Al Alamein International University

Faculty of Computer

Science & Engineering

Software Engineering

Course Code: CSE251

University Management System

Report 2

Project Manager:

Adham Ayman Farouk Ibrahim – 21100782

Team Members:

Mazen Mohamed elsayed – 21100912

Abdelrahman Mohamed Abdelaziz – 21100799

Ahmed Mokhtar Mokhtar - 21100781

Ahmed Mohamed Mahdi – 21100822

DR. Islam Elgedawy

Functional User & System Requirements:

1. Student Management System:
    - Ability to create and manage student profiles, including personal information and academic records.
    - Ability to enroll students in courses and manage their course schedules.
    - Ability to track attendance, grades, and performance for each student.
    - Ability to generate reports on student progress and performance.
    - Ability to communicate with students through messaging or notification features.
2. Faculty Management System:
    - Ability to create and manage faculty profiles, including personal information and teaching credentials.
    - Ability to assign faculty to courses and manage their teaching schedules.
    - Ability to track faculty performance and evaluations.
    - Ability to generate reports on faculty workload and performance.
    - Ability to communicate with faculty through messaging or notification features.
3. Course Management System:
    - Ability to create and manage course catalogs, including course descriptions and prerequisites.
    - Ability to assign faculty to courses and manage course schedules.
    - Ability to track course enrollment and waitlists.
    - Ability to generate reports on course availability and demand.
    - Ability to communicate with students and faculty regarding course updates and changes.
4. Exam Management System:
    - Ability to create and manage exam schedules and locations.
    - Ability to track student registration and eligibility for exams.
    - Ability to generate exam reports and statistics.
    - Ability to communicate with students and faculty regarding exam updates and changes.
5. Fee Management System:
    - Ability for students to view their fees.
    - Ability for students to make online payments.
    - Ability for the system to automatically calculate fees.
    - Ability for the system to notify students of any outstanding fees.
6. Library Management System:
    - Ability for librarians to add or remove books from the library database.
    - Ability for librarians to track books checked out by students.
    - Ability for students to search for books in the library database.
    - Ability for students to request books to be checked out.

7. Housing Management System:
    - Ability for students to apply for housing.
    - Ability for housing administrators to approve or deny housing applications.
    - Ability for students to view their housing assignments.
    - Ability for students to report any housing issues to housing administrators.
8. Transportation Management System:
    - Ability for students to apply for transportation services.
    - Ability for transportation administrators to approve or deny transportation requests.
    - Ability for students to view their transportation schedules.
    - Ability for students to report any transportation issues to transportation administrators.

Non-Functional User & System Requirements:

1. The system must be available 24/7, with no planned downtime exceeding 1 hour per month and no unplanned downtime exceeding 30 minutes per month.
2. The system must be designed to protect the privacy of users, with all data encrypted in transit and at rest, and no personal identifiable information shared with third parties without user consent.
3. The system must be highly secure, with all servers and endpoints regularly patched and monitored for vulnerabilities, and all user authentication and authorization mechanisms robustly implemented and tested.
4. The system should offer all required functions to the user, with no more than 2 clicks required to access any function.
5. The system must have a response time of under 5 seconds for all user requests, with no more than 1 second required for page load times.
6. The system screen refresh time should be less than 3 seconds, with no more than 1 second required for data updates.
7. The system must have mechanisms in place to prevent unauthorized access and ensure data integrity, with strict access controls, audit logs, and tamper-evident measures implemented.
8. The system should be compatible with a wide range of devices and platforms such as PCs, smartphones, and tablets, with no more than 2% of users reporting compatibility issues.
9. The system should be easy to maintain and update, with clear documentation and well-organized code, and no more than 4 hours of scheduled maintenance per month.
10. The system should be optimized to consume minimal computing resources and energy, with no more than 75% CPU utilization or 85% memory utilization at any time.
11. The probability of events leading to failure shouldn't be higher than 95%, with regular stress testing and load testing conducted to validate system reliability.

12. The system should handle errors, provide error messages to users, and log errors, with no more than 0.5% of user requests resulting in errors.
13. The system must have a backup and recovery plan to ensure that data can be restored in the event of a system failure, with all backups securely stored offsite and tested for recoverability at least once per quarter.
14. The system should be designed to allow for future upgrades, with all code and database changes tested in a staging environment before being deployed to production.
15. The probability of non-availability shouldn't be higher than 99.9%, with all critical system components having redundant failover mechanisms in place.
16. The system should be scalable to handle an increase in user traffic and data volume, with load balancers and auto-scaling groups configured to automatically adjust resources as needed.
17. The system should have a user-friendly interface that is easy to navigate and understand, with no more than 10% of users reporting difficulty using the system.
18. The system should be designed with accessibility in mind, including features for users with disabilities, with compliance to WCAG 2.1 AA standard.
19. The system should have a comprehensive user manual and online help resources, with all documentation regularly reviewed and updated.
20. The system should have a reliable and secure authentication and authorization system, with no more than 0.1% of user accounts compromised or hacked.
21. The system should be compliant with relevant data protection and privacy laws and regulations, including GDPR, CCPA, and HIPAA.
22. The system should have robust data backup and disaster recovery mechanisms in place, with no more than 1% of data loss in the event of a disaster.

Test Requirements:

1. Mange Student information:
    1.1. Verify that a new student can be added to the system.
    1.2. Verify that a student can be updated with new information.
    1.3. Verify that a student can be removed from the system.
    1.4. Verify that a specific student can be retrieved from the system by their ID.
    1.5. Verify that a list of all students can be retrieved from the system.
2. Mange Faculty Information:
    2.1. Verify that a new faculty member can be added to the system.
    2.2. Verify that a faculty member can be updated with new information.
    2.3. Verify that a faculty member can be removed from the system.
    2.4. Verify that a specific faculty member can be retrieved from the system by their ID.

2.5. Verify that a list of all faculty members can be retrieved from the system.

3. Mange courses:
   3.1. Verify that a new admission can be created in the system.
   3.2. Verify that an existing admission can be updated with new information.
   3.3. Verify that a specific admission can be retrieved from the system by its ID.
   3.4. Verify that a list of all admissions can be retrieved from the system.
   3.5. Verify that a list of admissions can be retrieved based on their status (e.g. accepted, rejected, pending).
   3.6. Verify that a list of admissions can be retrieved based on the program they are applying to.
4. Examination Management System:
   4.1. Verify that a new exam can be scheduled in the system.
   4.2. Verify that a student can be registered for an exam.
   4.3. Verify that an exam can be graded.
   4.4. Verify that a list of exam schedules can be retrieved based on the course they are associated with.
   4.5. Verify that a list of exam results can be retrieved for a specific student.
5. Mange Books:
   5.1. Verify that a new book can be added to the system.
   5.2. Verify that a book can be updated with new information.
   5.3. Verify that a book can be removed from the system.
   5.4. Verify that a specific book can be retrieved from the system by its ID.
   5.5. Verify that a list of all books can be retrieved from the system.
   5.6. Verify that books can be searched by title, author, and category.
6. Mange room:
   6.1. Verify that a new room can be added to the system.
   6.2. Verify that a room can be updated with new information.
   6.3. Verify that a room can be removed from the system.
   6.4. Verify that a specific room can be retrieved from the system by its ID.
   6.5. Verify that a list of all rooms can be retrieved from the system.
   6.6. Verify that rooms can be searched by type.
   6.7. Verify that a student can be allocated to a room.
   6.8. Verify that hostel fee can be collected for a specific student.
   6.9. Verify that a hostel receipt can be generated for a specific student.
   6.10. Verify that a list of hostel fee payments can be retrieved for a specific student.

System Rules:

1. Student Registration: In addition to meeting academic requirements, students may also need to provide proof of identity, residency, and other personal information to register for courses. The registration process may involve online forms, in-person meetings, or other methods of communication.

2. Course Enrollment: Prerequisites for courses may include completing certain prerequisite courses, achieving a minimum grade point average (GPA), or obtaining approval from the instructor or department head. Course enrollment may be limited based on factors such as class size, availability of resources, or priority for certain student populations.

3. Course Offerings: The university may use a variety of methods to determine course offerings, including student demand, faculty availability, and budget constraints. Course schedules may be adjusted based on factors such as student feedback, changes to faculty availability, or unforeseen circumstances such as natural disasters or public health emergencies.

4. Grading: The university may use a variety of grading scales depending on the course and department. Grades may be based on a combination of factors such as examinations, assignments, participation, and attendance. Students may have the opportunity to appeal grades through established procedures such as grade appeals committees or academic ombudsman offices.

5. Academic Policies: Academic policies may cover a wide range of topics, including academic honesty, plagiarism, grading, attendance, and classroom behavior. Such policies may be outlined in a student handbook, course syllabus, or other official documents. Students may be required to sign a code of conduct or other agreement acknowledging their understanding of these policies.

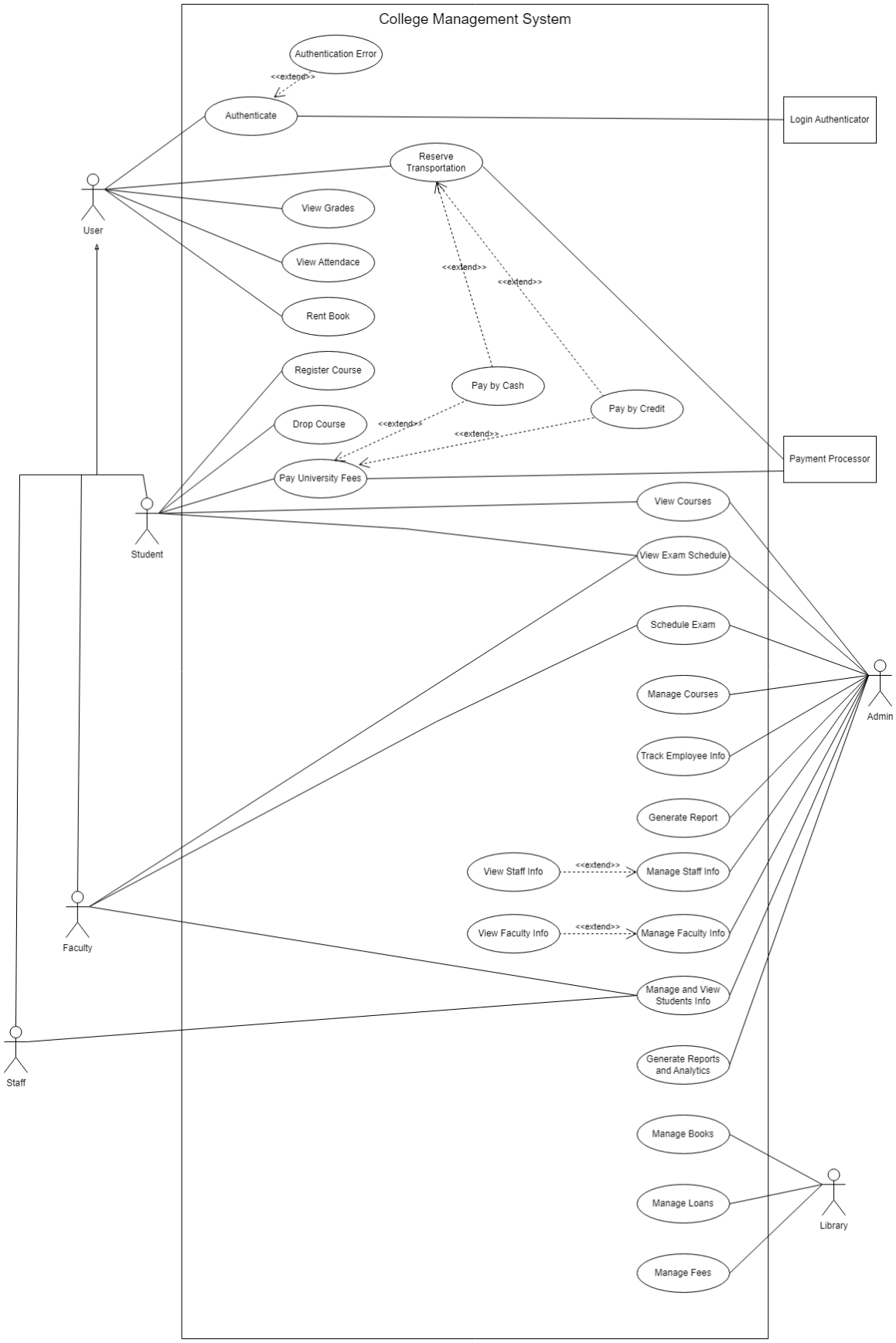
6. Student Records: Student records may contain a wide range of information, including academic transcripts, personal information, financial aid records, and disciplinary records. Access to these records may be limited to authorized personnel such as academic advisors or financial aid officers. Students may be required to provide identification or other proof of identity to access their own records.

7. Financial Aid: Financial aid policies may cover a wide range of topics, including eligibility requirements, application procedures, disbursement schedules, and repayment options. Financial aid may be available in the form of grants, loans, or work-study programs. Students may be required to maintain a minimum GPA or credit load to remain eligible for financial aid.

8. Admissions: Admissions policies may cover a wide range of topics, including application deadlines, eligibility requirements, and selection criteria. The university may use a variety of methods to evaluate applicants, including standardized test scores, interviews, and essays. The admissions process may involve multiple rounds of review and decision-making.

