Darshan University

A Project Report on

“University Management System”

Under the subject

Software Engineering (2101CS503)

B. Tech, Semester – V

Computer Science & Engineering Department

Submitted By

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Academic Year

(2024-2025)

Internal Guide	Dean-DIET
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Darshan University	Darshan University

Computer Science & Engineering Department
Darshan University

DECLARATION

We hereby declare that the SRS, submitted along with the **Software Engineering (2101CS503)** for entitled **"University Management System"** submitted in partial fulfilment for the Semester-5 of **Bachelor Technology (B. Tech)** in **Computer Science and Engineering (CSE)** Department to Darshan University, Rajkot, is a record of the work carried out at **Darshan University, Rajkot** under the supervision of (Rajkumar Gondaliya**)** and that no part of any of report has been directly copied from any students' reports, without providing due reference.

(Krishirajsinh vansia)

Student's Signature

Date:

Computer Science & Engineering Department
Darshan University

CERTIFICATE

This is to certify that the SRS on **"University Management System" has** been satisfactorily prepared by **Krishirajsinh vansia** (22010101200) under my guidance in the fulfillment of the course **Software Engineering (2101CS503)** work during the academic year 2024-2025.

Internal Guide	Dean-DIET
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Darshan University	Darshan University

ACKNOWLEDGEMENT

I wish to express my sincere gratitude to my project guide Prof. **Rajkumar Gondaliya** and all the faculty members for helping me through my project by giving me the necessary suggestions and advices along with their valuable co-ordination in completing this work.

I also thank my parents, friends and all the members of the family for their precious support and encouragement which they had provided in completion of my work. In addition to that, I would also like to mention the Darshan University personals who gave me the permission to use and experience the valuable resources required for the project from the University premises.

Thus, in conclusion to the above said, I once again thank the faculties and members of **Darshan University** for their valuable support in completion of the project.

Thanking You

Krishirajsinh vansia

ABSTRACT

The University Management System (UMS) is a digital solution designed to automate and streamline the daily operations of a university. This system transforms traditional university management into an efficient, internet-based application with user-specific logins for students, faculty, parents, and administrators.

Key features include student course enrollment, attendance tracking, grade viewing, resource access, and schedule management. Faculty can manage course assignments, monitor student performance, and communicate with stakeholders. Parents can track their child's academic progress and fee payments. Administrators can oversee student and faculty records, financial transactions, hostel accommodations, inventory, and generate various reports.

The UMS enhances operational efficiency and reduces human effort by offering capabilities beyond conventional systems. It ensures data integrity and user privacy, providing a seamless and user-friendly experience for all university stakeholders. The main purpose of this system is to reduce human efforts and improve the management of university operations.

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1. Introduction

1.1 Product perspective

This project aims to revolutionize the traditional, manual university management processes by transitioning to a comprehensive, internet-based application. The University Management System (UMS) will facilitate seamless interaction between students, faculty, and administration, enhancing overall efficiency and user experience.

1.2 Product features

1.2.1 There are **four** different **users** who will be using this product:

- **Student:** Students will be the primary users of the system. They can manage their course enrollments, track their attendance, view their grades, access course materials, and stay updated with university announcements.

- **Faculty:** Faculty members will utilize the system to manage their course assignments, track student performance, handle attendance records, distribute resources, and communicate with students and administration.

- **Parents:** Parents will have access to view their children's academic progress, attendance records, fee payments, and receive important updates from the university, providing them with transparency and involvement in their child's education.

- **Admin:** The administrative staff will oversee the overall management of the university operations. They will handle student and faculty records, financial management, hostel accommodations, inventory control, and generate comprehensive reports for better decision-making.

1.3 Functional Requirement

The features that are required for each user in the University Management System are:

1.3.1 Student:

•**Course Enrollment:** Students can enroll in courses and drop them within the registration period.

- **Class Schedule:** Students can view and download their class schedules.
- **Grade Viewing:** Students can view their grades for all completed courses.
- **Assignment Submission:** Students can submit assignments electronically and receive feedback.
- **Attendance Viewing:** Students can view their attendance records for each course.
- **Resource Access:** Students can access course materials, lecture notes, and additional resources.
- **Library Access:** Students can search the library catalog, borrow books, and check due dates.
- **Exam Schedule:** Students can view their upcoming exam schedules and locations.
- **Fee Payment:** Students can view and pay their tuition and other fees online.
- **Profile Management:** Students can update their personal information and academic details.
- **Communication Portal:** Students can send messages to faculty and receive notifications.
- **Club Registration:** Students can join university clubs and participate in extracurricular activities.
- **Internship/Job Portal:** Students can search and apply for internships and job opportunities.

- **Feedback Submission:** Students can provide feedback on courses and faculty.
- **Academic Calendar:** Students can view the academic calendar, including important dates and deadlines.

1.3.2 Parents:

- **Progress Monitoring:** Parents can view their child's academic progress, including grades and attendance.
- **Fee Payment:** Parents can view and pay tuition and other fees online.
- **Event Notifications:** Parents receive notifications about upcoming events, parent-teacher meetings, and other important dates.
- **Attendance Viewing:** Parents can view their child's attendance records.
- **Grade Reports:** Parents can access their child's grade reports for each term.
- **Communication Portal:** Parents can communicate with faculty and school administration.
- **Student Schedule:** Parents can view their child's class and exam schedules.
- **Resource Access:** Parents can access educational resources and guidelines provided by the university.
- **Library Records:** Parents can view their child's library borrowing history and dues.
- **Transport Management:** Parents can view the transport schedules and routes for their child.
- **Profile Management:** Parents can update their contact information and emergency details.
- **Notification Preferences:** Parents can set their preferences for receiving notifications and alerts.
- **Scholarship Application:** Parents can assist their child in applying for scholarships and financial aid.

- **Counselor Access:** Parents can schedule meetings with academic counselors and advisors.
- **Activity Monitoring:** Parents can track their child's participation in extracurricular activities and clubs.

1.3.3 Faculty:

- **Attendance Management:** Faculty can mark and update student attendance records.
- **Grade Submission:** Faculty can enter and update student grades for their courses.
- **Course Material Upload:** Faculty can upload lecture notes, assignments, and other course materials.
- **Assignment Management:** Faculty can create, distribute, and grade assignments.
- **Exam Scheduling:** Faculty can schedule exams and manage exam logistics.
- **Student Communication:** Faculty can communicate with students individually or in groups.
- **Resource Access:** Faculty can access academic resources and research materials.
- **Profile Management:** Faculty can update their professional and personal information.
- **Feedback Collection:** Faculty can collect and review feedback from students on their courses.
- **Timetable Management:** Faculty can view and manage their teaching schedules.
- **Research Management:** Faculty can manage their research projects and publications.
- **Library Access:** Faculty can access library resources and manage their borrowing.
- **Committee Participation:** Faculty can participate in and manage academic and administrative committees.

- **Counseling and Mentoring:** Faculty can provide academic counseling and mentoring to students.
- **Event Management:** Faculty can organize and manage academic and extracurricular events.

1.3.4 Admin:

- **User Management:** Admin can create, update, and delete user accounts for students, parents, and faculty.
- **Course Management:** Admin can create and update course details, schedules, and faculty assignments.
- **Attendance Reports:** Admin can generate attendance reports for all students.
- **Grade Reports:** Admin can generate and distribute grade reports for all courses.
- **Fee Management:** Admin can manage tuition fees, payments, and generate financial reports.
- **Communication Management:** Admin can send notifications and messages to students, parents, and faculty.
- **Resource Allocation:** Admin can allocate resources such as classrooms, laboratories, and equipment.
- **Library Management:** Admin can manage the library catalog, borrowing records, and dues.
- **Profile Management:** Admin can update user profiles and access permissions.
- **Event Coordination:** Admin can coordinate and manage university events and activities.
- **Academic Calendar:** Admin can update and maintain the academic calendar.
- **Exam Management:** Admin can schedule exams, assign invigilators, and manage exam logistics.

- **Report Generation:** Admin can generate various academic and administrative reports.
- **Support Services:** Admin can manage support services like counseling, health services, and student welfare.
- **System Maintenance:** Admin can perform regular maintenance and updates to the university management system.

1.4 Non-Functional Requirement

1.4.1 Performance: The system should handle multiple user requests efficiently, ensuring quick response times and minimal latency, even during peak usage periods.

1.4.2 Security: Data transmission should be encrypted, user authentication must be robust, and access controls should be in place to prevent unauthorized access to sensitive information.

1.4.3 Reliability: The system should be highly available with minimal downtime, regular data backups should prevent data loss, and error handling mechanisms should prevent system crashes.

1.4.4 Usability: The interface should be intuitive and easy to use, supporting various devices and screen sizes, with accessibility features for users with disabilities.

1.4.5 Scalability: The system architecture should be able to handle increasing user and data loads, with strategies in place for horizontal and vertical scaling and load balancing to ensure optimal performance.

