Software Requirements Specification

for

Online Extra Class Scheduling

Version 0.1

Prepared by Group 9

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Course:	**DBMS**
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Contents

1 Introduction

1.1 Document Purpose

The aim of the project is to build a Database Management System that allows teachers to book slots for extra online classes. The extra class can be scheduled for a slot within the next seven days based on the availability of the batch and the professor.

1.2 Product Scope

Students can use the product to view their timetable of extra classes for the coming week. They are also able to retrieve the links to the classes.

Professors can make the booking for an extra class by entering the day, slot and batch. If the slot is available, the professor can book and once the class is done, the slot is made accessible. The professor also has the ability to deschedule a class that had been scheduled if needed.

1.3 Intended Audience and Document Overview

Clients (students and professors), admin of the servers and the professor.

1.4 Document Conventions

Font style: Arial font size 12

2 Overall Description

2.1 Product Overview

The product is would act as an upgrade to the already existing dss website. It acts as a self-contained product, contacting and updating the databases of students, professors, batches and timetables as required.

2.2 Product Functionality

List of the major functions provided by the system for a user:

- Login as student
- Login as professor

List of the major functions provided by the system for a student:

- View timetable
- Retrieve class link

List of the major functions provided by the system for a professor:

- View timetable
- Retrieve class link
- Schedule extra class
- Deschedule extra class

List of helper functions assisting the major functions:

- Check slot availability
- Check professor availability
- Check batch availability
- Book slot
- Cancel class
- Check password

2.3 Design and Implementation Constraints

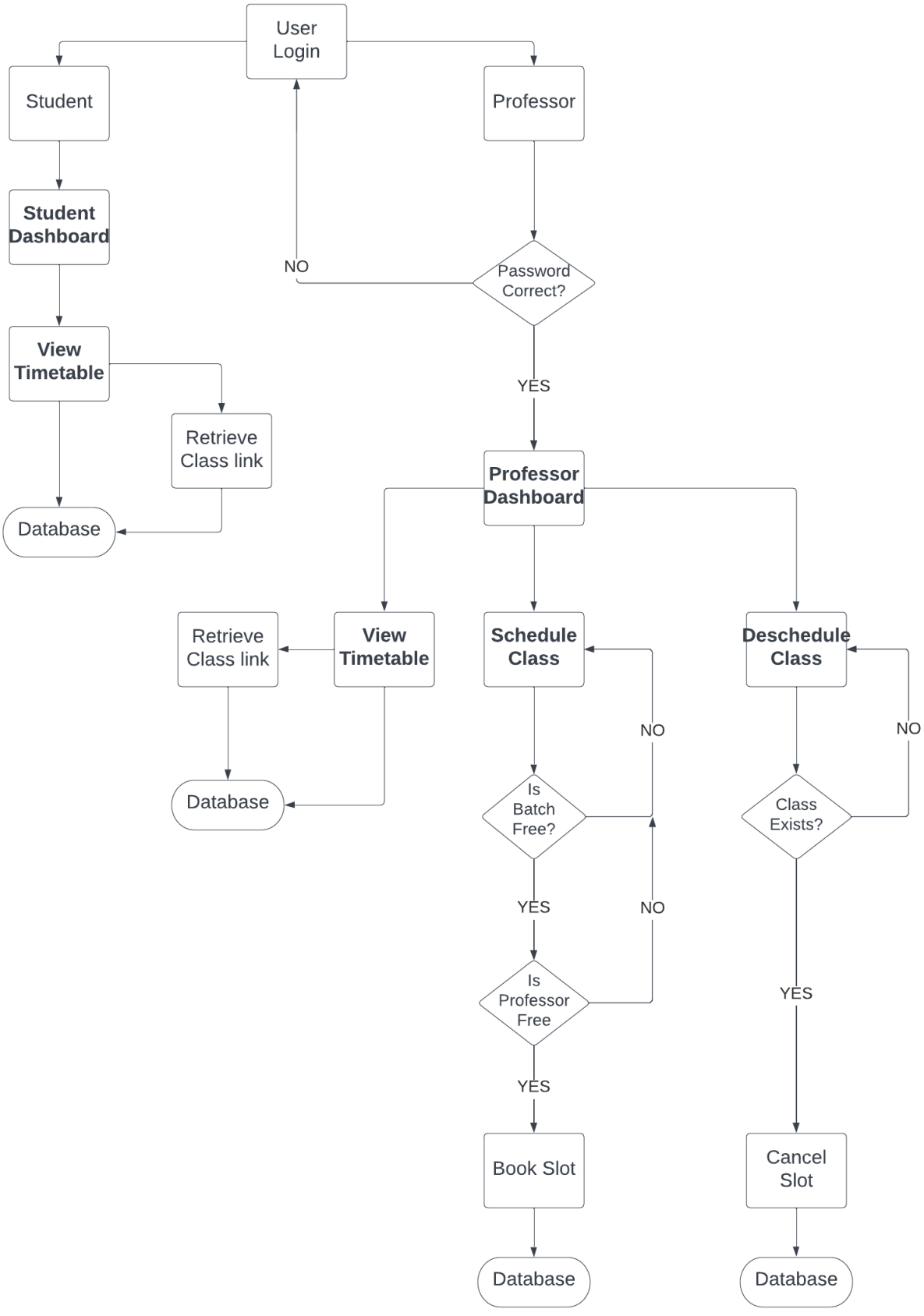
An admin version of the app needs to always be active on the college servers, to update the timetables every single day.