9. Academic Support: Academic support services may include tutoring, counseling, disability services, and other resources to help students succeed academically. These services may be provided by a dedicated office or department or integrated into individual courses or academic programs. Students may be required to seek approval or provide documentation to access certain services.

10. Student Conduct: Student conduct policies may cover a wide range of topics, including academic honesty, harassment, discrimination, and drug and alcohol use. Violations of the student conduct code may result in a variety of consequences, including warning, probation, suspension, or expulsion. The university may use a variety of methods to investigate and adjudicate potential violations, including hearings, investigations, and appeals processes.


College Management System
Authentication Error
<<extend>>
Authenticate
Login Authenticator
Reserve Transportation
User
View Grades
View Attendace
Rent Book
<<extend>>
<<extend>>
Register Course
Pay by Cash
Pay by Credit
Drop Course
<<extend>>
<<extend>>
Pay University Fees
Payment Processor
Student
View Courses
View Exam Schedule
Schedule Exam
Admin
Manage Courses
Track Employee Info
Generate Report
View Staff Info
<<extend>>
Manage Staff Info
Faculty
View Faculty Info
<<extend>>
Manage Faculty Info
Manage and View Students Info
Staff
Generate Reports and Analytics
Manage Books
Manage Loans
Library
Manage Fees

Use Case:	Generate Reports
Goal:	Generate Students' and User's reports, including but not limited to; Attendance, GPA, CGPA, Fees Report, Employee report etc..
Preconditions:	User must be authenticated on the System.
Success End Condition:	User generates the needed report.
Primary Actor:	User.
Secondary Actor:	Bank.
Trigger:	User is generating a report.

Use Case:	Manage Courses
Goal:	User and Staff are able to Add, Edit and Delete courses.
Preconditions:	User must be authenticated on the System.
Success End Condition:	Course(s) are managed.
Primary Actor:	User.
Secondary Actor:	
Trigger:	User is trying to manage a course or their courses.

Use Case:	Track Employee.
Goal:	Track Employee's Information.
Preconditions:	Staff member must be Authenticated on the System.
Success End Condition:	Employee's need is displayed.
Primary Actor:	Staff.
Secondary Actor:	
Trigger:	Staff Members wants to track their info.

Use Case:	Register Course
Goal:	Course is registered.
Preconditions:	User must be authenticated on the system, and not pass his credit hour requirements.
Success End Condition:	Course is registered Successfully.
Primary Actor:	User.
Secondary Actor:	Student.
Trigger:	User is trying to register a course.

Use Case:	Pay University Fees
Goal:	Pay the University Fees.
Preconditions:	User must be authenticated on the system and must have enough money in payment method.
Success End Condition:	Fees are paid.
Primary Actor:	Student.
Secondary Actor:	Payment Processor.
Trigger:	User is trying to pay the University Fees.

A	Student Management System:	• Student profile management • Student attendance tracking • Student grade management • Course registration and scheduling • Fee payment processing • Communication with faculty and advisors	• Student getStudentProfile(int studentId); • void updateStudentProfile(int studentId, Student student); • void trackAttendance(int studentId, Attendance attendance); • void submitGrades(int facultyId, int courseId, List<StudentGrade> grades); • void registerForCourse(int studentId, int courseId); • List<Course> getCourseSchedule(int studentId); • void processFeePayment(int studentId, FeePayment feePayment); • void communicateWithFaculty(int studentId, int facultyId, String message);
B	Faculty Management System:	• Faculty profile management • Course management and scheduling • Grade submission • Research output tracking • Time off requests • Communication with administrators and students	• void updateFacultyProfile(int facultyId, Faculty faculty); • void manageCourse(int facultyId, Course course); • void submitGrades(int facultyId, int courseId, List<StudentGrade> grades); • void trackResearchOutput(int facultyId, ResearchOutput researchOutput); • void requestTimeOff(int facultyId, TimeOffRequest timeOffRequest); • void communicateWithAdmin(int facultyId, int adminId, String message); • void communicateWithStudents(int facultyId, List<Integer> studentIds, String message);
C	Course Management System:	• Course scheduling and management • Course material management • Enrollment tracking and management • Attendance tracking and reporting • Grade tracking and reporting • Communication with faculty and students	• void manageCourse(Course course); • void scheduleCourse(int courseId, List<Session> sessions); • void manageCourseMaterials(int courseId, List<CourseMaterial> materials); • void enrollStudent(int studentId, int courseId); • void trackAttendance(int courseId, Attendance attendance); • void submitGrades(int facultyId, int courseId, List<StudentGrade> grades); • List<Student> getEnrolledStudents(int courseId);
D	Exam Management System:	• Exam scheduling and management • Exam material management • Exam grading and reporting • Communication with faculty and students	• void scheduleExam(int courseId, Date examDate); • void manageExamMaterials(int courseId, List<ExamMaterial> materials); • void gradeExam(int facultyId, int courseId, Exam exam); • List<Exam> getExamSchedule(int courseId);
E	Fee Management System:	• Fee collection and payment processing • Fee tracking and reporting • Communication with students regarding fees and payments	• void collectFee(int studentId, Fee fee); • void trackFee(int studentId); • void communicateWithStudents(int adminId, List<Integer> studentIds, String message);

F	Library Management System:	• Library material management and inventory tracking • Loan management and tracking • Patron management and communication • Analytics and reporting on library usage and materials	• void addMaterial(Material material); • void removeMaterial(int materialId); • void checkoutMaterial(int patronId, int materialId); • void checkinMaterial(int patronId, int materialId); • List<Material> searchMaterials(String query); • List<Patron> getPatrons(int materialId);
G	Housing Management System:	• Housing application and assignment management • Occupancy tracking and management • Housing fee collection and reporting • Communication with students regarding housing options	• void applyForHousing(int studentId, HousingApplication application); • void assignHousing(int adminId, int studentId, Housing housing); • void trackOccupancy(int housingId); • void collectHousingFee(int studentId, HousingFee fee);
H	Transportation Management System:	• Transportation scheduling and management • Transportation vehicle maintenance tracking • Transportation usage tracking and reporting • Communication with transportation users	• void scheduleTransportation(int courseId, List<Session> sessions); • void manageTransportationVehicles(List<Vehicle> vehicles); • void trackTransportationUsage(int courseId); • void communicateWithTransportationUsers(int adminId, List<Integer> userIDs, String message);

Interface 1: Manage Student Information
public void getStudentInformation();
public void setStudentGPA();
public void setStudentAttendance();

Interface 2: Courses
public void manageCourse(Course course);
public void dropCourse(Coures course);
public void registerCourse(Course course);

Interface 3: Exam
public void getExamLocation(Exam exam);
public void getExamReport(Exam exam);

Interface 4: Books
public void loanBook(Book book);
public void buyBook(Book book);

Interface 5:Bus
public void bookTransportation(Bus bus);

Interface 6: Housing
public void bookRoom(Room room);
public void cancelRoom(Room room);

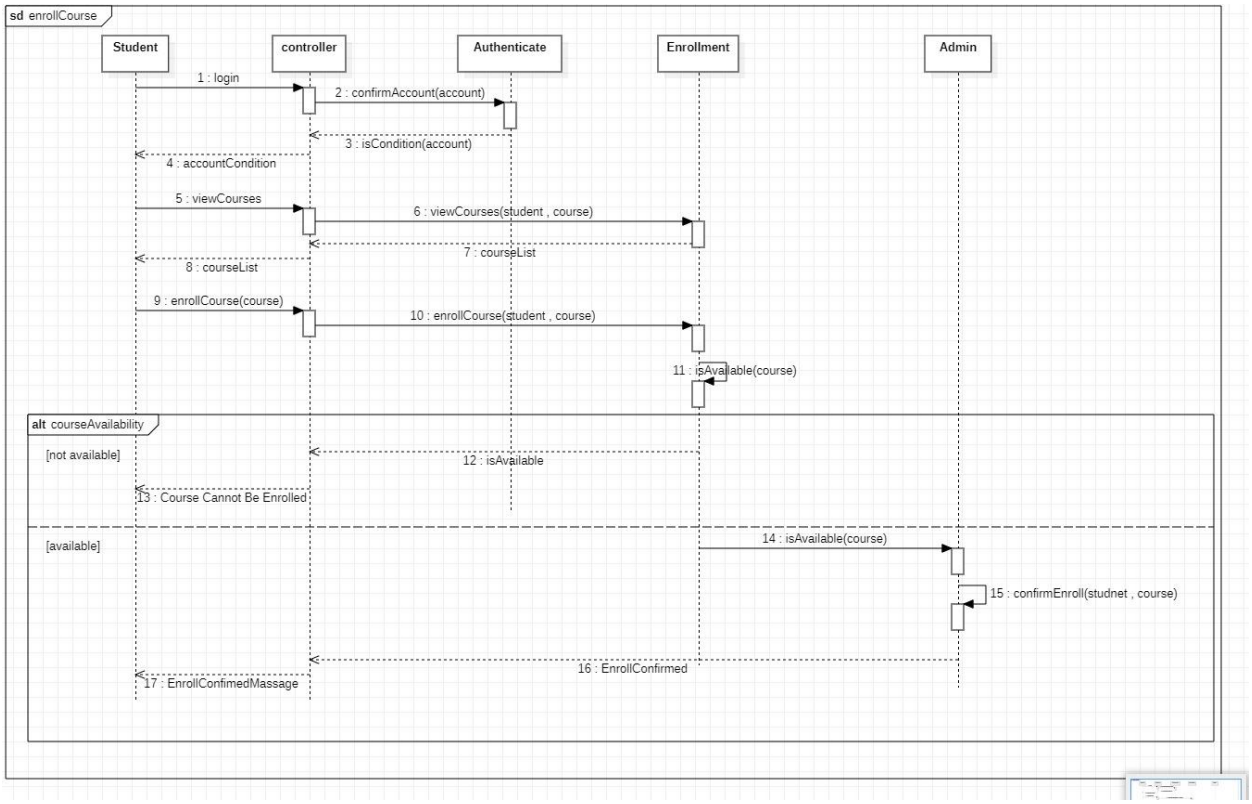
Interface 7: Student
public void addStudent(Student student);
public void deleteStudent(Student student);

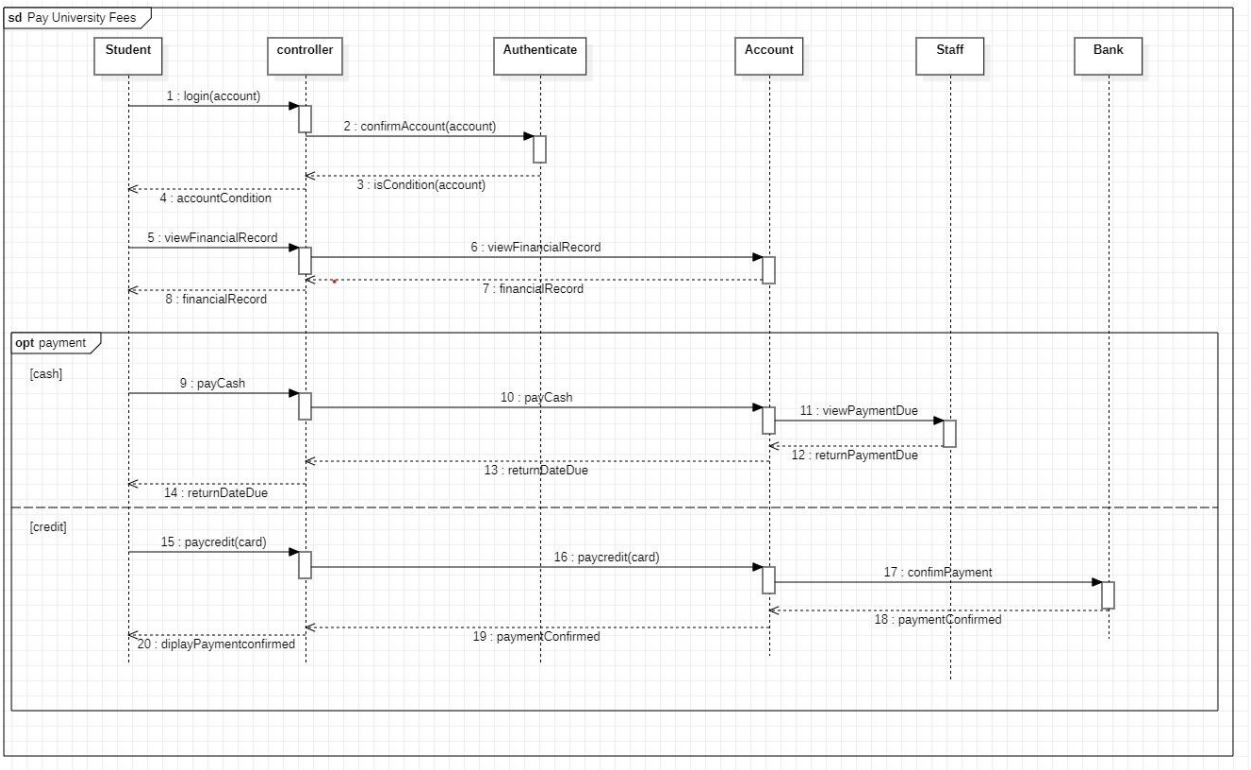
Interface 8: Course
public void deleteCourse(Course course);
public void addCourse(Course course);