2 Design and Implementation Constraints

2.1 Use case diagram

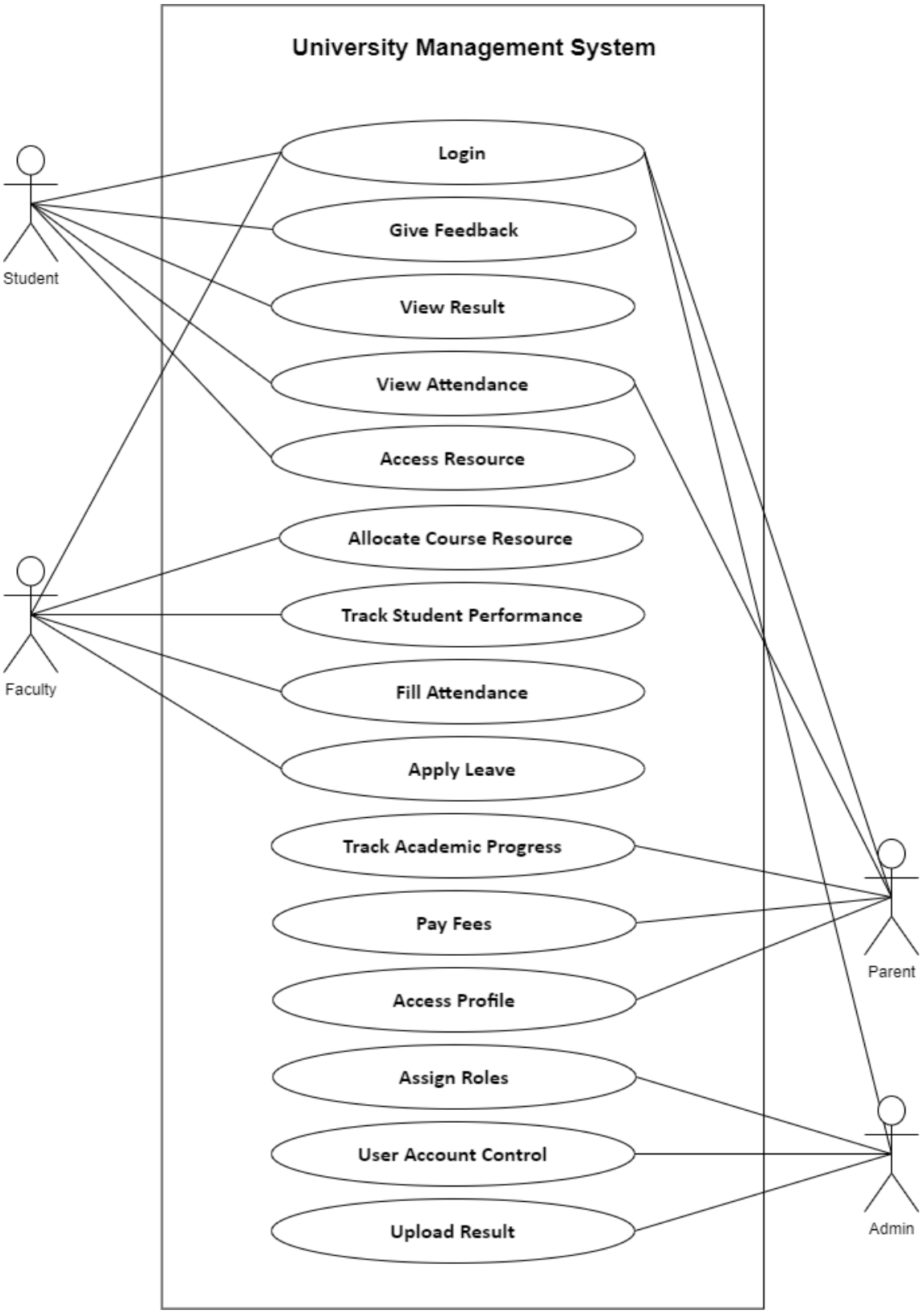

Figure 2.1-1 Use case diagram for university management system

2.2 Activity diagram and Swimlane diagram

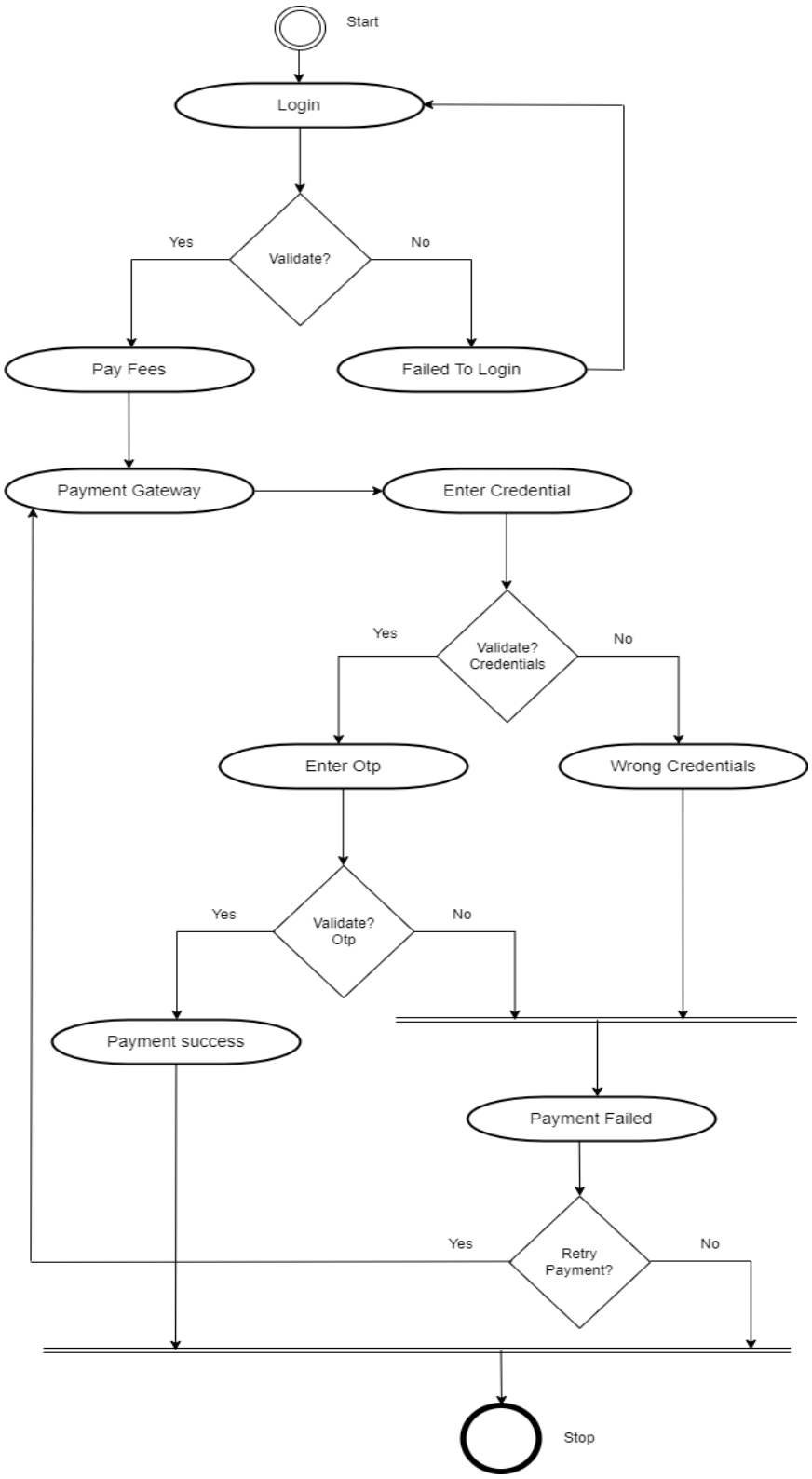

Figure 2.2-1 Activity Diagram for Fees Payment System

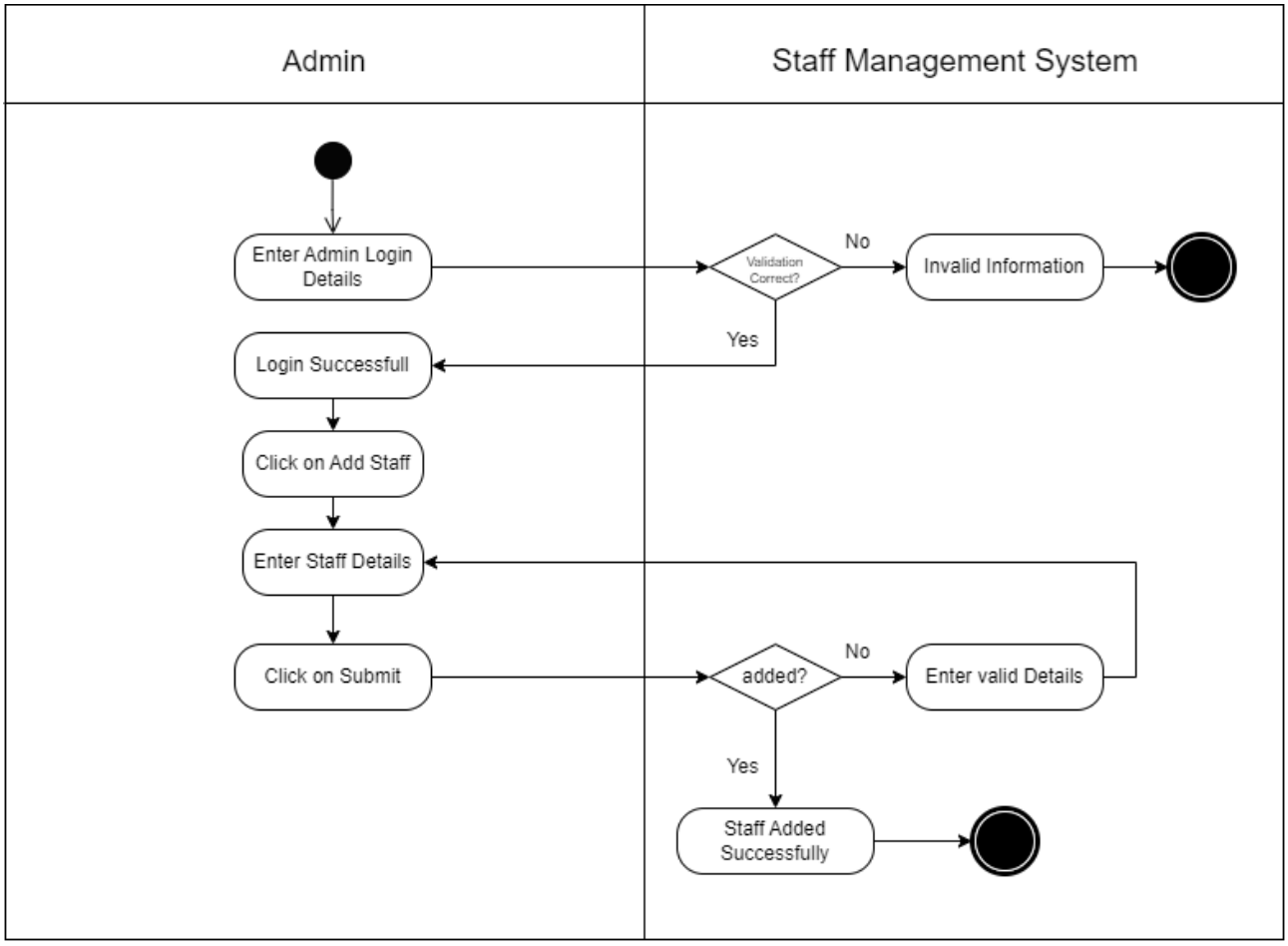

Figure 2.2-2 Swimlane diagram for Login

2.3 Sequence diagram

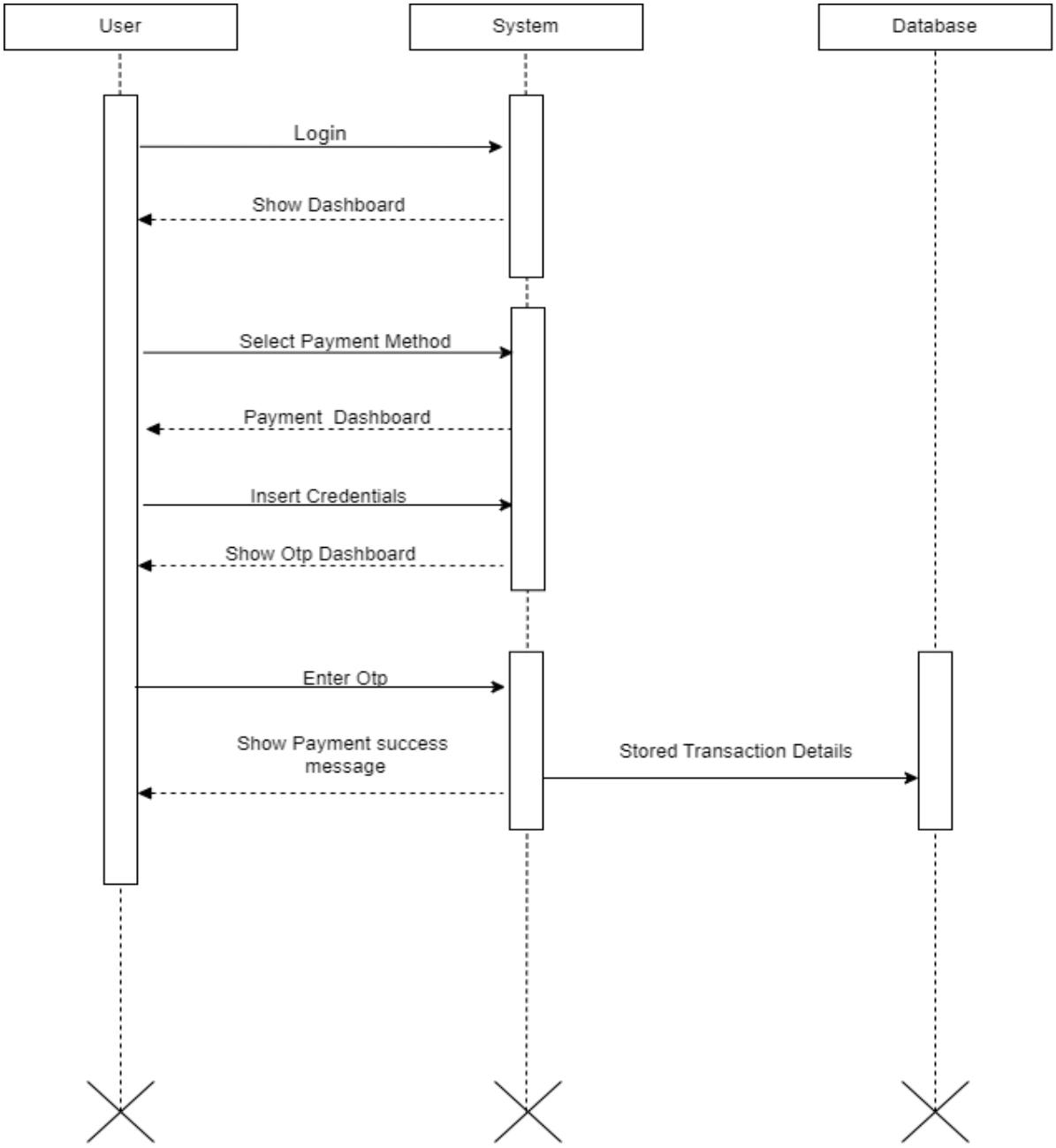

Figure 2.3-1 Sequence diagram for Fees Payment System

2.4 State diagram

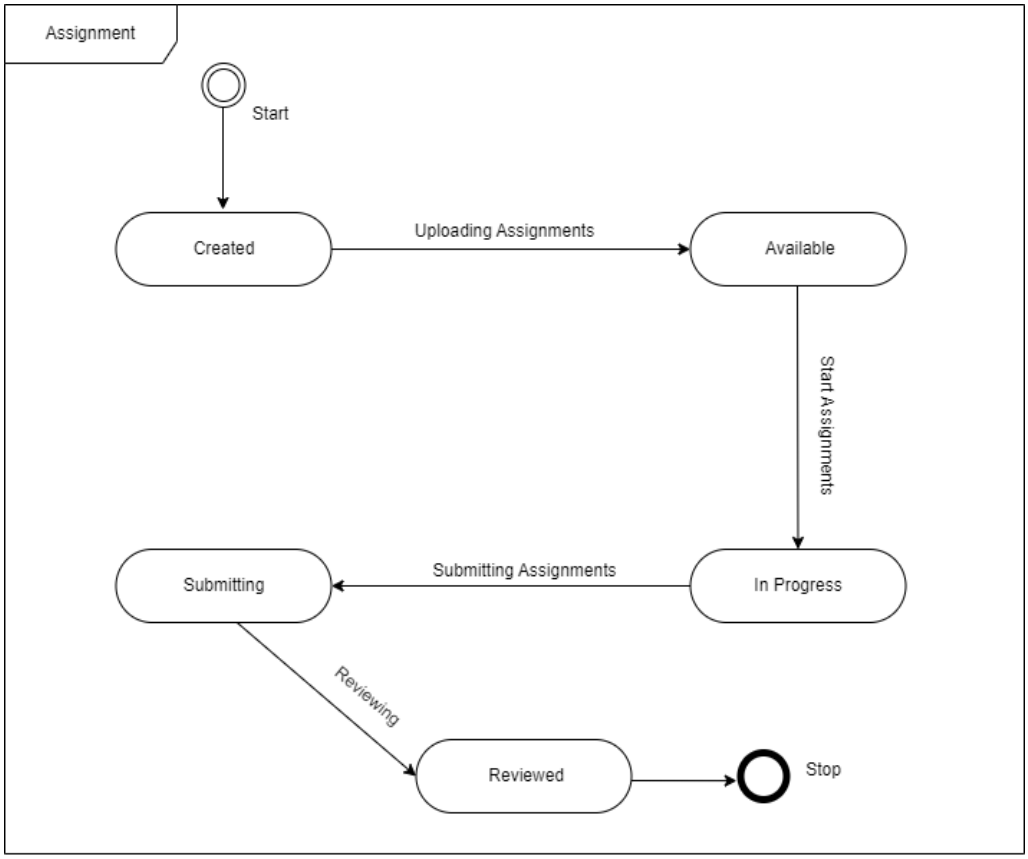

Figure 2.4-1 State diagram of Assignment Uploading

2.5 Class diagram

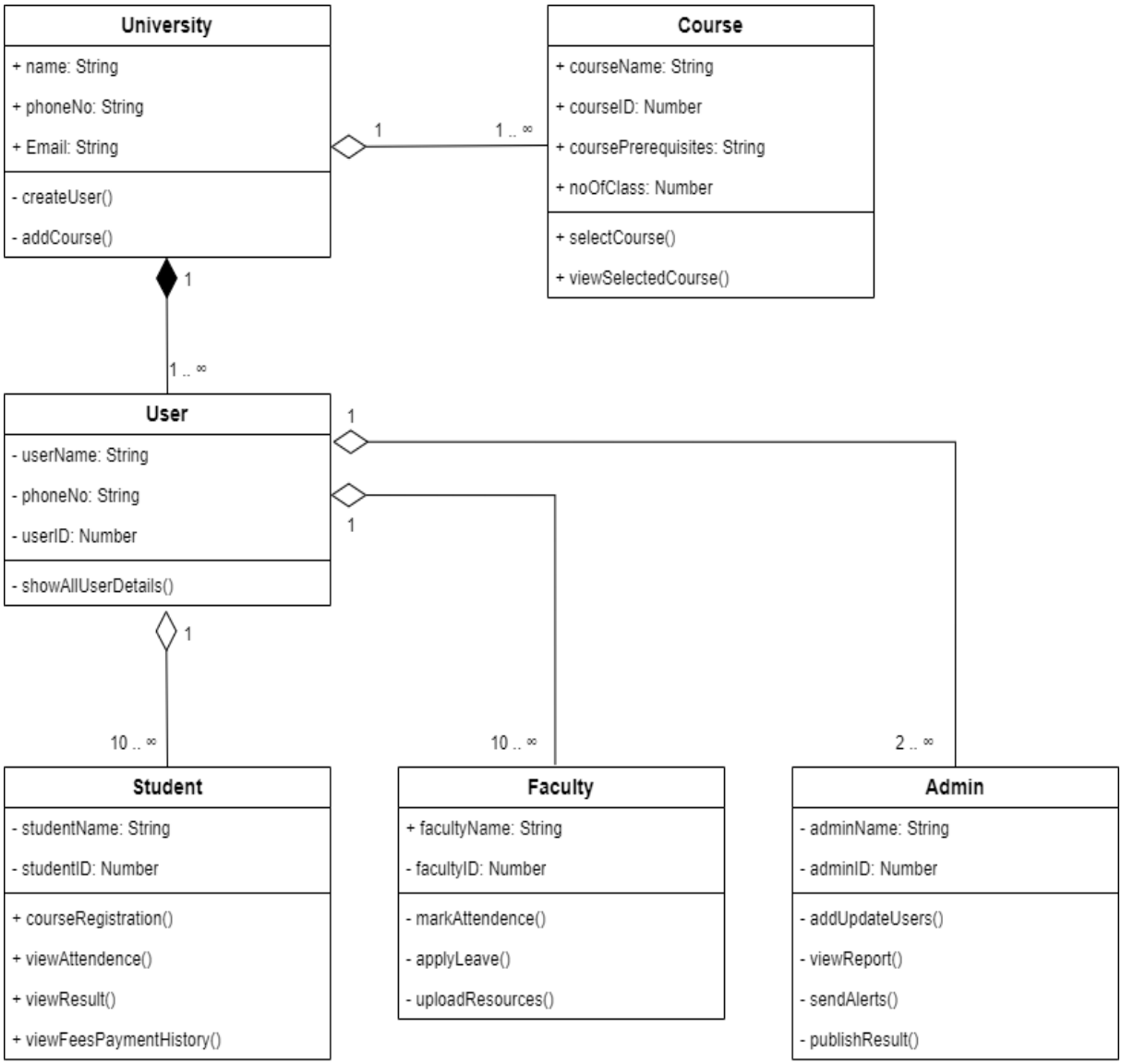

Figure 2.5-1 Class diagram for University management system

2.6 Data flow diagram

2.6.1 Context diagram (level-0)

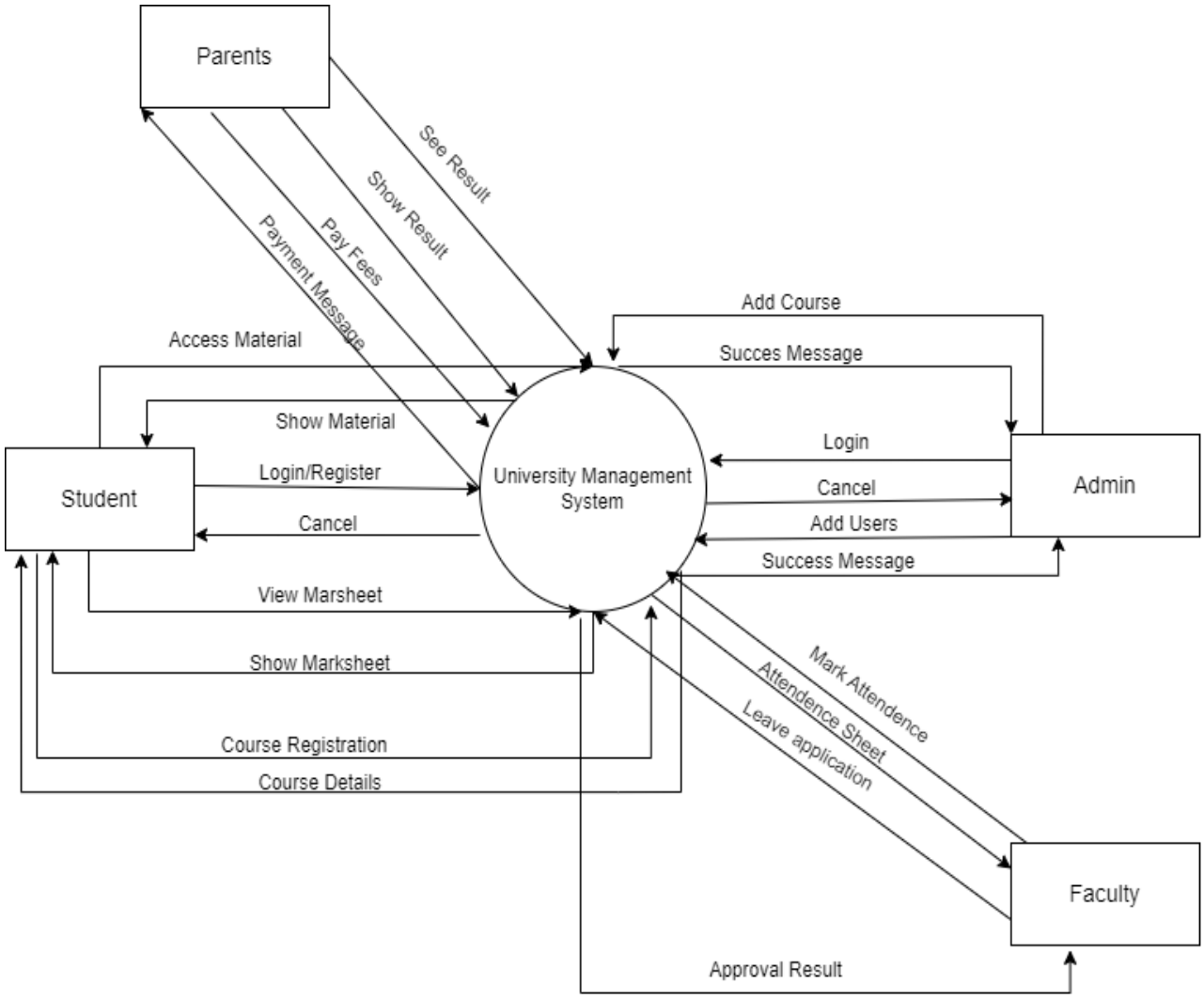

Figure 2.6-1 Context diagram for University management system

2.6.2 DFD Level-1

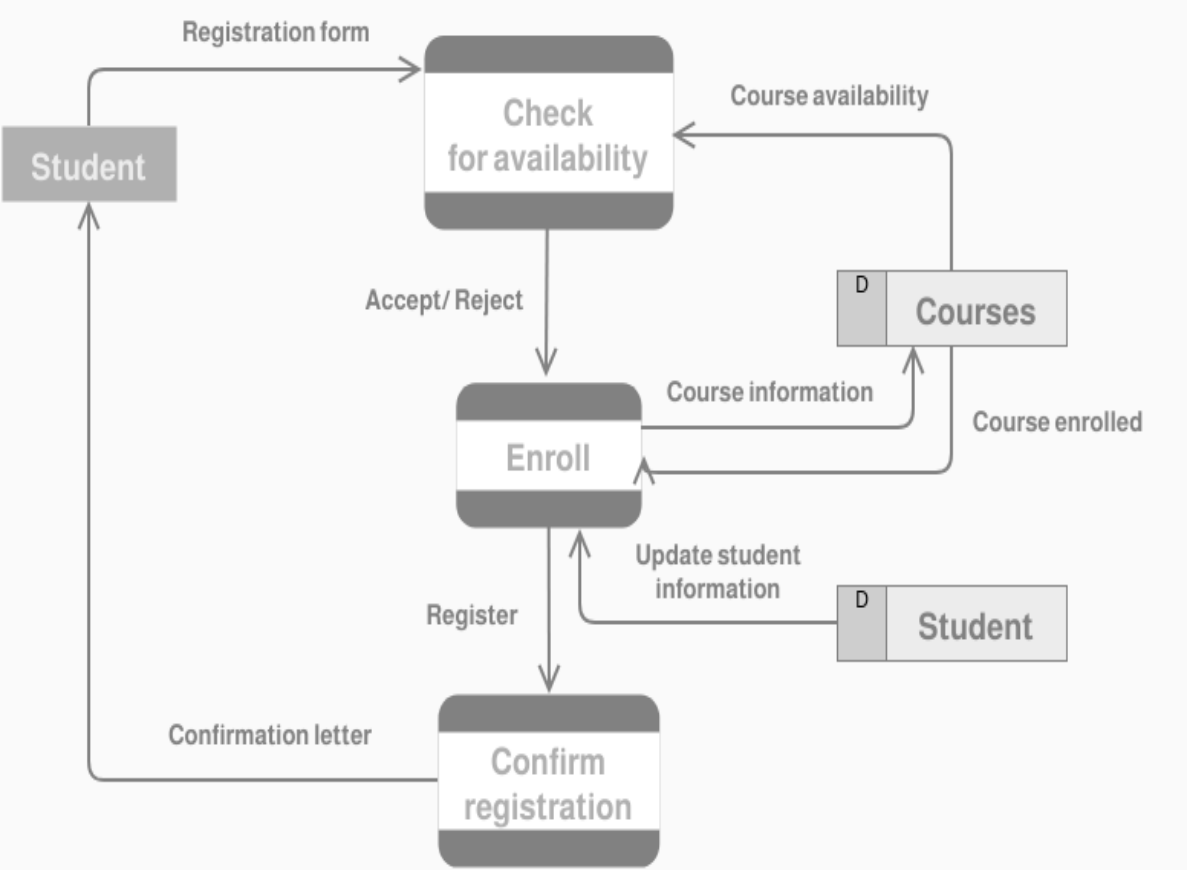

Figure 2.6-2 DFD level-1 for Student Registration system

3 External interface requirement (Screens)

3.1 Screen-1: Attendence Screen