2.4 Assumptions and Dependencies

1. All students of a particular batch have the same courses.
2. All slots for extra class are assumed to initially be empty (in case of courses already having slots, the updating of timetable can be changed using a single query).

2.5 Flow Diagram

The following is a diagram describing the flow of events and functionalities while using the product.



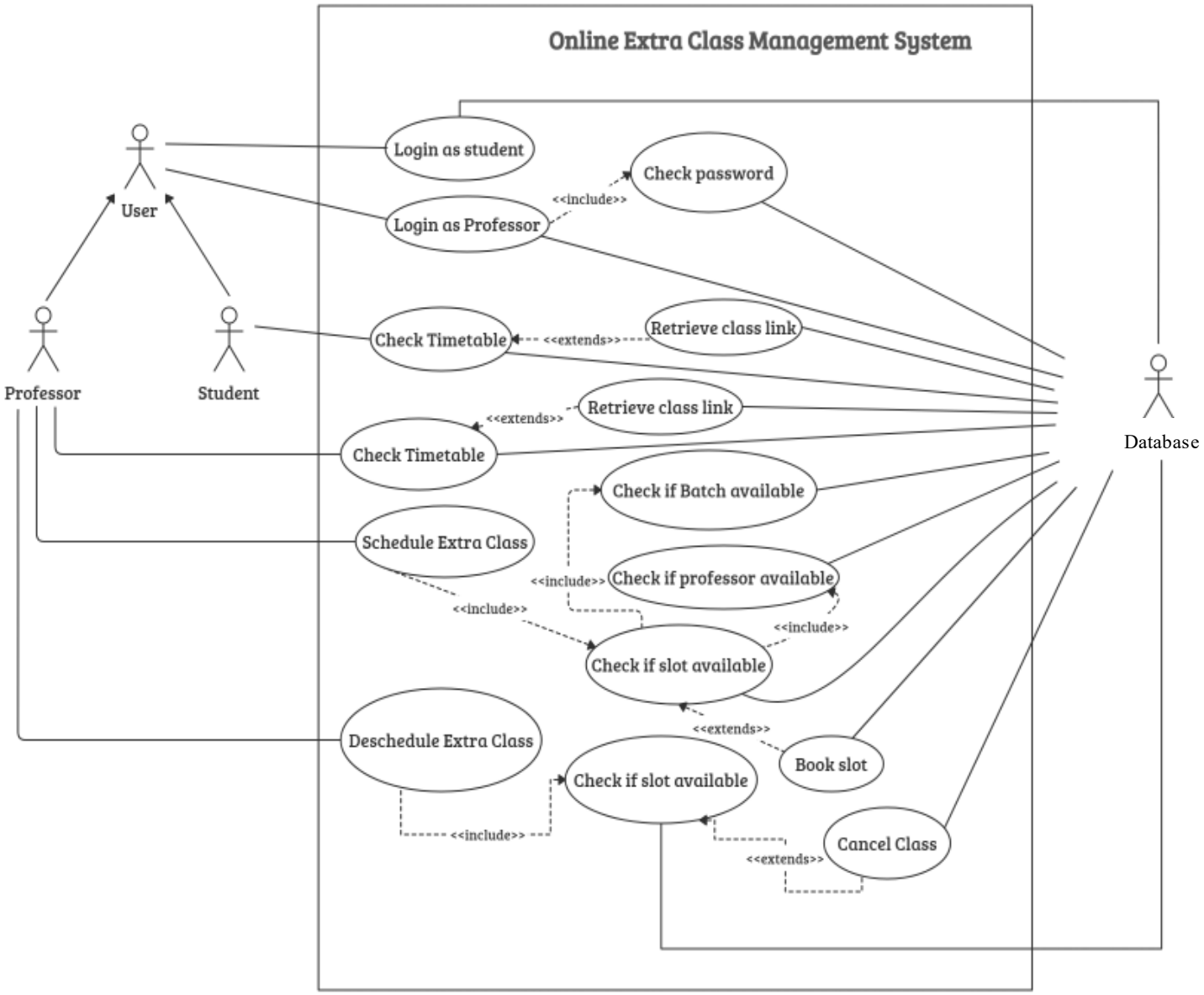
3 Specific Requirements

3.1 Functional Requirements

- Login as student:
  Allows student to login using roll number
- Login as professor:
  Allows professor to login using professor ID and password
- Check password:
  Checks if the password entered by the professor is correct
- View timetable (student):
  Allows student to view timetable of extra classes for the week
- View timetable (professor):
  Allows professor to view timetable of their extra classes for the week
- Retrieve class link:
  Allows a student or professor to access the link to the online class scheduled in the slot
- Schedule extra class:
  Allows professor to schedule an extra class of their course for a batch
- Check batch availability:
  Checks if the batch is free in the slot
- Check professor availability:
  Checks if the professor is free in the slot
- Check slot availability:
  Checks if the professor and the batch are free in the slot and the slot is available for booking
- Book slot:
  Updates the timetables for the professor and the batch
- Deschedule extra class:
  Allows the professor to deschedule a scheduled class from the slot
- Cancel class:
  Clears the timetables for the professor and the batch

3.2 Use Case Model

The following page contains a Use Case Model describing the functionality and interactions involved in the System.


Online Extra Class Management System
User
Professor
Student
Database
Login as student
Login as Professor
Check password
<<include>>
Check Timetable
Retrieve class link
<<extends>>
Check Timetable
Retrieve class link
<<extends>>
Check if Batch available
Schedule Extra Class
Check if professor available
<<include>>
<<include>>
<<include>>
Check if slot available
<<extends>>
Deschedule Extra Class
Book slot
Check if slot available
<<include>>
Cancel Class