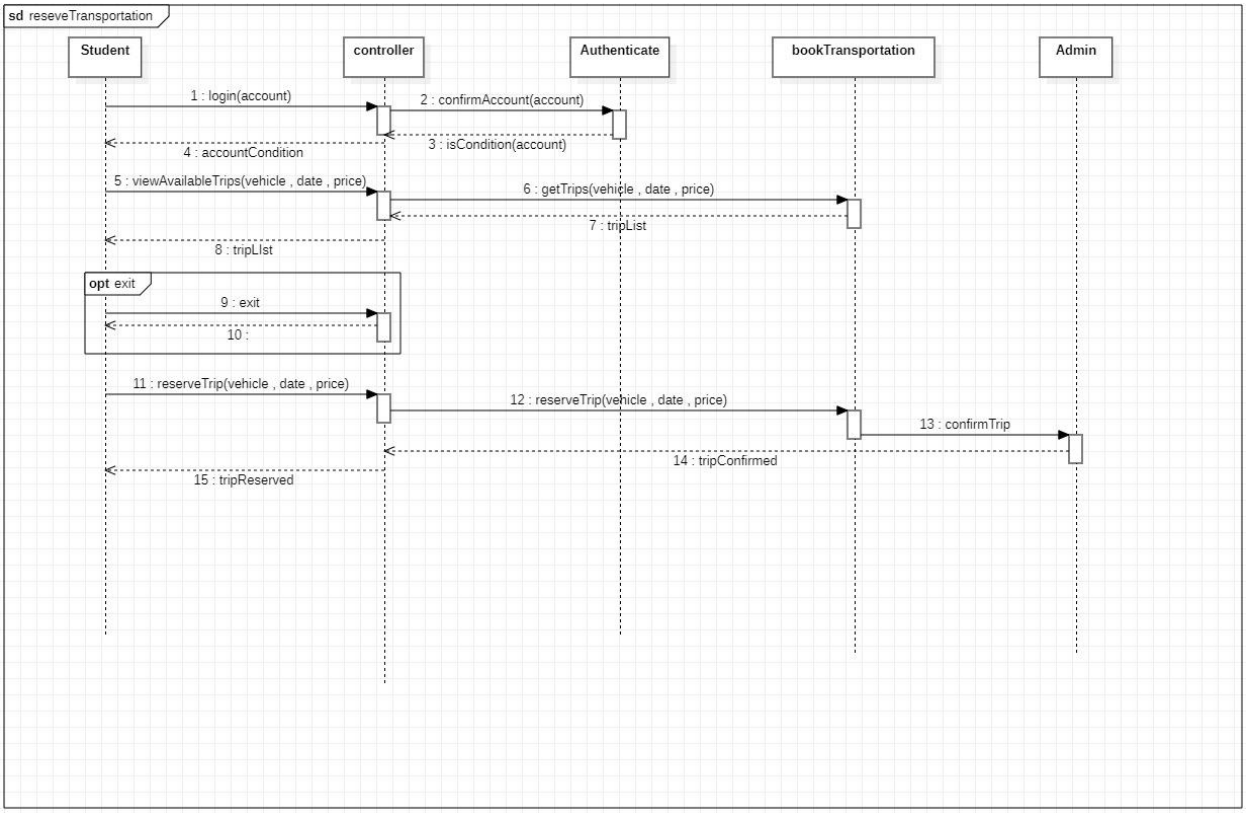
Interface 9: Exam
public void addExam(Exam exam);
public void deleteExam(Exam exam);

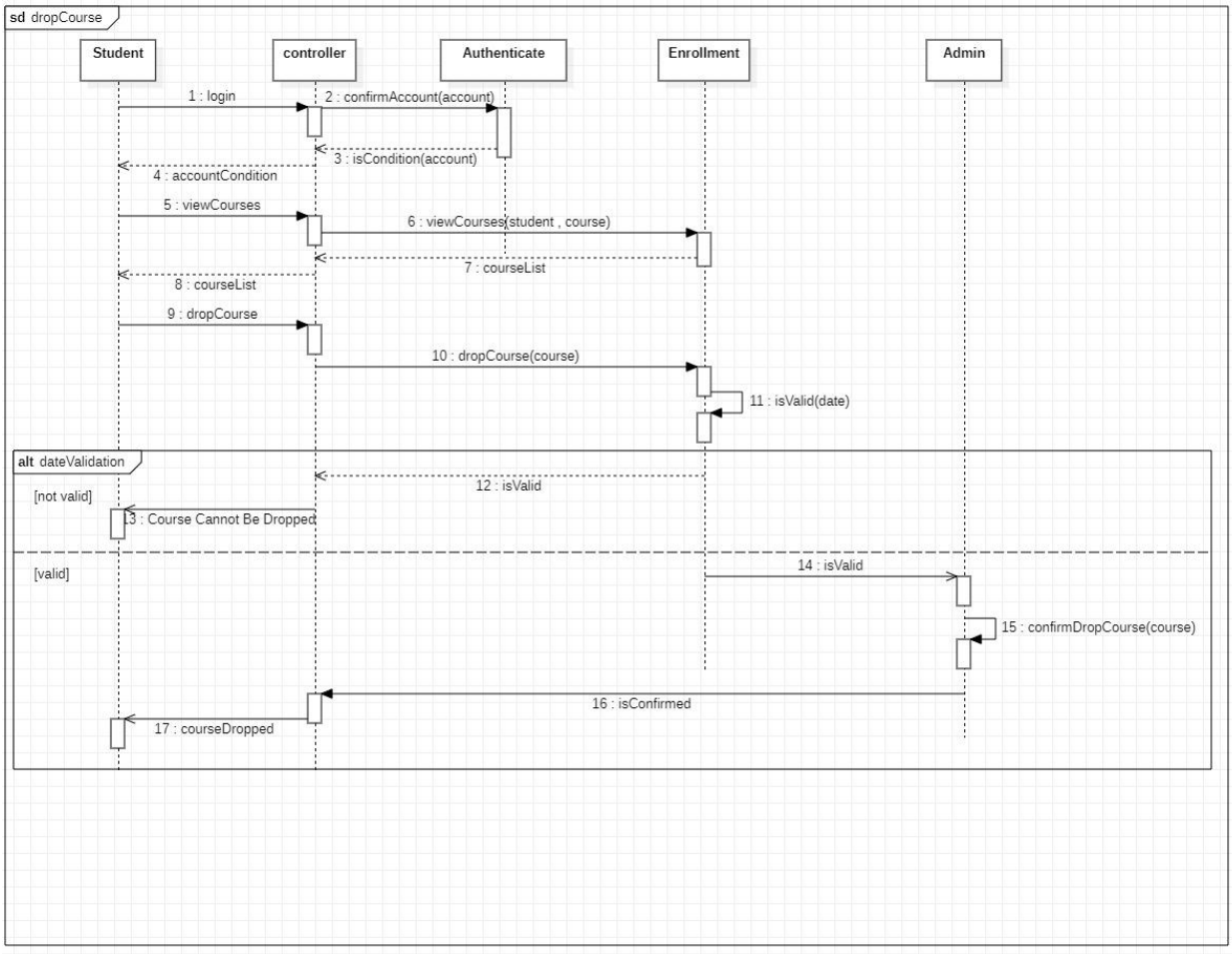
Interface 10: Book
public void addBook(Book book);
public void deleteBook(Book book);

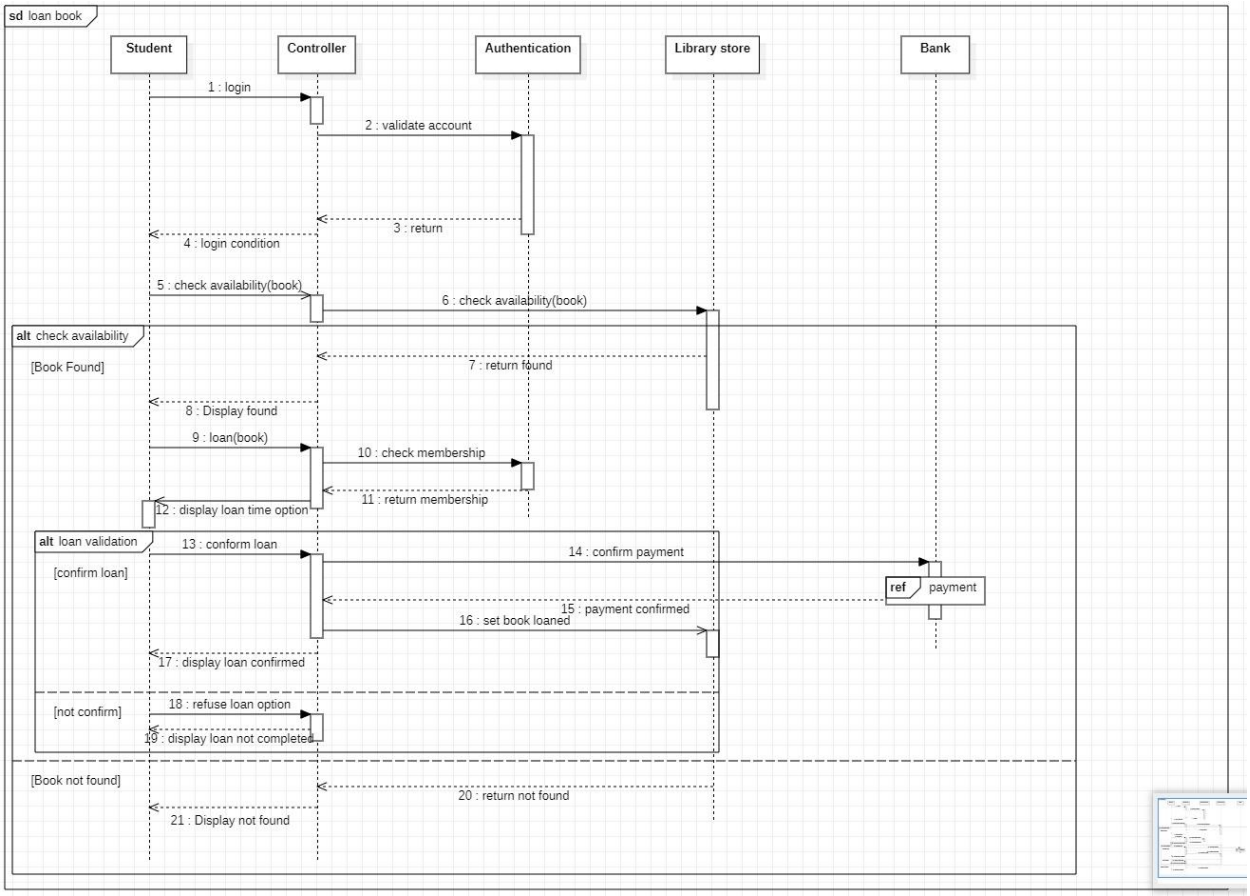
Sequence Diagram:



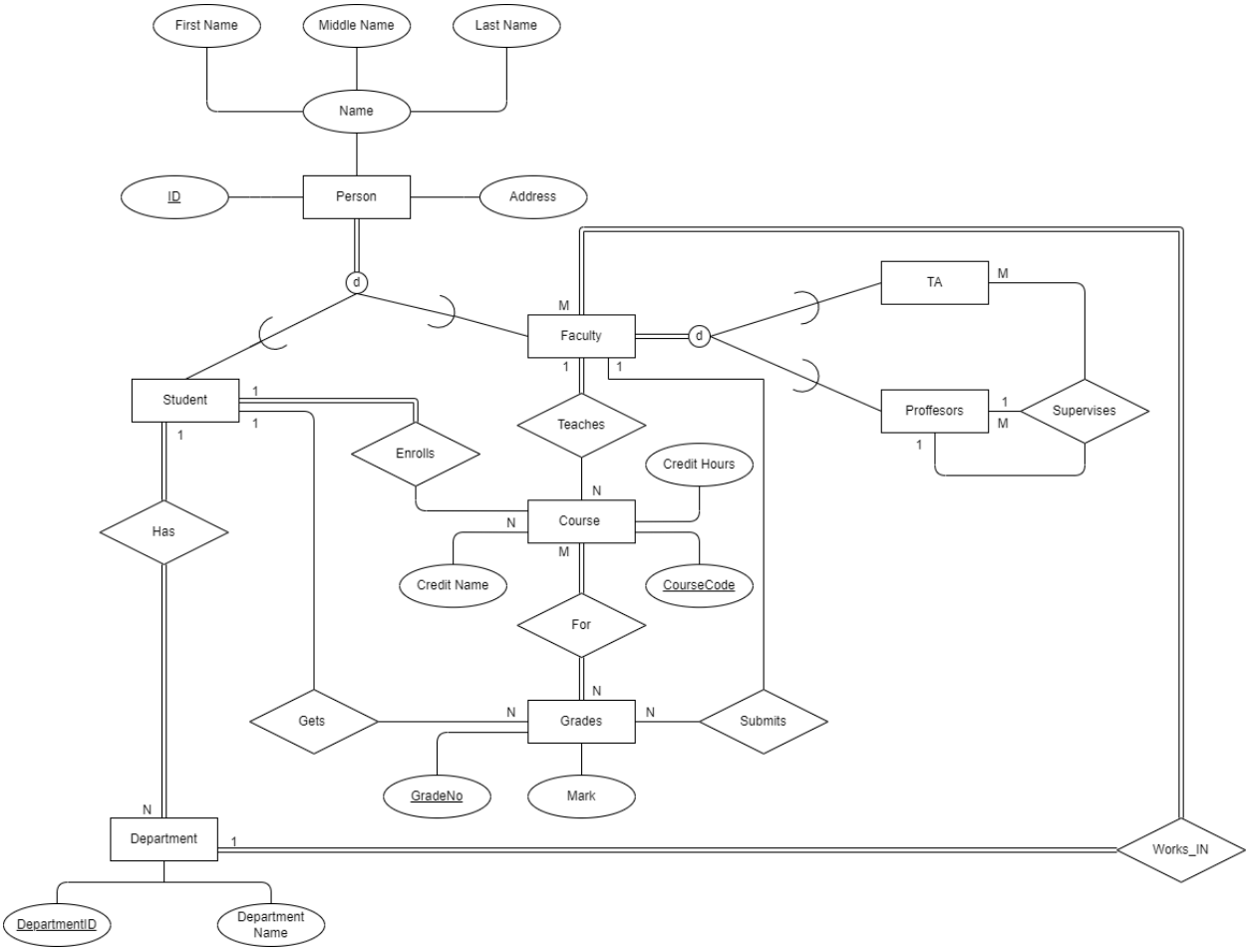



sd reseveTransportation
Student
controller
Authenticate
bookTransportation
Admin
1 : login(account)
2 : confirmAccount(account)
3 : isCondition(account)
4 : accountCondition
5 : viewAvailableTrips(vehicle , date , price)
6 : getTrips(vehicle , date , price)
7 : tripList
8 : tripLIst
opt exit
9 : exit
10 :
11 : reserveTrip(vehicle , date , price)
12 : reserveTrip(vehicle , date , price)
13 : confirmTrip
14 : tripConfirmed
15 : tripReserved