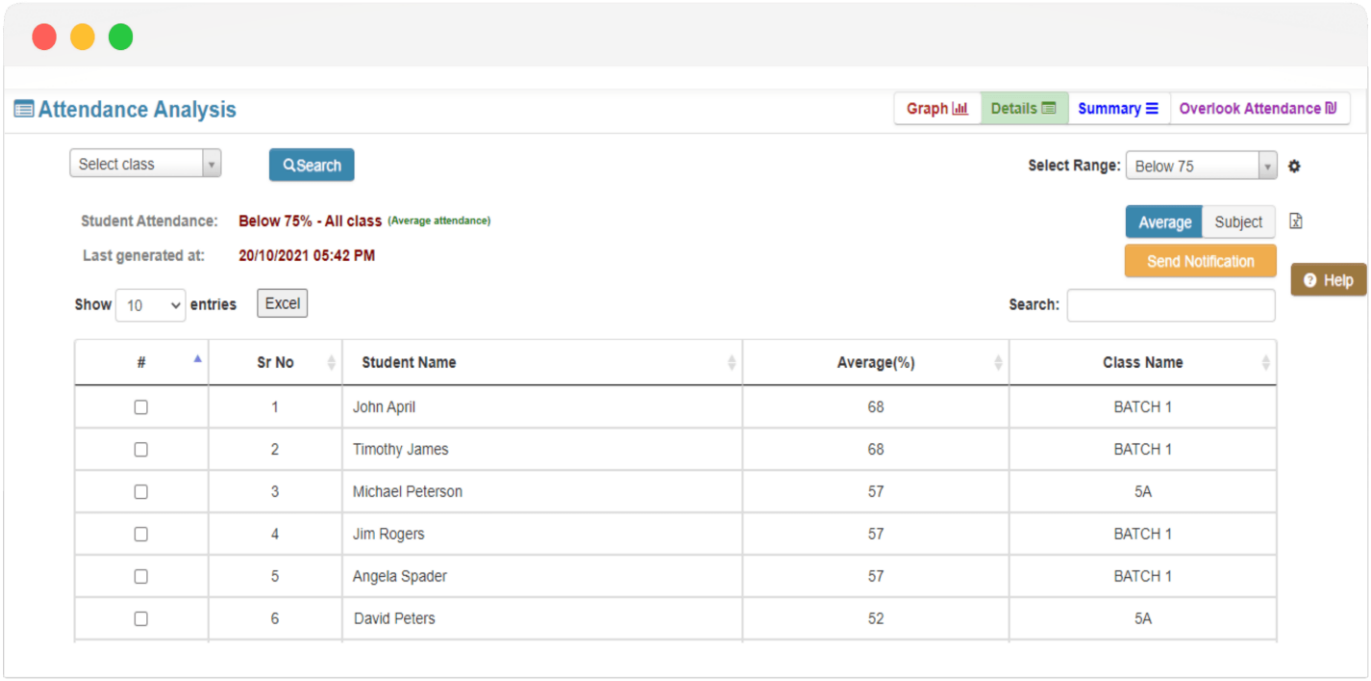

Figure 3.1-1 Screen-1: Marking Attendence

Purpose: This screen will enable target end-users to register in the attendance tracking system. The following information will be collected and recorded in the system to facilitate accurate attendance analysis and reporting.

Table 3.1-1 Screen element of Attendence Screen

Sr	Screen Element	Input Type	O/M	1/N	Description
1	Select Class	Dropdown	M	1	Dropdown to select the class.
2	Search	Button	M	1	Button to initiate the search based on selected criteria.
3	Select Range	Dropdown	M	1	Dropdown to select the attendance range.
4	Average	Button	M	1	Button to show average attendance.
5	Subject	Button	M	1	Button to show subject-wise attendance.
6	Send Notification	Button	M	1	Button to send notifications to selected students.
7	Help	Button	M	1	Button to get help or instructions.
8	Entries Show	Dropdown	M	1	Dropdown to select the number of entries to show per page.
9	Excel	Button	M	1	Button to export the data to an Excel file.
10	Search (table filter)	Text	M	1	Text field to filter table entries.