<<extends>>

4 Non functional Requirements

4.1 Hardware Requirements

- Processor: Pentium or greater
- RAM: 512MB
- Hard Disk: Disk space usage depends on data to be stored in the database – Ideally minimum 1GB
- Keyboard
- Monitor

4.2 Software Requirements

Software Used	Description
Operating System	We have chosen the Windows operating system for its best support and user-friendly graphic interface
Database	SQL: If possible, you should use the newest driver available. The older JDBC drivers (for SQL Server 2000 and older) provided by My Microsoft, are known to be buggy and slow. The new SQL Server 2005 driver is preferred and can also work with SQL Server 2000
Php, HTML, CSS	To implement the server side, we are using Php programming language, and the front end of the application is implemented using HTML and CSS

4.3 Safety and Security Requirements

- The system will contact the data stored in the secure databases. The users do not have permissions to directly edit the database, changes such as adding a new course/ professor/ batch to the database can only happen via the server (super admin) and not the app. Regular backing up of the database is advised to avoid shutting down of the app in cases of errors.
- Apart from security of the data, other measures such as keeping a password for professors to login, keeping the displayed timetable and class links unavailable for editing to the students, etc. have been taken. Functionalities of scheduling and

descheduling classes take into account the availability of the concerned batch and the professor ensuring no clashes and smooth management.

4.4 Software Quality Attributes

- Reliability – the system will provide instant and accurate results to the users without lag to all concerned users.
- Scalability – the system can be extended to other organizations, and the slots available per day/ number of days needed to book a class in advance can be upscaled with ease as required.
- Portability – The system can be deployed on most machines, with the quality remaining user-friendly and the app being easy to navigate through.
- Cost-effectiveness – Other than regular maintenances and disk usage on the servers, the software is relatively cost free.