sd dropCourse
Student
controller
Authenticate
Enrollment
Admin
1 : login
2 : confirmAccount(account)
3 : isCondition(account)
4 : accountCondition
5 : viewCourses
6 : viewCourses(student , course)
7 : courseList
8 : courseList
9 : dropCourse
10 : dropCourse(course)
11 : isValid(date)
alt dateValidation
12 : isValid
[not valid]
13 : Course Cannot Be Dropped
[valid]
14 : isValid
15 : confirmDropCourse(course)
16 : isConfirmed
17 : courseDropped


sd loan book
Student
Controller
Authentication
Library store
Bank
1 : login
2 : validate account
3 : return
4 : login condition
5 : check availability(book)
6 : check availability(book)
alt check availability
[Book Found]
7 : return found
8 : Display found
9 : loan(book)
10 : check membership
11 : return membership
12 : display loan time option
alt loan validation
[confirm loan]
13 : conform loan
14 : confirm payment
ref payment
15 : payment confirmed
16 : set book loaned
17 : display loan confirmed
[not confirm]
18 : refuse loan option
19 : display loan not completed
[Book not found]
20 : return not found
21 : Display not found

ERD:


First Name
Middle Name
Last Name
Name
ID
Person
Address
d
M
Faculty
d
TA
M
1
1
Student
1
1
Teaches
Proffesors
1
M
Supervises
1
Enrolls
Credit Hours
N
Course
N
M
Has
Credit Name
CourseCode
For
N
Gets
N
Grades
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Submits
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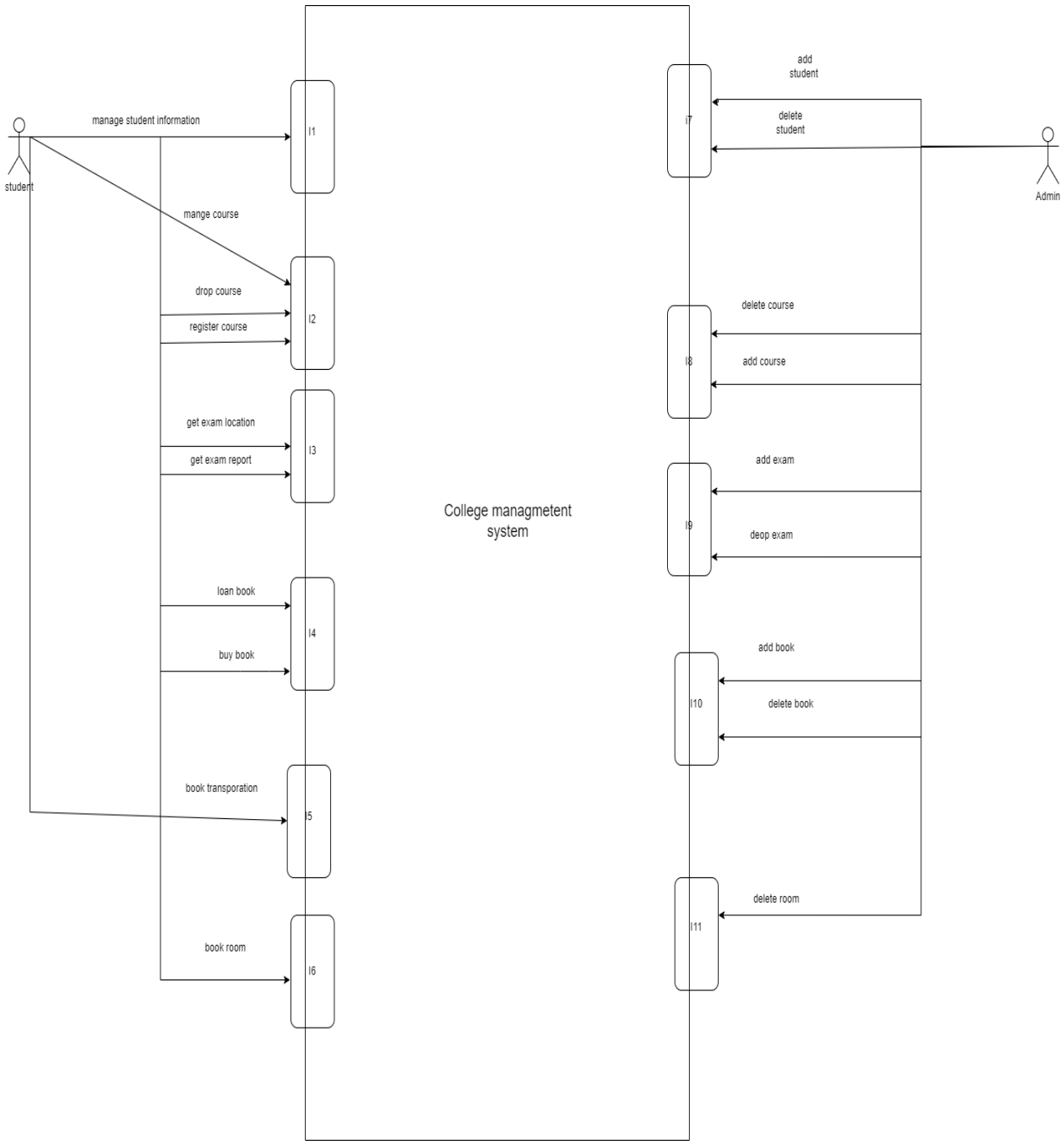
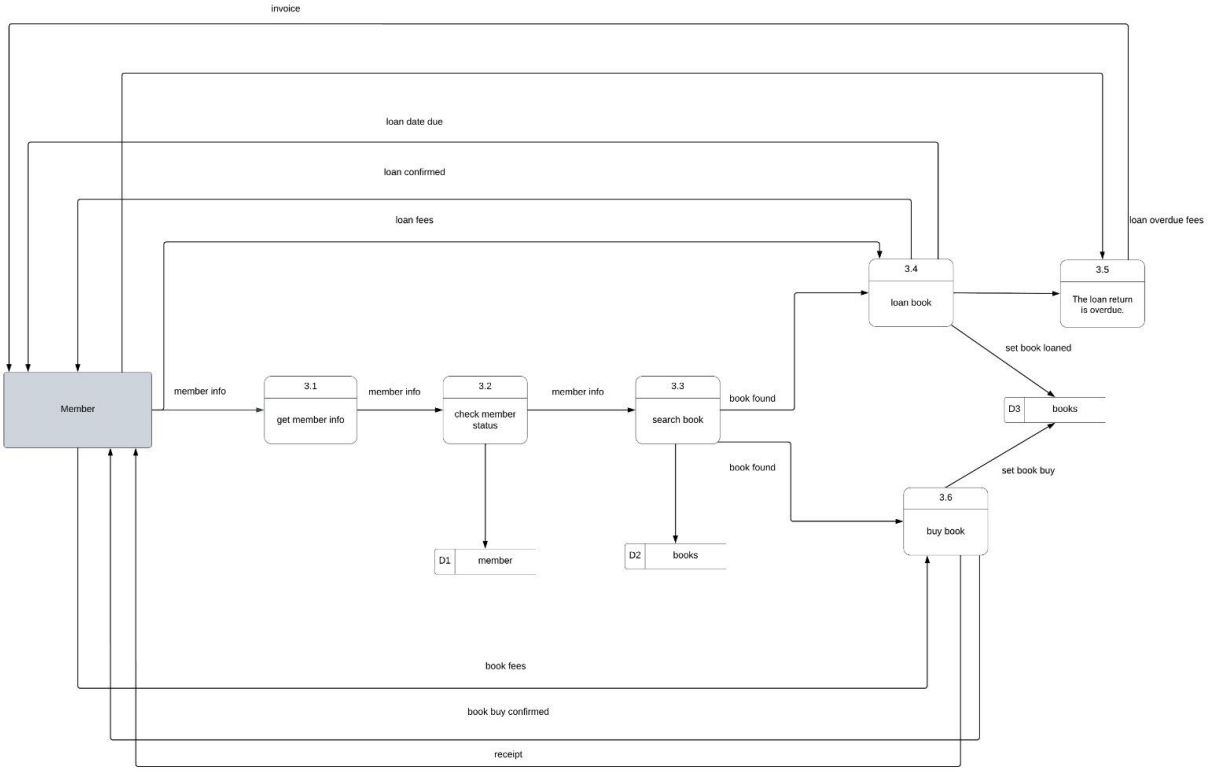
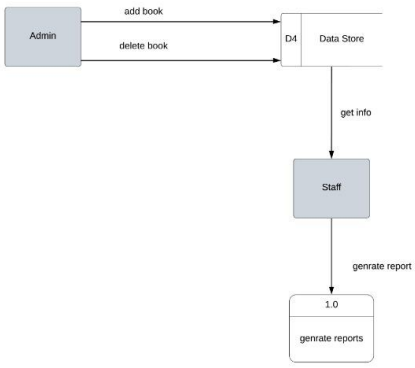
Mark
N
Department
1
Works_IN
DepartmentID
Department Name

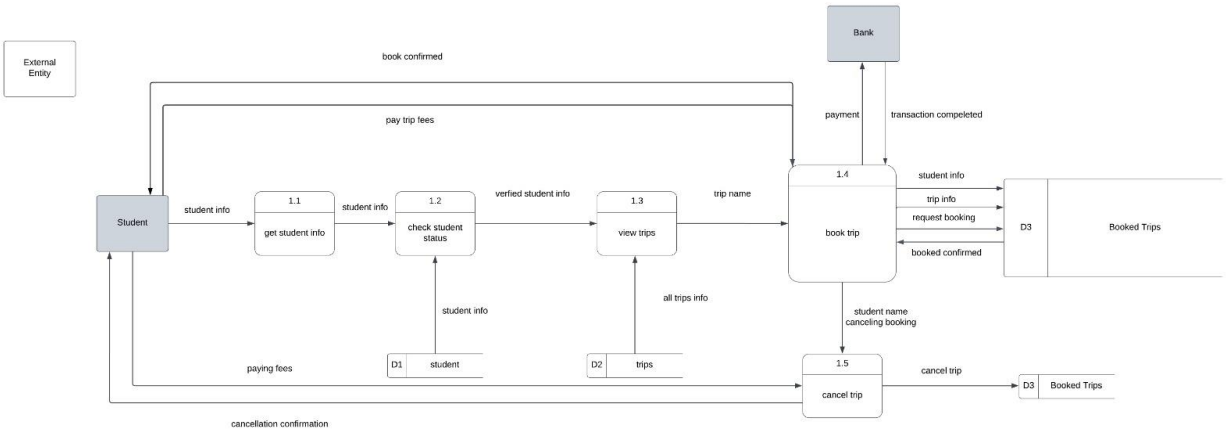
ACD:

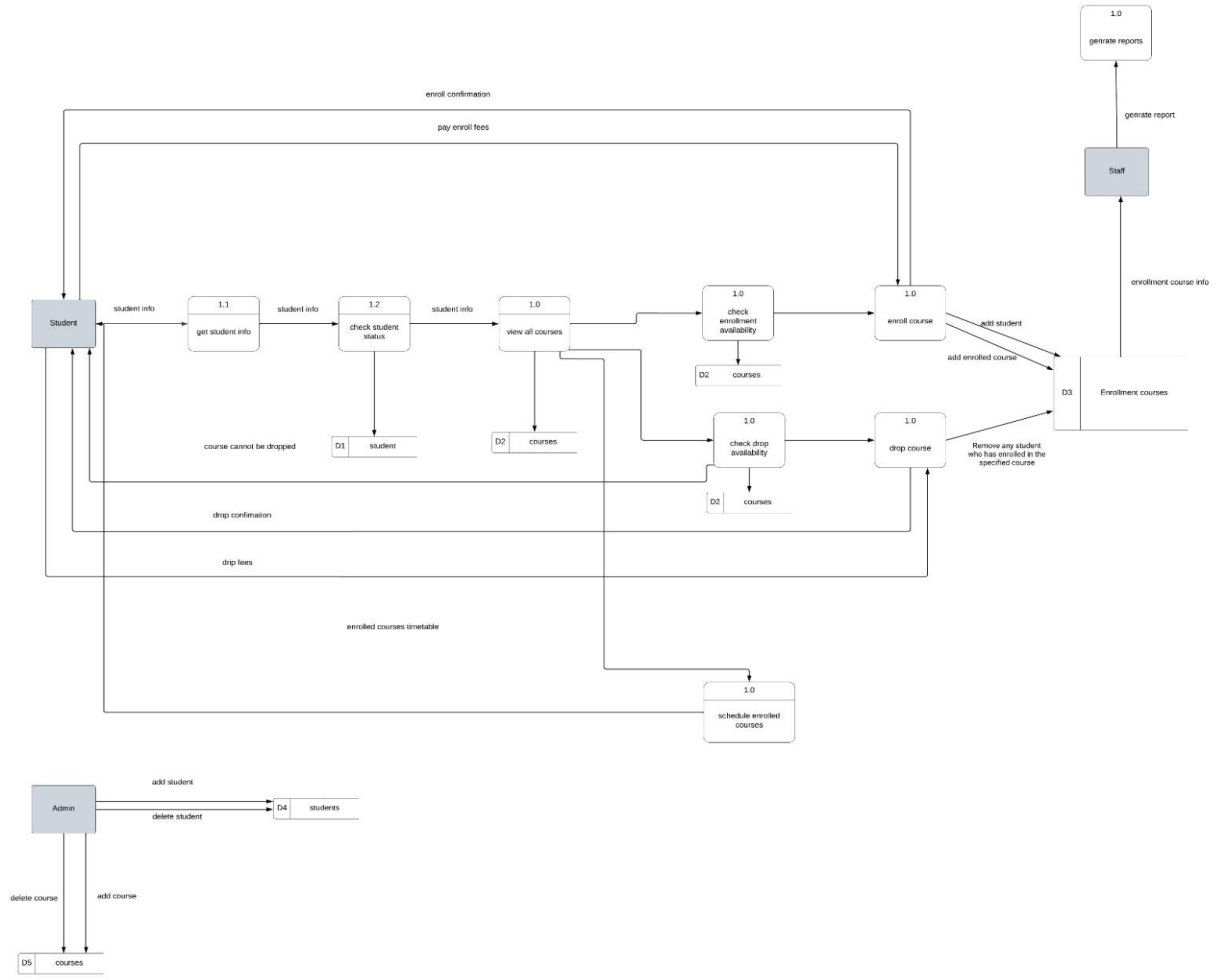

student
manage student information
I1
mange course
drop course
register course
I2
get exam location
get exam report
I3
loan book
buy book
I4
book transporation
I5
book room
I6
College managmetent system
add student
delete student
I7
Admin
delete course
add course
I8
add exam
deop exam
I9
add book
delete book
I10
delete room
I11

Dataflow Diagram Level 2:

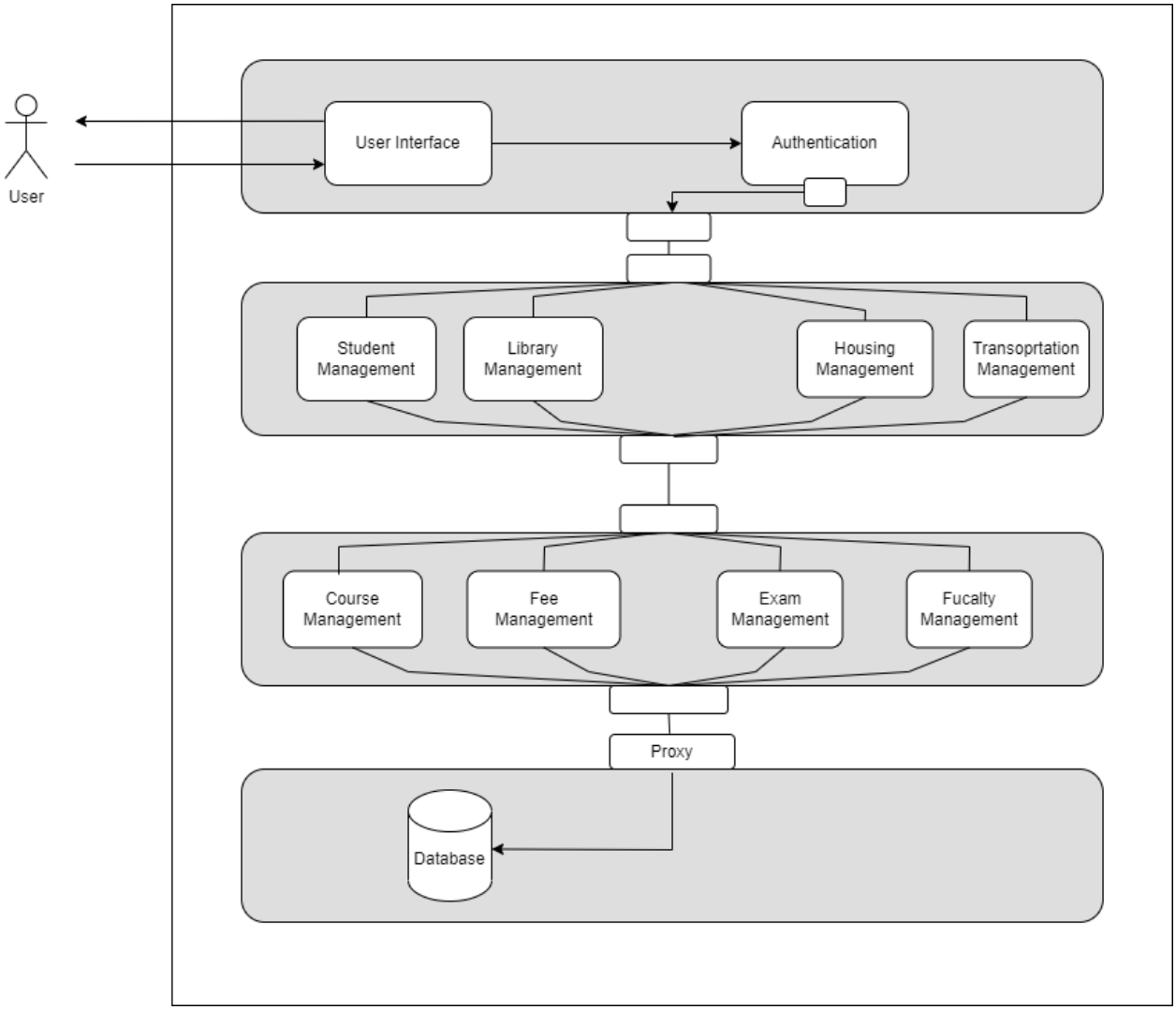




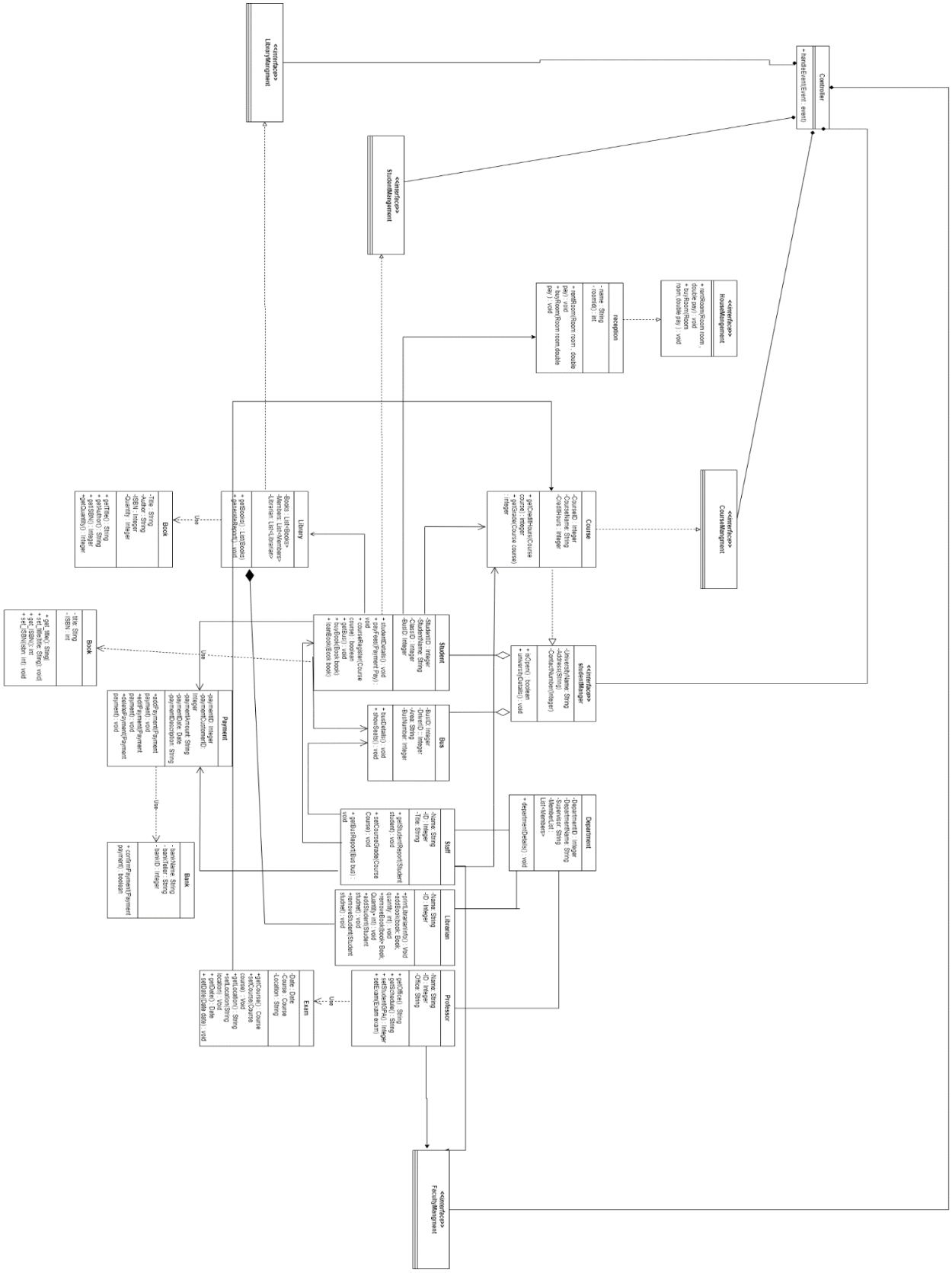

External Entity
Bank
book confirmed
pay trip fees
payment
transaction compeleted
Student
student info
1.1
get student info
student info
1.2
check student status
verfied student info
1.3
view trips
trip name
1.4
book trip
student info
trip info
request booking
booked confirmed
D3
Booked Trips
student info
all trips info
student name canceling booking
paying fees
D1
student
D2
trips
1.5
cancel trip
cancel trip
D3
Booked Trips
cancellation confirmation


1.0
genrate reports
genrate report
Staff
enroll confirmation
pay enroll fees
enrollment course info
Student
student info
1.1
get student info
student info
1.2
check student status
student info
1.0
view all courses
1.0
check enrollment availability
1.0
enroll course
add student
add enrolled course
D3
Enrollment courses
D2
courses
course cannot be dropped
D1
student
D2
courses
1.0
check drop availability
1.0
drop course
Remove any student who has enrolled in the specified course
D2
courses
drop confirmation
drip fees
enrolled courses timetable
1.0
schedule enrolled courses
Admin
add student
delete student
D4
students
delete course
add course
D5
courses

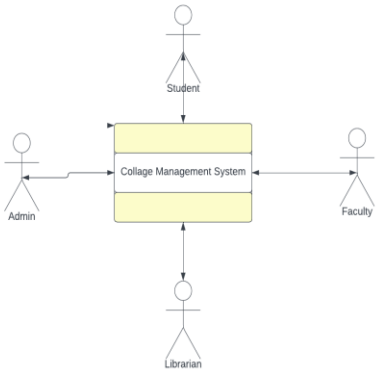
Architectural Model:



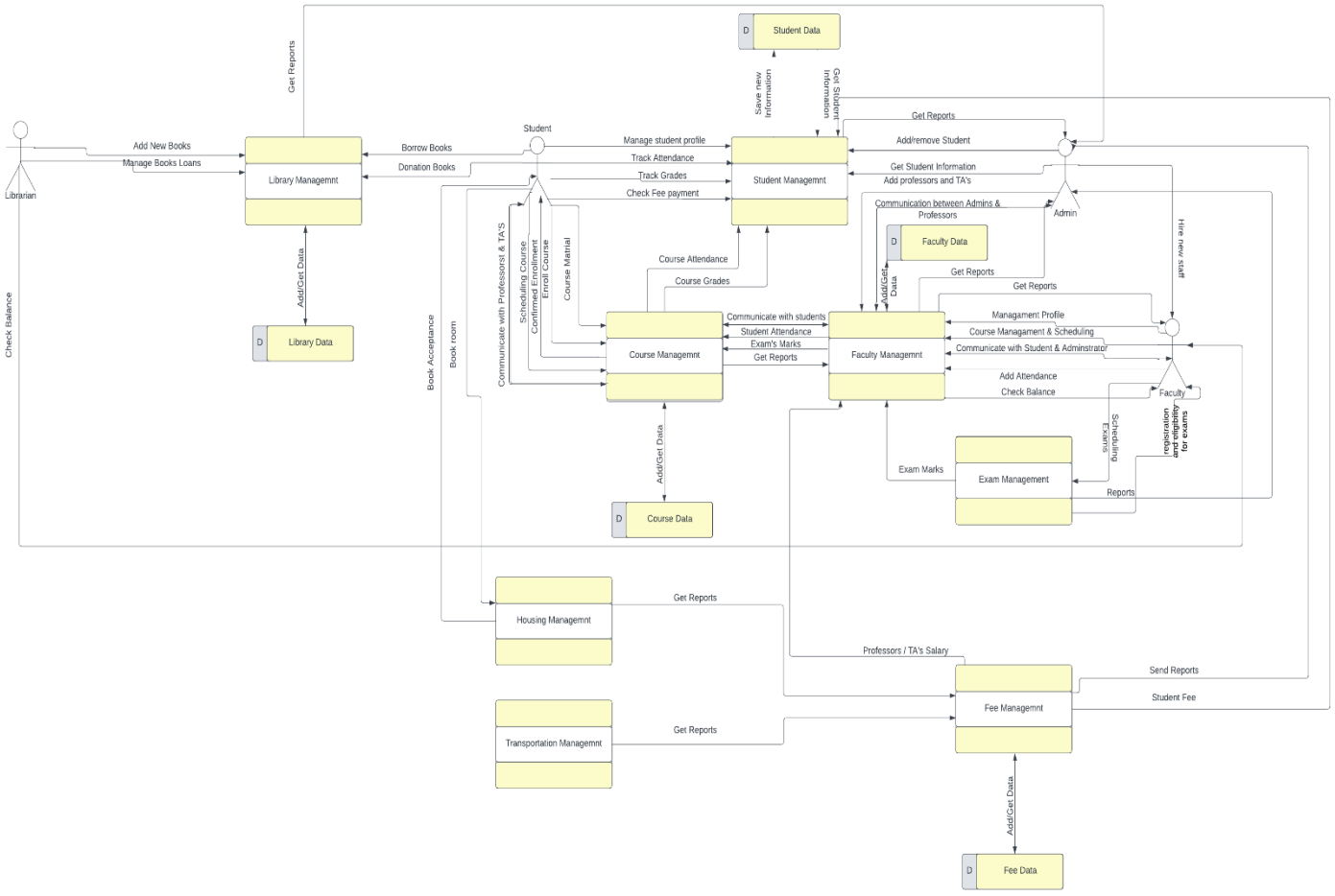
Class Diagram:



Level 0 Dataflow Diagram:



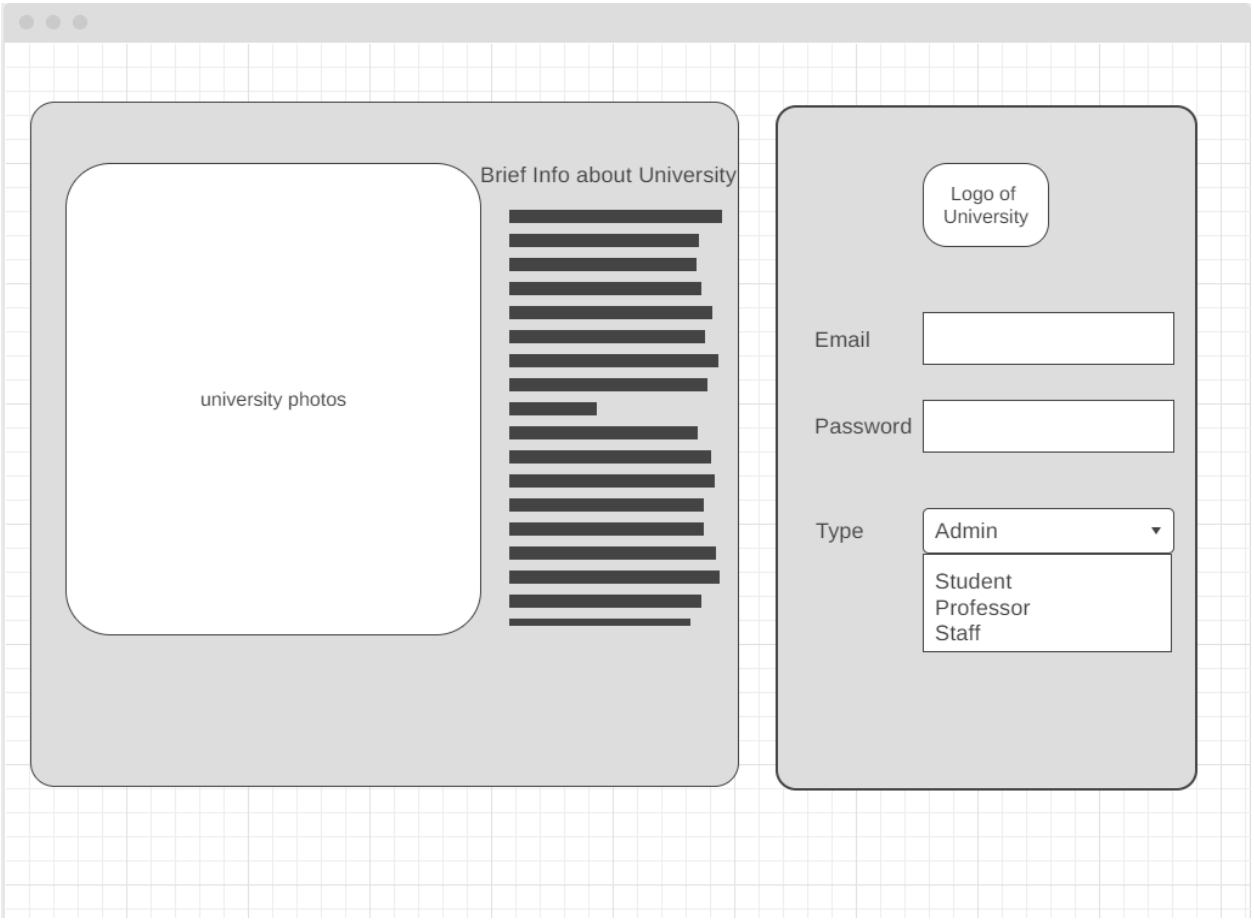
Level 1 Dataflow Diagram For Whole System:



Manual:

Login Page:

1. On the login screen, provide three options for the user to choose from: "Admin," "Student," and "Professor."
2. After the user selects their role, direct them to a different page depending on their selection.
3. If the user selects "Admin," direct them to the admin login page where they will be prompted to enter their admin credentials.
4. If the user selects "Student," direct them to the student login page where they will be prompted to enter their student credentials.
5. If the user selects "Professor," direct them to the professor login page where they will be prompted to enter their professor credentials.
6. Ensure that each login page is tailored to the specific needs of that role, providing relevant information and options.
7. Once the user has entered their credentials, authenticate them, and redirect them to their respective dashboard.
8. If the user enters incorrect login credentials, display an error message and prompt them to try again.
9. Provide a way for users to reset their password or retrieve their login information in case they forget it.
10. Ensure that the user can easily switch between different roles or log out of the system.



Admin Page:

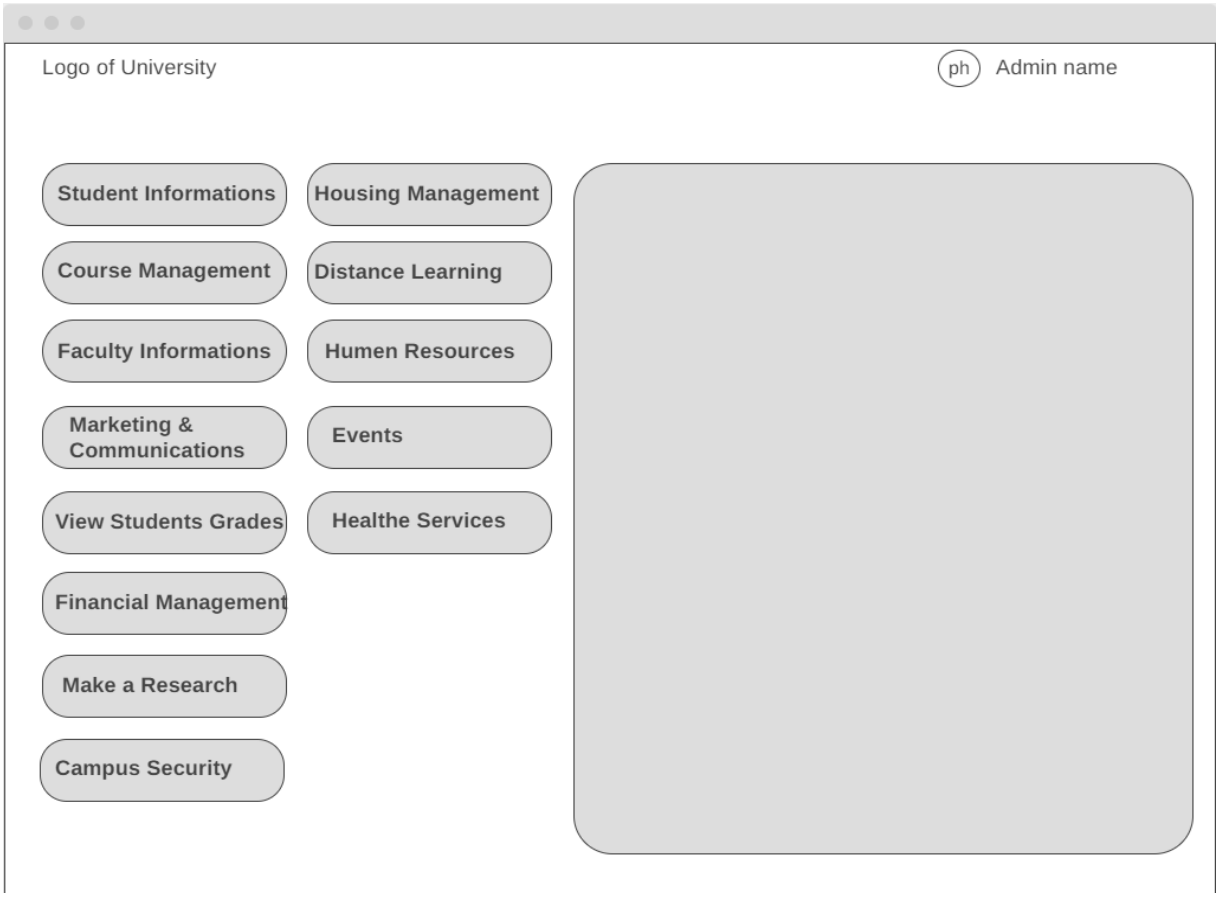
Welcome to the Admin Page Manual. As an administrator, you have access to various functionalities to manage different aspects of the university. Here's a guide on how to navigate through the different sections of the page:

1. Student Information: This section allows you to view student details such as their personal information, enrollment status, and academic performance.
2. Housing Management: In this section, you can manage the housing facilities offered by the university, including room assignments, lease agreements, and maintenance requests.
3. Course Management: This section allows you to manage the courses offered by the university, including course schedules, instructor assignments, and student enrollment.
4. Distance Learning: In this section, you can manage the distance learning programs offered by the university, including online courses, virtual classrooms, and e-learning resources.
5. Faculty Information: This section allows you to view the details of the faculty members, including their contact information, areas of expertise, and teaching schedules.
6. Human Resources: In this section, you can manage the human resources of the university, including employee records, payroll processing, and benefits administration.
7. Marketing Management: In this section, you can manage the marketing and branding of the university, including promotional campaigns, public relations, and social media.
8. Event Management: In this section, you can manage the events organized by the university, including academic conferences, career fairs, and student activities.
9. Student Grades: In this section, you can view the academic performance of the students, including their grades, GPA, and academic standing.
10. Health Services: In this section, you can manage the health services offered by the university, including medical facilities, health insurance, and counseling services.
11. Finance Management: In this section, you can manage the financial operations of the university, including budgeting, accounting, and financial reporting.
12. Campus Security: In this section, you can manage the security of the university, including access control, surveillance, and emergency response.

To access a specific section, click on the corresponding tab on the menu bar. Within each section, you will find different sub-sections and functionalities.

For example, in the "Student Information" section, you can view the student details by entering their ID number or name in the search bar. You can also view the enrollment status of each student and their academic performance by selecting the appropriate options from the drop-down menu.

In the "Housing Management" section, you can view the available housing facilities and manage the room assignments by selecting the building and room number from the drop-down menu. You can also manage the lease agreements and maintenance requests by selecting the appropriate options from the sub-sections.