11	Checkbox (select all)	Checkbox	M	1	Checkbox to select all entries in the table.
12	Checkbox (individual rows)	Checkbox	M	1	Checkbox to select individual entries in the table.

13	Sr No	Column	O	1	Column showing the serial number of the students.
14	Student Name	Column	O	1	Column showing the names of the students.
15	Average (%)	Column	O	1	Column showing the average attendance percentage of the students.
16	Class Name	Column	O	1	Column showing the class names of the students.
17	Graph	Link	O	1	Link to navigate to the graph view of the attendance data.
18	Details	Link	O	1	Link to navigate to the detailed view of the attendance data.
19	Summary	Link	O	1	Link to navigate to the summary view of the attendance data.
20	Overlook Attendance	Link	O	1	Link to navigate to the overlook attendance view.
21	Last generated at	Text	O	1	Text showing the timestamp when the attendance data was last generated.
22	Student Attendance Status	Text	O	1	Text showing the current status of student attendance (e.g. 75%)

3.2 Screen-2: Assignment Screen

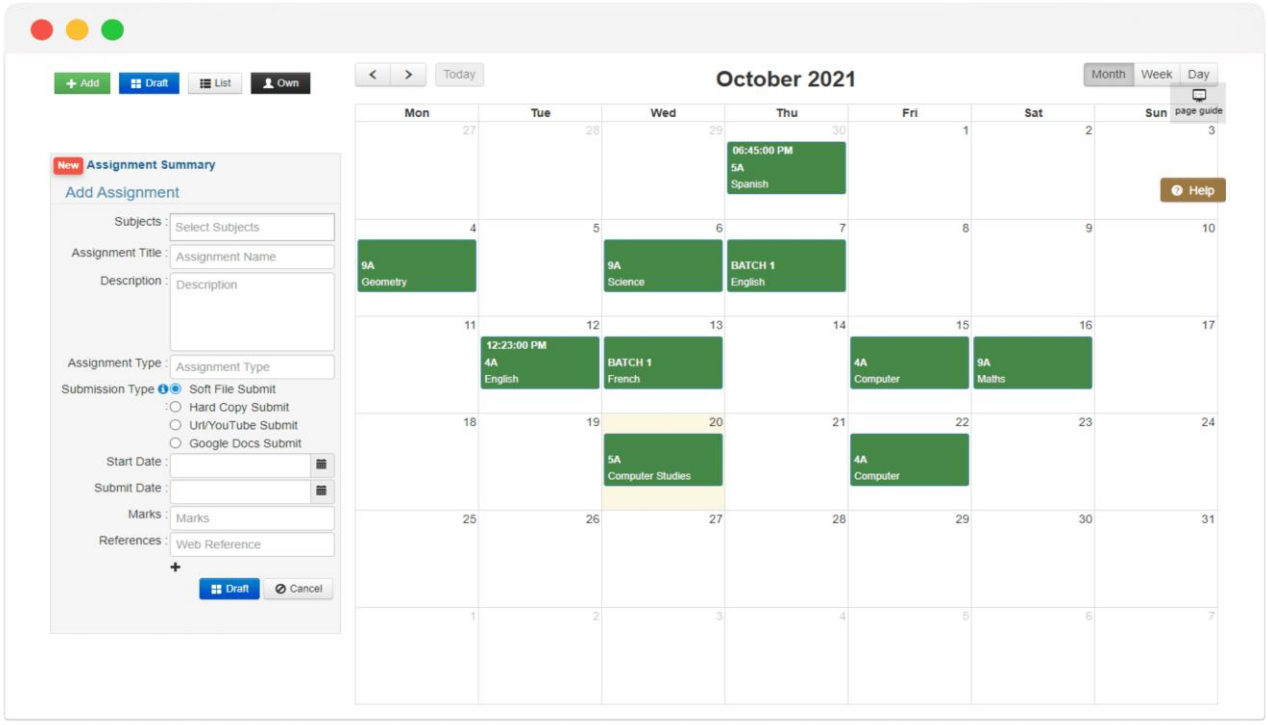

Figure 3.2-1 Screen-2: Assignment Screen

Purpose: This screen will allow registered users to securely access the system. The following credentials will be required to authenticate and grant access to the system.

Table 3.2-1 Screen element of Assignment Screen

Sr	Screen Element	Input Type	O/M	1/N	Description
1	Add Assignment Button	Button	M	1	Button to add a new assignment.
2	Draft Button	Button	M	1	Button to save the assignment as a draft.
3	List Button	Button	M	1	Button to view the list of assignments.
4	Own Button	Button	M	1	Button to view own assignments.
5	Subjects	Dropdown	M	1	Dropdown to select the subjects.
6	Assignment Title	Text	M	1	Text field to enter the assignment title.
7	Description	Textarea	M	1	Textarea to enter the assignment description.
8	Assignment Type	Dropdown	M	1	Dropdown to select the assignment type.
9	Submission Type - Soft File Submit	Radio Button	M	1	Radio button to select soft file submission type.
10	Submission Type - Hard Copy Submit	Radio Button	M	1	Radio button to select hard copy submission type.
11	Submission Type - URL/YouTube Submit	Radio Button	M	1	Radio button to select URL/YouTube submission type.

