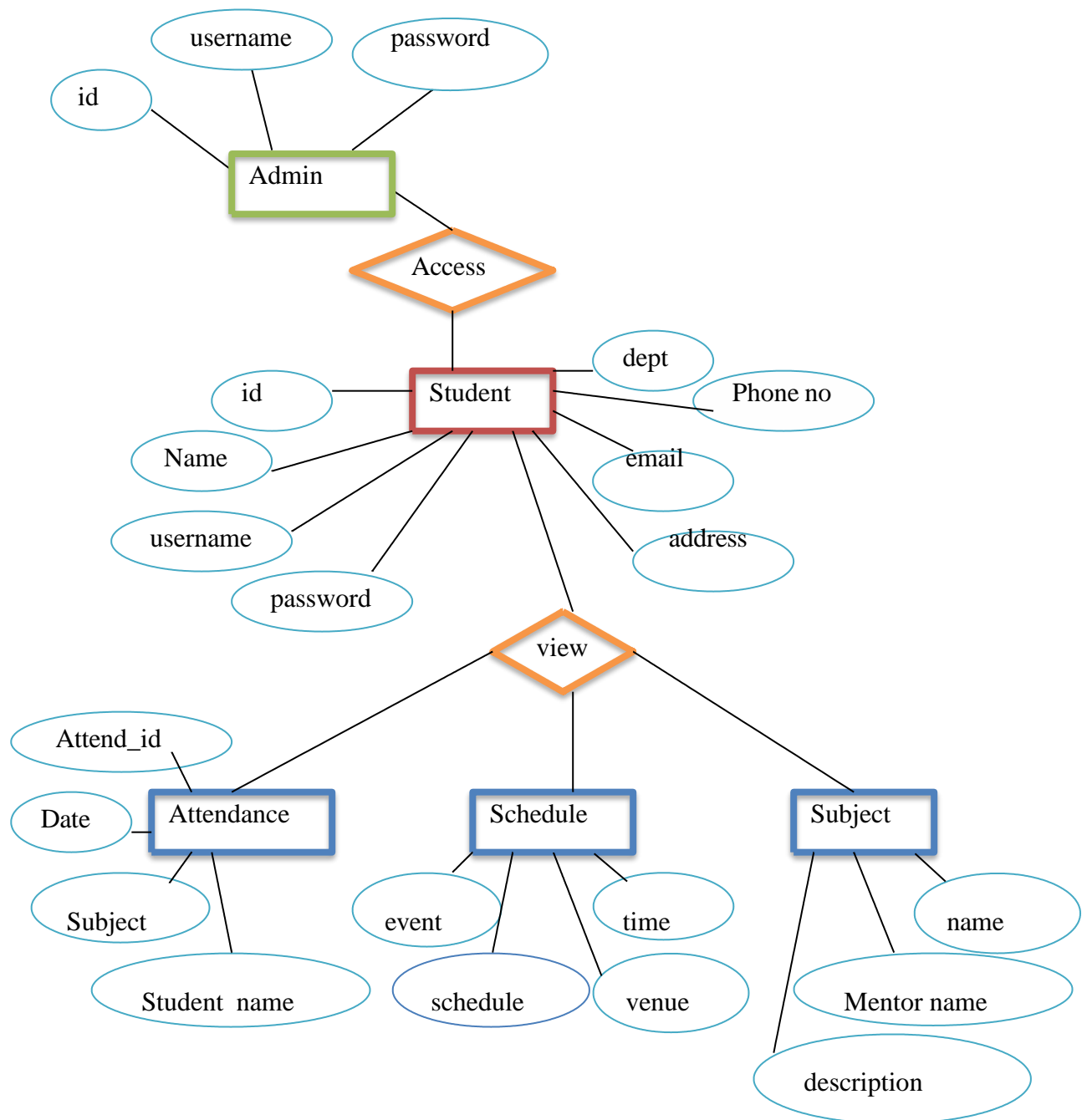- Reset DB
- Upload DB.
- Reset Password

TEACHER

- Update Attendance.
- Export attendance sheet
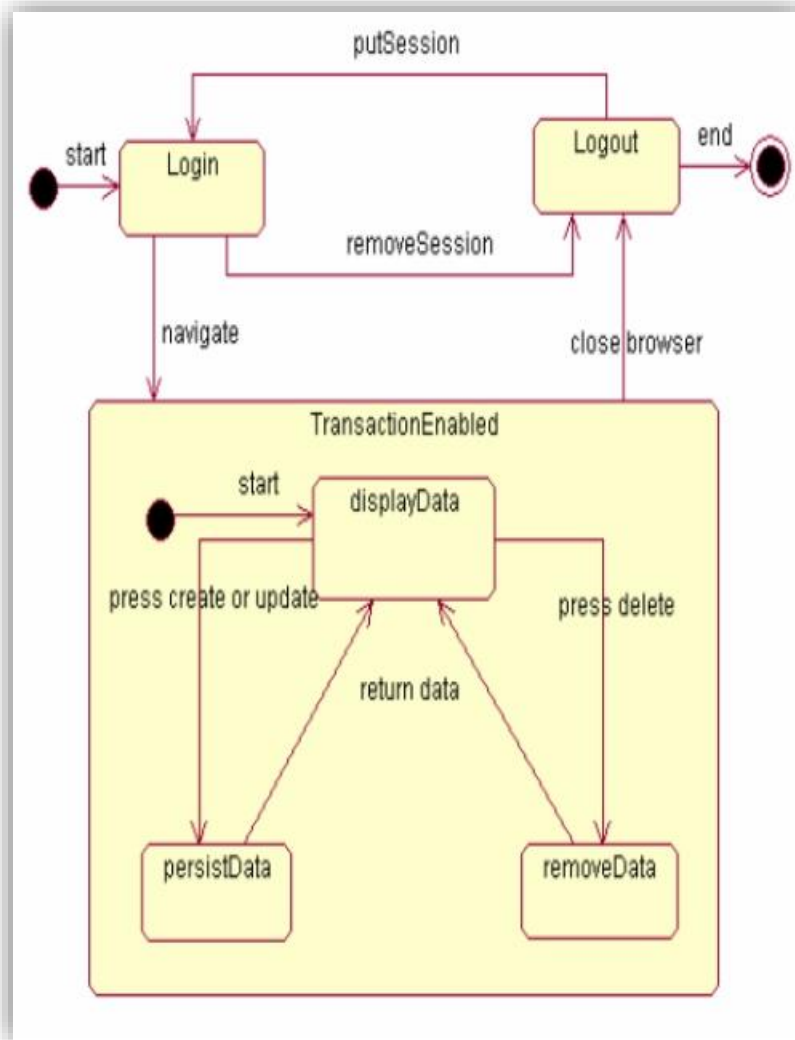- Check Attendance.
- Update student record.

STUDENT

- View student details.
- Check attendance record.
- Analyze the attendance feed.
- View attendance of class students.

4.2 Data Flow Diagrams (DFD)

4.3 State-Transition Diagrams (STD)

A. Appendices

Glossary

Following abbreviations have been used throughout this document:

DFD: Data Flow Diagram
ERD: Entity Relationship Diagram
SRS: Software Requirement Specification
SQL: Structured Query Language
AMS: Attendance Management System
STD: State Transition Diagram