Logo of University
ph
Admin name
Student Informations
Housing Management
Course Management
Distance Learning
Faculty Informations
Humen Resources
Marketing & Communications
Events
View Students Grades
Healthe Services
Financial Management
Make a Research
Campus Security

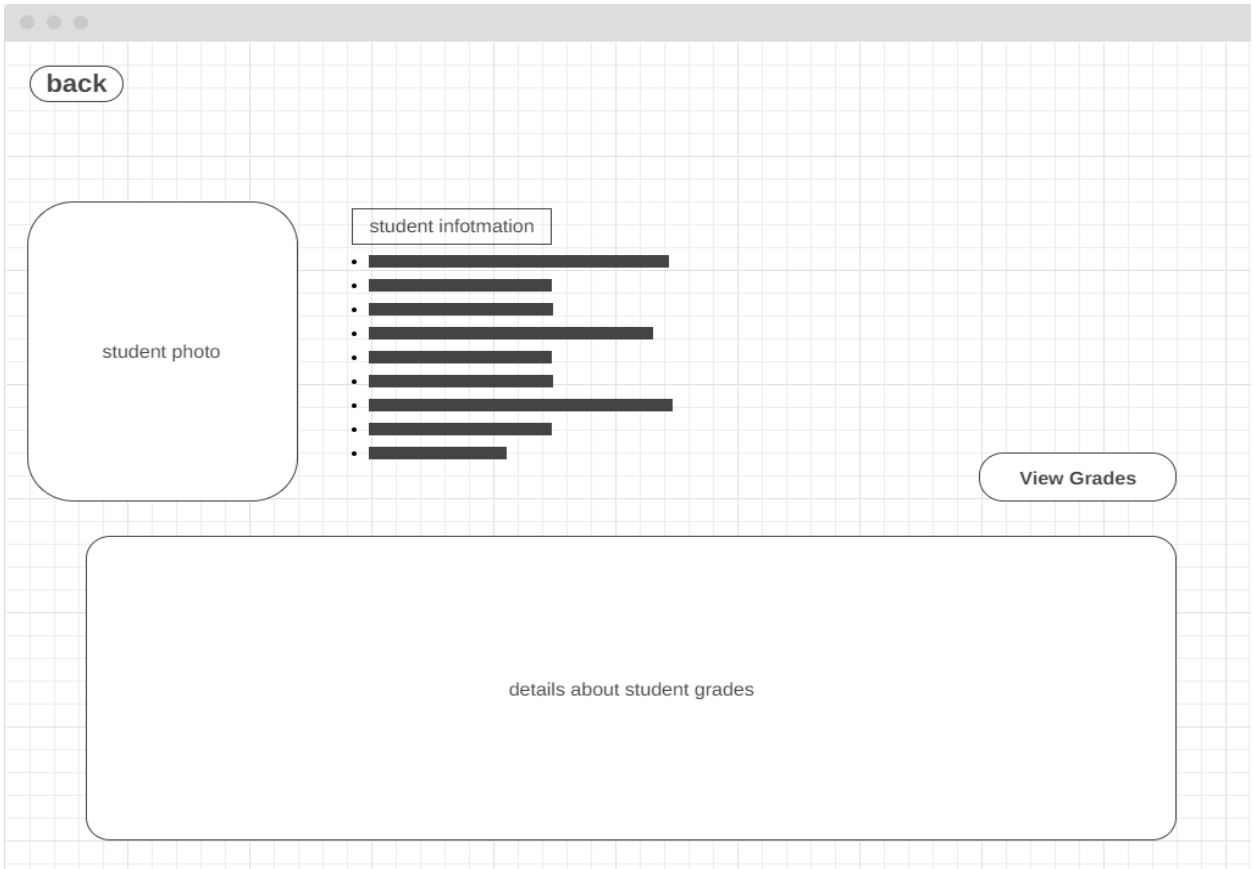
Student Page:

As a student, you have access to a variety of features and tools on the university website that can help you manage your academic and campus life. Here's a brief overview of the main functions available to you:

1. Checking Courses You can view the courses available for registration each semester by navigating to the "Course Catalog" section of the website. Here, you can search for courses by department, course number, or keyword.
2. Adding Courses To add a course to your schedule, click on the "Add/Drop Courses" option on the website. Here, you can search for courses by course number, title, or instructor. Once you have selected the course you want to add, simply click the "Add" button.
3. Dropping Courses If you need to drop a course, navigate to the "Add/Drop Courses" section of the website and click the "Drop" button next to the course you want to remove from your schedule.
4. Viewing Information You can view your personal information, such as your contact details, academic records, and financial aid status, by going to the "My Account" section of the website.
5. Viewing Events To view the upcoming campus events, click on the "Events" tab on the university website. Here, you can see a calendar of events and search for events by category, date, or keyword.
6. Checking Bills You can view your bills and account balances in the "My Account" section of the website. Here, you can see your current balance, view your billing history, and make payments.
7. Viewing Housing If you are living on campus, you can view your housing information, such as your room assignment, roommate information, and housing policies, by navigating to the "Housing" section of the website.

Student Information Page:

Both students and admins can access the Student Information page to view student-related information. The Student Information page may include details such as student names, ID numbers, contact information, academic standing, and enrollment status. This information can be used by both students and admins for various purposes such as course planning, tracking student progress, and managing administrative tasks related to student affairs.



Event Management Page:

The Event Page is where students, faculty, and staff can view information about upcoming events and activities happening on campus. This page is designed to provide you with all the necessary information about upcoming events, including dates, times, locations, and other details.

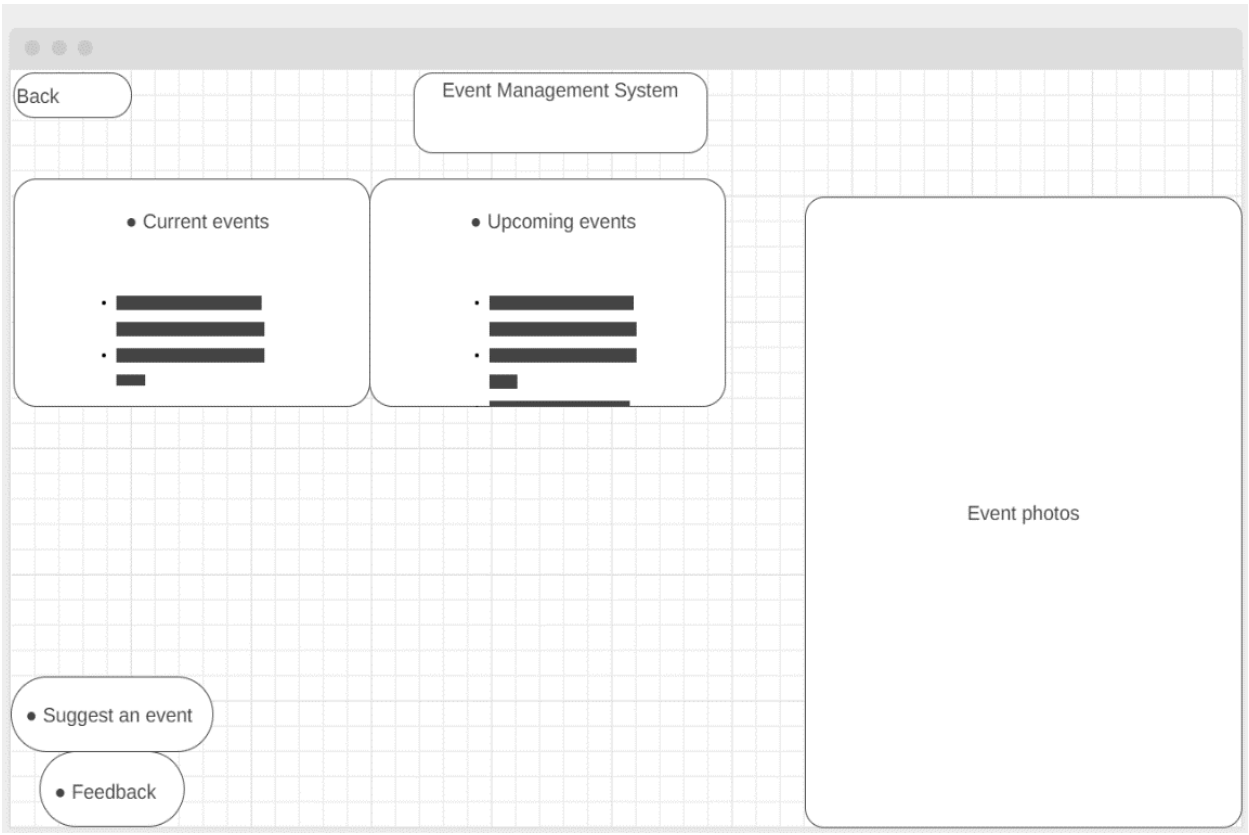
Current and Upcoming Events: The Current and Upcoming Events section is where you can view all the events that are happening on campus right now, as well as upcoming events. You can browse through the list of events, and click on each event to view more details about it, such as the date, time, location, and any other important information.

Photos of Events: The Photos of Events section is where you can view photos from past events that have taken place on campus. This section is a great way to get a feel for what events are like on campus, and to see what you can expect from upcoming events.

Suggest an Event: The Suggest an Event section is where you can suggest an event or activity that you think would be a great addition to campus life. This section is designed to give students, faculty, and staff the opportunity to suggest new events and activities that they would like to see on campus. Simply fill out the form with your suggestions, and the event planning team will review your submission.

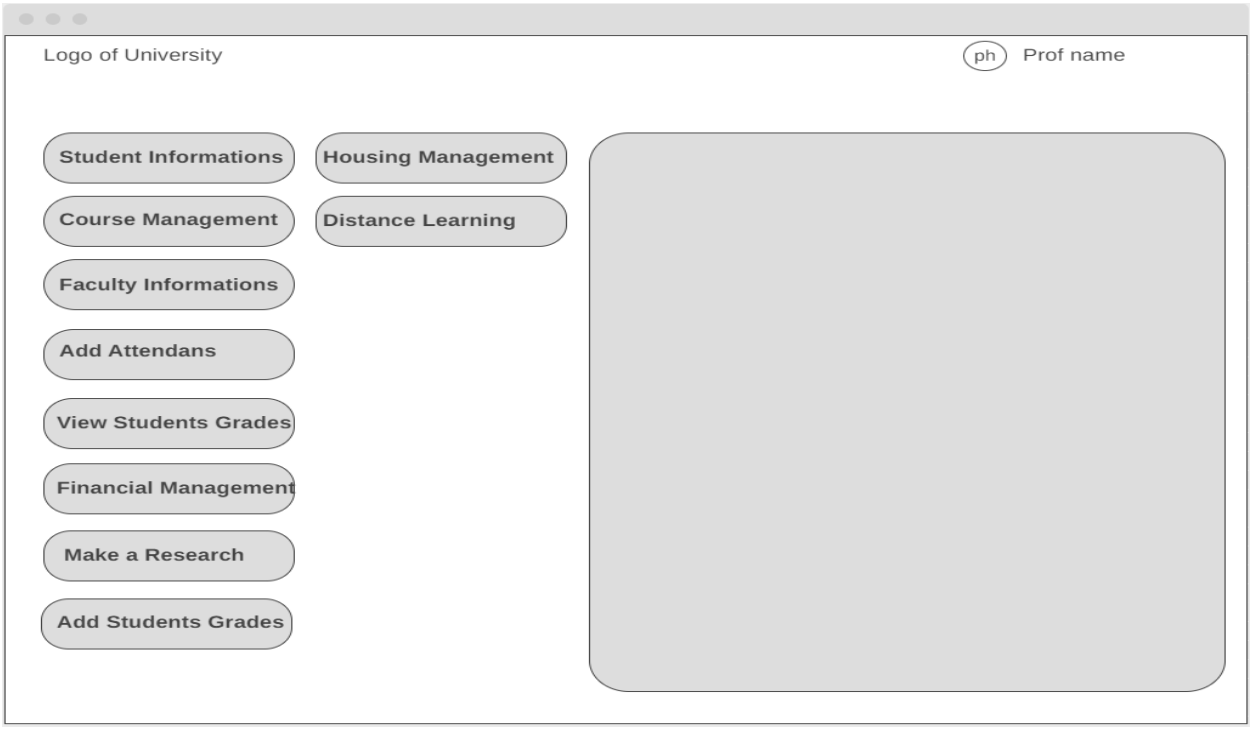
Feedback: The Feedback section is where you can leave feedback about any events or activities that you have attended on campus. Your feedback will help the event planning team improve future events, and ensure that they are meeting the needs and expectations of the campus community. Simply fill out the form with your feedback, and the event planning team will review your submission.

In conclusion, the Event Page is an important resource for anyone who wants to stay up-to-date on campus events and activities. Whether you're looking for something to do on the weekend, or want to suggest a new event or activity, the Event Page has everything you need to get involved on campus.



Professor Page:

1. Dashboard: Upon logging in, you will be directed to the dashboard. The dashboard will show your current and upcoming courses, your schedule, and recent updates.
2. Course Management: The Course Management tab allows you to manage your courses. Here, you can add new courses, delete courses, and edit course information.
3. Student Management: The Student Management tab allows you to view student information, add graders, view attendance, and add grades. You can search for students by their names or student ID.
4. Faculty Management: The Faculty Management tab allows you to view information about other faculty members. You can search for faculty members by their names or faculty ID.
5. Gradebook: The Gradebook tab allows you to manage grades for your courses. You can add, edit, and delete grades. You can also view individual student grades or course averages.
6. Attendance: The Attendance tab allows you to add and manage attendance records for your courses. You can view attendance reports for individual students or the entire class.
7. Announcements: The Announcements tab allows you to make announcements to your students. You can create and edit announcements, and they will be displayed on the dashboard.
8. Feedback: The Feedback tab allows you to view feedback from students. Students can provide feedback on your courses and teaching style, and you can use this feedback to improve your courses.