12	Submission Type - Google Docs Submit	Radio Button	M	1	Radio button to select Google Docs submission type.
13	Start Date	Date Picker	M	1	Date picker to select the start date of the assignment.
14	Submit Date	Date Picker	M	1	Date picker to select the submission date of the assignment.
15	Marks	Text	M	1	Text field to enter the marks for the assignment.
16	References	Text	M	1	Text field to enter the web reference for the assignment.
17	Draft Button (Form)	Button	M	1	Button to save the assignment form as a draft.
18	Cancel Button (Form)	Button	M	1	Button to cancel the assignment form.
19	Calendar	Calendar	M	1	Calendar to view the assignments for the month.
20	Month View Button	Button	M	1	Button to switch to the month view of the calendar.
21	Week View Button	Button	M	1	Button to switch to the week view of the calendar.
22	Day View Button	Button	M	1	Button to switch to the day view of the calendar.
23	Page Guide Button	Button	M	1	Button to show the page guide.
24	Help Button	Button	M	1	Button to get help or instructions.

3.3 Screen-3: Fees Payment Screen

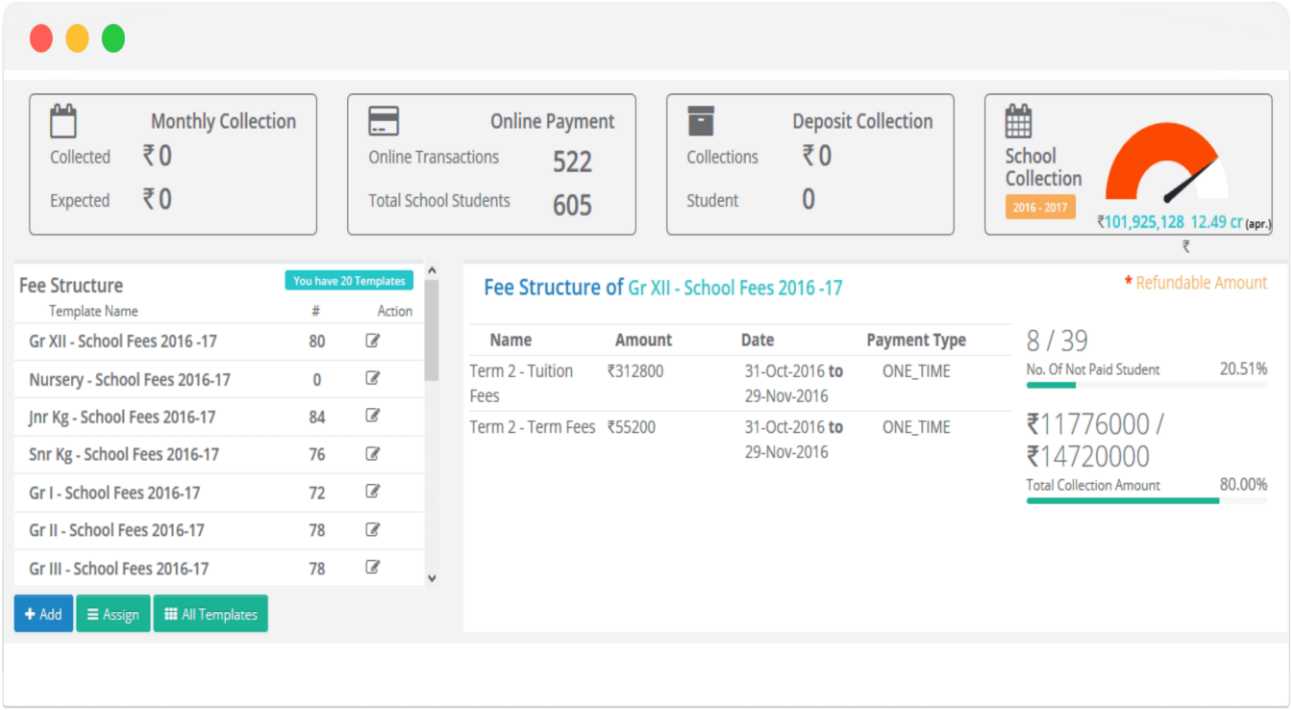

Figure 3.3-1 Screen-3: Fees Payment Screen

Purpose: This screen will allow users to submit and process payments for fees. The following payment details will be collected and recorded to ensure accurate tracking and confirmation of the payment.

Table 3.3-1 Screen element of Fees Payment Screen

Sr	Screen Element	Input Type	O/M	1/N	Description
1	Monthly Collection - Collected	Label	M	1	Displays the collected amount for the month.
2	Monthly Collection - Expected	Label	M	1	Displays the expected amount for the month.
3	Online Transactions	Label	M	1	Displays the number of online transactions.
4	Total School Students	Label	M	1	Displays the total number of school students.
5	Deposit Collection - Collections	Label	M	1	Displays the amount collected as deposit.
6	Deposit Collection - Student	Label	M	1	Displays the number of students for deposit collection.
7	School Collection - Gauge	Label	M	1	Displays the school collection amount as a gauge.
8	Fee Structure - Template Name	Label	M	1	Displays the template name for fee structure.
9	Fee Structure - Count (#)	Label	M	1	Displays the count of the templates.
10	Fee Structure - Action	Button	M	1	Button to edit the template.
11	Add Button	Button	M	1	Button to add a new template.
12	Assign Button	Button	M	1	Button to assign a template.

13	All Templates Button	Button	M	1	Button to view all templates.
14	Selected Fee Structure - Name	Label	M	1	Displays the name of the selected fee structure.
15	Selected Fee Structure - Amount	Label	M	1	Displays the amount for the selected fee structure.
16	Selected Fee Structure - Date	Label	M	1	Displays the date for the selected fee structure.
17	Selected Fee Structure - Payment Type	Label	M	1	Displays the payment type for the selected fee structure.
18	Number of Not Paid Students	Label	M	1	Displays the number of students who have not paid.
19	Total Collection Amount	Label	M	1	Displays the total collection amount and percentage.

3.4 screen-4: Exam Screen

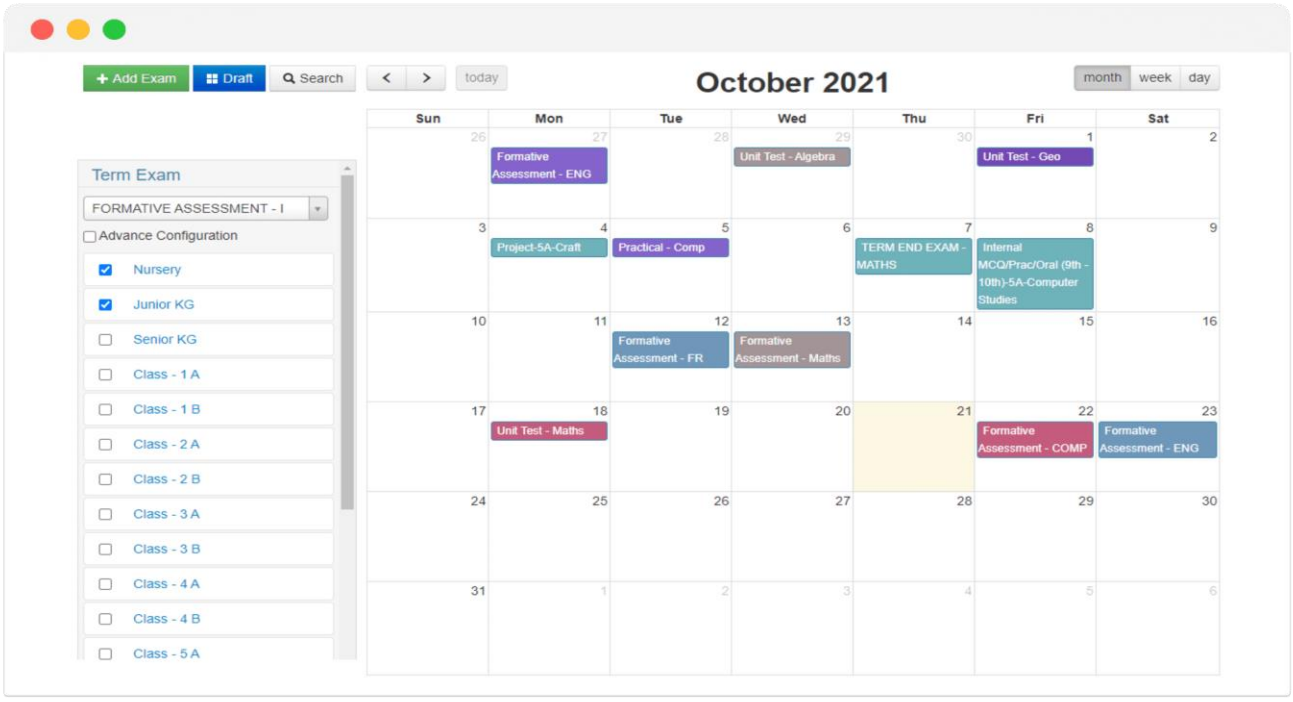

Figure 3.4-1 Screen-3: Exam Screen

Purpose: This screen will enable users to register for exams. The following information will be collected to ensure proper scheduling, tracking, and management of the exam process.

Table 3.4-1 Screen element of Fees Payment Screen

Sr	Screen Element	Input Type	O / M	1/ N	Description
1	Formative Assessment - ENG	Label	M	1	Formative Assessment - English on 27th September 2021
2	Unit Test - Algebra	Label	M	1	Unit Test - Algebra on 29th September 2021
3	Unit Test - Geo	Label	M	1	Unit Test - Geography on 1st October 2021
4	Project-5A-Craft	Label	M	1	Project for Class 5A - Craft on 4th October 2021
5	Practical - Comp	Label	M	1	Practical Exam - Computer on 5th October 2021
6	TERM END EXAM - MATHS	Label	M	1	Term End Exam - Mathematics on 6th October 2021
7	Internal MCQ/Prac/Oral	Label	M	1	Internal MCQ/Practical/Oral for Classes 9th-10th on 7th October 2021
8	Formative Assessment - FR	Label	M	1	Formative Assessment - French on 11th October 2021
9	Formative Assessment - Maths	Label	M	1	Formative Assessment - Mathematics on 12th October 2021
10	Unit Test - Maths	Label	M	1	Unit Test - Mathematics on 18th October 2021
11	Formative Assessment - COMP	Label	M	1	Formative Assessment - Computer on 21st October 2021
12	Formative Assessment - ENG	Label	M	1	Formative Assessment - English on 22nd October 2021

13	Nursery	Checkbox	M	1	Nursery class selected
14	Junior KG	Checkbox	M	1	Junior KG class selected

3.5 Screen-5 Attendance Analysis Screen

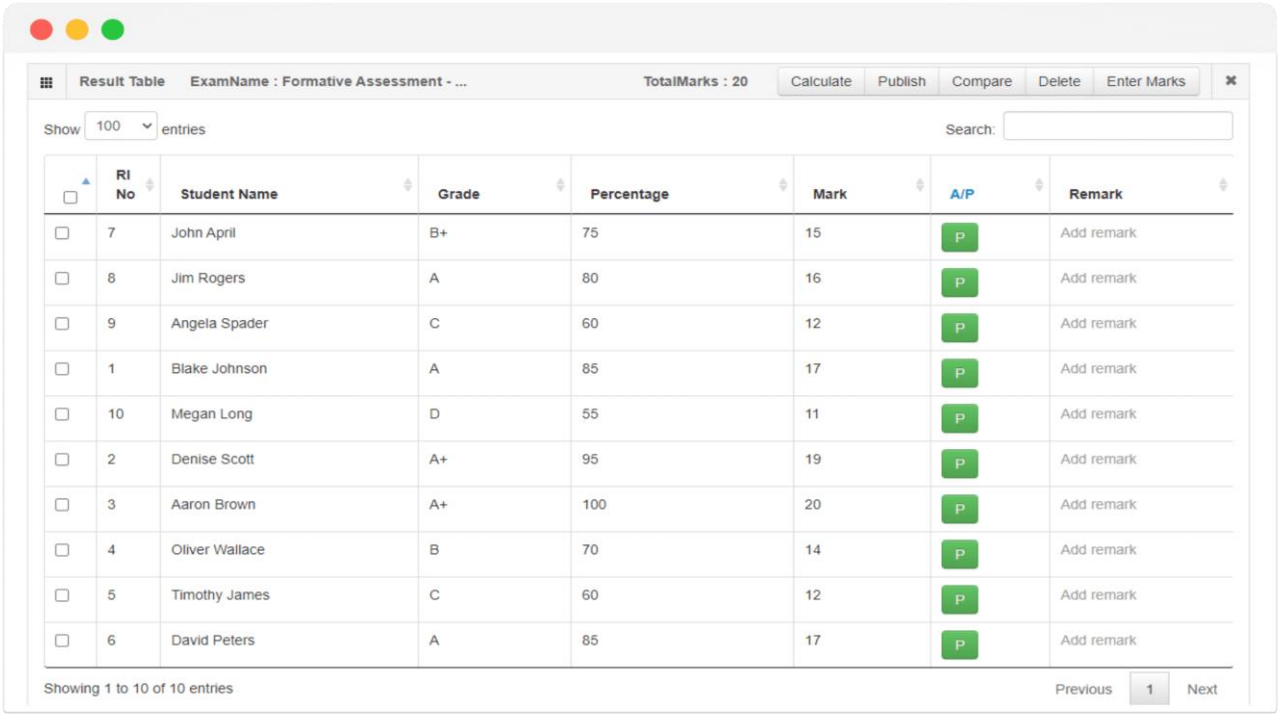

Figure 3.5-1 Screen-3: Exam Screen

Purpose: This screen will enable users to register for exams. The following information will be collected to ensure proper scheduling, tracking, and management of the exam process.

Table 3.5-1 Screen element of Fees Payment Screen

Sr	Screen Element	Input Type	O/M	1/N	Description
1	Exam Name : Formative Assessment	Label	M	1	Displays the name of the exam.
2	TotalMarks	Label	M	1	Displays the total marks for the exam.
3	Calculate	Button	M	1	Button to calculate marks.
4	Publish	Button	M	1	Button to publish the results.
5	Compare	Button	M	1	Button to compare results.
6	Delete	Button	M	1	Button to delete records.
7	Enter Marks	Button	M	1	Button to enter marks.
8	Search	TextBox	M	1	Input field to search students.
9	RI No	Label	M	1	Displays the roll number of the student.
10	Student Name	Label	M	1	Displays the name of the student.
11	Grade	Label	M	1	Displays the grade of the student.
12	Percentage	Label	M	1	Displays the percentage score of the student.
13	Mark	Label	M	1	Displays the mark of the student.
14	A/P	Label	M	1	Displays if the student is present or absent.
15	Remark	TextBox	M	1	Input field to add a remark for the student.
16	Entries Dropdown	Dropdown	M	1	Dropdown to select the number of entries to show.

4 Database design

4.1 List of Tables

- Student
- Course
- Transport
- Faculty
- Exam

Table 4.1-1 Student Table

Column	Data Type	Null	Keys & Constraints	Default Value & Description
StudentID	int	NN	PK (Auto Increment)	
FirstName	varchar(50)	NN		
LastName	varchar(50)	NN		
DateOfBirth	date	NN		
Gender	varchar(10)	AN	CHECK (Gender IN ('Male', 'Female', 'Other'))	
Address	text	AN		
PhoneNumber	varchar(15)	AN	UNIQUE	
Email	varchar(100)	AN	UNIQUE	
EnrollmentDate	date	NN		

Table 4.1-2 Course Table

Column	Data Type	Null	Keys & Constraints	Default Value & Description
CourseID	int	NN	PK (Auto Increment)	
CourseName	varchar(100)	NN	UNIQUE	
Description	text	AN		
Credits	int	NN	CHECK (Credits > 0)	
Department	varchar(50)	NN		

Table 4.1-3 Transport Table

Column	Data Type	Null	Keys & Constraints	Default Value & Description
TransportID	int	NN	PK (Auto Increment)	
VehicleNumber	varchar(20)	NN	UNIQUE	
DriverName	varchar(50)	NN		
DriverContact	varchar(15)	NN		
Route	text	NN		
Capacity	int	NN	CHECK (Capacity > 0)	
Schedule	text	NN		

Table 4.1-4 Faculty Table

Column	Data Type	Null	Keys & Constraints	Default Value & Description
FacultyID	int	NN	PK (Auto Increment)	
FirstName	varchar(50)	NN		
LastName	varchar(50)	NN		
DateOfBirth	date	NN		
Gender	varchar(10)	AN	CHECK (Gender IN ('Male', 'Female', 'Other'))	
Address	text	AN		
PhoneNumber	varchar(15)	AN	UNIQUE	
Email	varchar(100)	AN	UNIQUE	
HireDate	date	NN		
Department	varchar(50)	NN		

Table 4.1-5 Exam Table

Column	Data Type	Null	Keys & Constraints	Default Value & Description
ExamID	int	NN	PK (Auto Increment)	
CourseID	int	NN	FK (references Course(CourseID))	
ExamDate	date	NN		
StartTime	time	NN		
EndTime	time	NN		
Venue	varchar(100)	NN		

5 Stories and Scenario

5.1 Story-1: Add New Course

*Story # **S1***	:	**As an Administrator,** **I want to** add a new course to the university system **So that** students can enroll in the new course and faculty can manage it.
Priority	:	High
Estimate	:	XL
Reason	:	Adding new courses is crucial for expanding the academic offerings of the university and meeting the educational needs of students.

5.1.1 Scenario# S1.1

*Scenario# **S1.1***	:	Adding a New Course with Valid Information
Prerequisite	:	Administrator is logged in to the university management system.
Acceptance Criteria	:	**Given:** The Administrator is on the course management page. Valid course information, including course title, code, description, and credits, is entered. **When:** The administrator selects the "Add New Course" option and enters valid course details. The administrator clicks the "Save" button to add the course to the system. **Then:** The system successfully adds the course, and the administrator receives a confirmation message with the course details.

5.1.2 Scenario# S1.2

*Scenario# **S1.2***	:	Adding a New Course with Invalid Information
Prerequisite	:	Administrator is logged into the university management system.
Acceptance Criteria	:	**Given:** The administrator is on the course management page. Incomplete or incorrect course details are entered. **When:** The administrator selects the "Add New Course" option and clicks the "Save" button. **Then:** The system displays error messages for the incorrect or missing information, and the course is not added to the system.

5.1.3 Scenario# S1.3

*Scenario# **S1.3***	:	Attempting to Add a Duplicate Course
Prerequisite	:	Administrator is logged into the university management system and is on the course
Acceptance Criteria	:	**Given**: The course information, including title and code, already exists in the system. **When**: The administrator tries to add a course with the same title and code.