Faculty Information Page:

The Faculty Information Page provides faculty members with access to important information and tools to manage their professional activities. The page includes several sections such as Faculty Record, Appointments, Reports, and Dashboard. Below is a detailed guide on how to use each section of the Faculty Information Page.

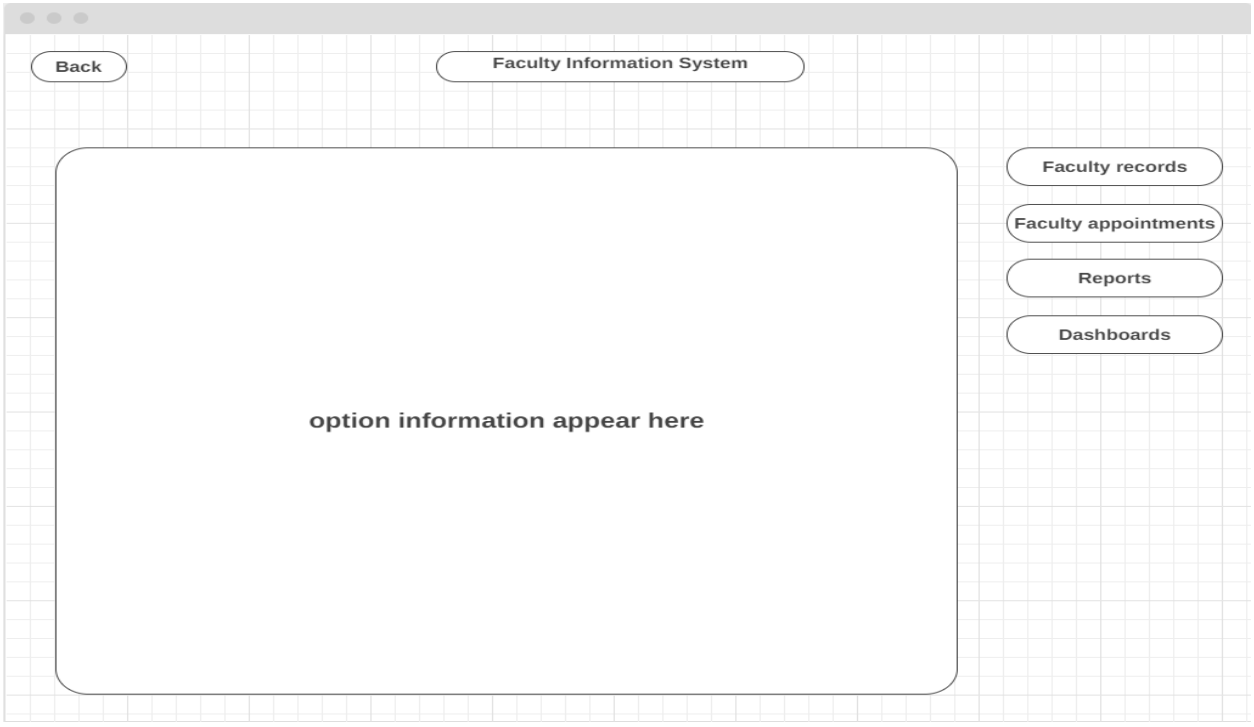
Faculty Record: The Faculty Record section allows faculty members to view and update their personal information, educational background, professional experience, and research interests. To update your information, simply click on the Edit button next to the section you wish to modify. Be sure to save any changes you make.

Appointments: The Appointments section displays faculty members' schedules, including courses taught and office hours. To view your schedule, select the appropriate semester or term, and your schedule will be displayed. To make changes to your schedule, contact the relevant department or administrative staff.

Reports: The Reports section provides access to a variety of reports related to faculty activities, such as course evaluations, student feedback, and attendance records. To view a report, select the appropriate category and report type. Some reports may require additional permissions, so please contact your department administrator if you have any issues accessing a particular report.

Dashboard: The Dashboard section provides a quick overview of important information, including upcoming appointments, course schedules, and student feedback. The dashboard also provides access to frequently used tools, such as attendance tracking, grading, and student roster management.

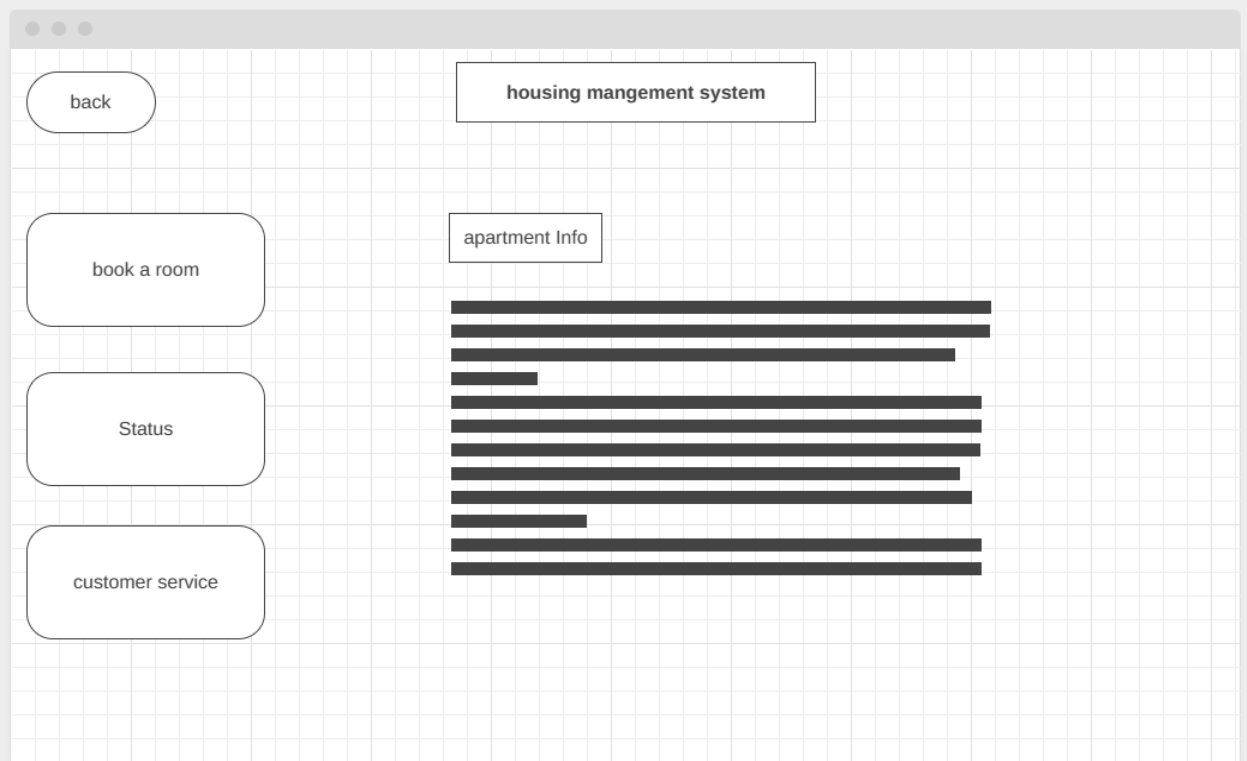
In conclusion, the Faculty Information Page provides faculty members with a centralized location for managing their professional activities, including personal information, schedules, reports, and important tools. If you have any issues or questions, please contact your department administrator for assistance.



Housing Management Page:

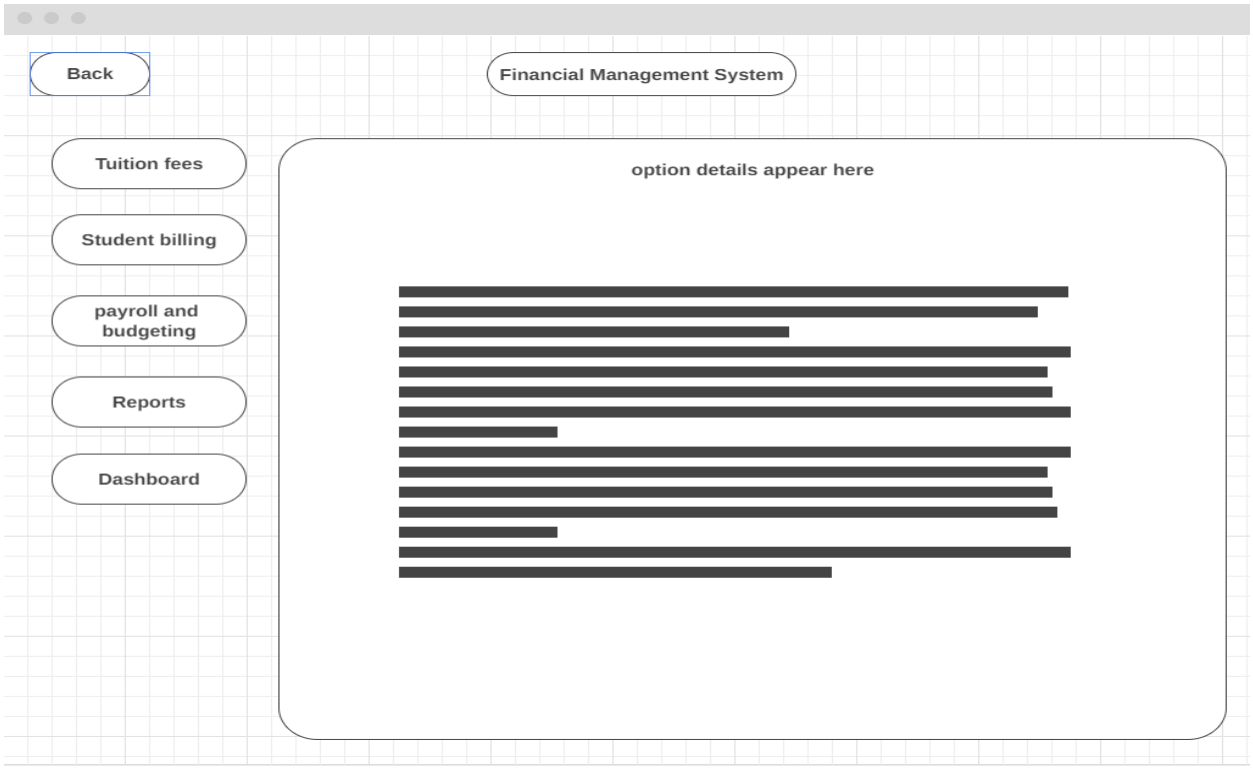
Here, you can easily manage your housing needs with just a few clicks. Follow the instructions below to make the most of this page:

1. Book a room: To book a room, click on the "Book a Room" button on the homepage. You will be directed to a page where you can select your desired housing option and room type. Follow the prompts to complete your booking.
2. View Status and Info: To view your housing status and information, click on the "My Housing" button on the homepage. You will be directed to a page where you can view your current housing information, including your room assignment and move-in/move-out dates.
3. Access Customer Service: If you have any questions or concerns about your housing, click on the "Customer Service" button on the homepage. You will be directed to a page where you can submit a request for assistance or contact our customer service team directly.



Financial Management Page:

1. Tuition Fees: This feature allows you to manage tuition fees for the university. You can view the current tuition fees, update them, and create payment plans for students.
2. Student Billing: This feature allows you to manage student billing. You can view the status of a student's bill, track payments, and send reminders.
3. Payroll and Budgeting: This feature allows you to manage payroll and budgeting for the university. You can view and manage employee salaries, bonuses, and benefits. You can also create and manage the university's budget.
4. Reports: This feature provides detailed reports on financial information, such as revenue, expenses, and budget utilization. You can generate reports for a specific time period and export them in various formats.
5. Dashboard: The dashboard provides an overview of the financial status of the university. You can view key metrics such as revenue, expenses, and budget utilization.



Traceability Matrix:

Requirements		Student Management System:	Faculty Management System:	Course Management System:	Exam Management System:	Fee Management System:	Library Management System:	Housing Management System:	Transportation Management System
1		1	0	0	0	0	0	0	0
2		1	0	1	0	0	0	0	0
3		1	0	1	0	0	0	0	0
4		1	0	1	0	0	0	0	0
5		1	0	0	0	0	0	0	0
6		0	1	0	0	0	0	0	0
7		0	1	1	0	0	0	0	0
8		0	1	0	0	0	0	1	0
9		1	1	0	0	1	0	0	0
10		1	1	0	0	0	0	0	0
11		0	0	1	0	0	0	0	0
12		0	0	1	0	0	0	0	0
13		0	0	1	0	0	0	0	0
14		0	0	1	0	0	0	0	0
15		0	0	1	0	0	0	0	0
16		1	0	0	1	0	0	0	0
17		0	0	0	1	0	0	0	0
18		0	0	0	1	0	0	0	0
19		1	1	0	1	0	0	0	0
20		1	0	0	0	1	0	0	0
21		1	1	0	0	1	0	0	0
22		1	0	0	0	1	0	0	0
23		0	0	0	0	1	0	0	0
24		0	0	0	0	0	1	0	0
25		1	0	0	0	0	1	0	0
26		0	0	0	0	0	1	0	0
27		0	0	0	0	0	1	0	0
28		0	0	0	0	0	0	1	0
29		0	0	0	0	0	0	1	0
30		0	0	0	0	0	0	1	0
31		0	0	0	0	0	0	1	0
32		0	0	0	0	0	0	0	1
33		0	0	0	0	0	0	0	1
34		0	0	0	0	0	0	0	1
35		0	0	0	0	0	0	0	1