	Then: The system generates a unique identifier for the new course if needed, and provides a message indicating that a course with the same title and code already exists.

5.2 Story-2: Enroll Student in a Course

*Story # **S2***	:	**As a** Student**,** **I want to** enroll in a course, **So that** I can attend classes and earn credits.
Priority	**:**	High
Estimate	**:**	M
Reason	**:**	Course enrollment is a fundamental aspect of academic life, allowing students to participate in their chosen courses and progress through their studies.

5.2.1 Scenario # S2.1:

*Scenario# **S2.1***	**:**	Enrolling in a Course with Available Seats
Prerequisite	**:**	Student is logged in to the university management system.
Acceptance Criteria	**:**	**Given**: The student is on the course enrollment page, and the course has available seats. **When**: The student selects a course and clicks the "Enroll" button. **Then**: The system successfully enrolls the student in the course and provides a confirmation message with the enrollment details.

5.2.2 Scenario # S2.2:

*Scenario# **S2.2***	**:**	Enrolling in a Course with No Available Seats
Prerequisite	**:**	Student is logged in to the university management system.
Acceptance Criteria	**:**	**Given**: The student is on the course enrollment page, and the course is fully booked. **When**: The student selects the course and clicks the "Enroll" button. **Then**: The system displays a message indicating that the course is full and enrollment cannot be completed.

5.3 Story-3: Manage The Student Grade as Faculty

*Story # **S3***	**:**	**As** Faculty Member, **I want** to manage and update student grades **So that** So that I can accurately reflect students' academic performance.
Priority	**:**	High
Estimate	**:**	M
Reason	**:**	Accurate management of student grades is essential for tracking academic progress and ensuring that students receive fair evaluations.

5.3.1 Scenario # S3.1:

*Scenario# **S3.1***	:	Updating Grades for a Student
Prerequisite	:	Faculty member is logged in to the university management system and has access to grading.
Acceptance Criteria	:	**Given**: The faculty member is on the grade management page, and valid grades are available. **When**: The faculty member selects a student and enters the new grade. The faculty member clicks the "Save" button to update the grade. **Then**: The system successfully updates the student's grade and provides a confirmation message.

5.3.2 Scenario # S3.2:

*Scenario# **S3.2***	:	Updating Grades with Invalid Information
Prerequisite	:	Faculty member is logged in to the university management system.
Acceptance Criteria	:	**Given**: The faculty member is on the grade management page and enters invalid grade information. **When**: The faculty member clicks the "Save" button. **Then**: The system displays an error message for the invalid grade and does not update the grade.

5.4 Story-4: Generate Student Transcript

*Story # **S4***	:	**As** Student, **I want** to generate a transcript of my academic records **So that** I can provide proof of my academic achievements to potential employers or institutions.
Priority	:	Medium
Estimate	:	M
Reason	:	Generating transcripts is important for students who need to provide evidence of their academic history for job applications or further education.

5.4.1 Scenario # S4.1:

*Scenario# **S4.1***	:	Generating a Transcript with Complete Records
Prerequisite	:	Student is logged in to the university management system and has completed all required courses.
Acceptance Criteria	:	**Given**: The student is on the transcript generation page. **When**: The student requests to generate a transcript. **Then**: The system generates the transcript with complete academic records and provides a downloadable PDF with all course grades and credits.

5.4.2 Scenario # S4.2:

*Scenario# **S4.2***	:	Generating a Transcript with Missing Records

Prerequisite	**:**	Student is logged in to the university management system.
Acceptance Criteria	**:**	**Given**: The student has incomplete course records or pending grades. **When**: The student requests to generate a transcript. **Then**: The system generates a transcript with a note about the missing or pending records and provides a downloadable PDF.

5.5 Story-5: Schedule University Events

*Story # **S5***	**:**	**As an** Event Coordinator,, **I want** I want to schedule university events **So that** students, faculty, and staff can participate and stay informed about upcoming activities.
Priority	**:**	Medium
Estimate	**:**	L
Reason	**:**	Scheduling and managing university events is essential for fostering community engagement and keeping everyone informed about important activities.

5.5.1 Scenario # S5.1:

*Scenario# **S5.1***	**:**	Scheduling a New Event
Prerequisite	**:**	Event Coordinator is logged in to the university management system.
Acceptance Criteria	**:**	**Given**: The event coordinator is on the event scheduling page and has valid event details. **When**: The event coordinator enters the event details, including date, time, location, and description. The coordinator clicks the "Save" button to schedule the event. **Then**: The system successfully schedules the event and sends notifications to relevant participants.

5.5.2 Scenario # S5.2:

*Scenario# **S5.2***	**:**	Scheduling an Event with Conflicting Dates
Prerequisite	**:**	Student is logged in to the university management system.
Acceptance Criteria	**:**	**Given**: The event coordinator is on the event scheduling page, and the proposed date/time conflicts with another scheduled event. **When**: The event coordinator enters conflicting event details and clicks the "Save" button. **Then**: The system displays a conflict warning and prompts the coordinator to choose a different date/time or resolve the conflict.

6 Test cases

Project Name:	**University Management System**	**Test Designed by:**	**Krishirajsinh vansia**
Module Name:	**Course Enrollment**	**Test Designed date:**	15-08-2024
Release Version:	**1.0**	**Test Executed by:**	**R. B. Gondaliya**
		Test Execution date:	15-09-2024

Pre-condition: **Web application should be accessible**				
Test Case ID	**Test Title**	**Test Type**	**Description**	**Test Case ID**
TC_001	Login to web application with valid credential	Functional	Login to University management system web application through valid credential	TC_001
TC_002	Login to web application with invalid credential	Functional	Login to University management system web application through invalid credential	TC_002
TC_003	Verify login page elements	GUI	verify that all elements are available on login page	TC_003
TC_004	Reset Password with Valid Email	Functional	Helps to reset the email with valid credentials	TC_004

Test Case Title	Login to web application with valid credential
Test Type	Functional
Test Priority	High
Pre-condition	Web application should be accessible

Test Step	Test Case Description	Expected Result	Actual Result	Status	Comment	Data	BUG ID
1	Access Web application URL	The site launched properly	Site launched successfully	Pass		https://accounts.google.com/ServiceLogin	
2	Enter valid Username in username field	Username field should be editable and accept the Username	Username input accepted	Pass		Username: kv@gmail.com	
3	Enter valid Password in Password field	Password field should be editable and accept the password and display as star or dot	Password input displayed in dot and accepted	pass		Password: kv@1991	
4	Enter valid captcha code in captch field	Captch field should editable and accept captcha	Captcha input accepted	Pass	Step required when human action	get captcha from image which is near by captcha field	

		and captcha is case sensitive			validation perform		
5	Click on login button	User should login into site and navigated to dashboard	User navigated to dashboard and username should br display in top of the right side.	pass			

Test Case Title	Login to web application with invalid credential
Test Type	Functional
Test Priority	Medium
Pre-condition	Web application should be accessible

Test Step	Test Case Description	Expected Result	Actual Result	Status	Comment	Data	Bug ID
1	Verify that User is not able to Login with invalid Username and invalid Password	Should be display an error message enter wrong username or password	Display an error of wrong username and password	Pass			
2	Verify that User is not able to Login with Valid Username and invalid Password	Should be display an error message enter wrong password	Display an error of wrong password	Pass			
3	Verify that User is not able to Login with	Should be display an error message	Display an error Username not found	Pass			

	invalid Username and Valid Password	User not found					
4	Verify that User is not able to Login with blank Username or Password	Set required field validation message for Username and Password	Display an error of wrong username and password	Fail	Not performing validation function fixes it		Bug_002

Test Case Title	Verify login page elements
Test Type	GUI
Test Priority	Medium
Pre-condition	Web application should be accessible

Test Step	Test Case Description	Expected Result	Actual Result	Status	Comment	Data	Bug ID
1	Launch application with the given URL	The site launched properly	Site launched successfully	Pass		https://accounts.google.com/ServiceLogin	
2	Verify that the login screen contains elements such as Username, Password, Sign in button, remember password check box, Forgot password link, and Create an account link.	All listed control displayed properly on the page	Login page loaded successfully	Pass			

3	Verify that cursor is focused on "Username" text box on the page load	Cursor is focused on Username textbox	Cursors focus in Username textbox	Pass			
4	Verify that tab functionality is working properly or not	When tab pressed cursor moves in next control	Cursor moving in next control	Pass			
5	Verify that all the fields such as Username, Password has a valid placeholder	All text fields have proper placeholder	All text fields have proper placeholder	Pass			
6	Verify that the labels float upward when the text field is in focus or filled (In case of floating label)	When field is focused or filled, label display on top of the filled	When field is focus or filled, label display on top of the filled	Pass	step required when fields with floating label		
7	verify that forgot password link working properly	when click on forgot password load forgot password page	forgot password link not working	Fail			

Test Case Title	Reset Password with Valid Email
Test Type	Functional
Test Priority	Medium
Pre-condition	Web application should be accessible, and the user should have a valid account.

Step	Test Case Description	Expected Result	Actual Result	Status	Comment	Data	BUG ID
1	Click on Forgot Password link	Forgot password page should load properly	Pass				
2	Enter valid registered email and click "Reset"	The system should send a password reset link to email	Pass		Email: kv@gmail.com		
3	Verify reset link received in email	A password reset email should be received	Pass				
4	Click on reset link and set new password	The system should allow setting a new password	Pass				
5	Login using new password	Login should be successful with the newly set password	Pass				

7 References

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