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DTDP
DEPARTMENT MANAGEMENT SYSTEM

**RADHA KRISHNA
DESHPANDE**

19011BC038



ABOUT ME

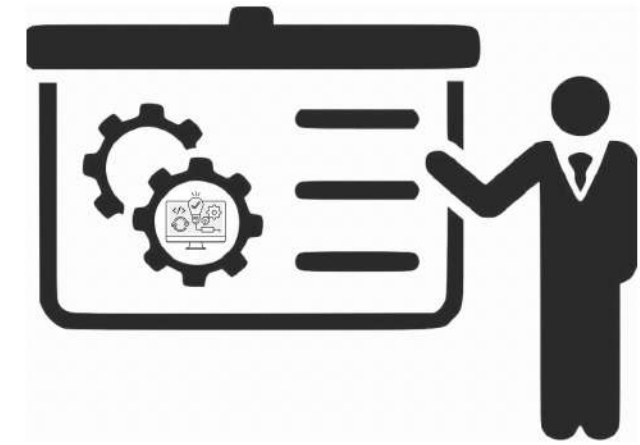


Hi, my self **Radha Krishna Deshpande**, a highly self-motivated final-year B.Tech DTDP student specialising in IT. With extensive experience as a full stack developer, I possess a strong background in machine learning. I am eager to utilise my skills and experience to contribute to the development and success of a dynamic and growing company. My focus lies in creating innovative and user-friendly web applications using machine learning techniques.

I had consistently excelled in my academic journey, securing an impressive 9.7 CGPA in 10th grade from Kakatiya High School (2016-2017) and a commendable 87.5% in 12th grade from Delta Junior College (2017-2019). Currently pursuing B.Tech DTDP, I am maintain a strong CGPA of 7.41 (up to the seventh semester) at Jawaharlal Nehru Architecture and Fine Arts University.

My technical skills include HTML, CSS, and JavaScript for front-end development. I am proficient in Python, Java, and AWS for back-end development. Additionally, I have expertise in machine learning with TensorFlow and are familiar with React.js for building dynamic user interfaces.

Abstract



The DTDP Department Management System automates manual processes using computerised equipment and web-based software, enabling efficient storage and easy access to valuable data. It handles student details, academic reports, courses, curriculum, batches, and resources. The system tracks student progress, attendance, and exam results, ensuring comprehensive reporting and future references.

By eliminating errors and enhancing reliability, this user-friendly system allows users to focus on other activities while maintaining accurate records. It facilitates information sharing among registered users and optimises resource utilisation, including library materials.

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DTDP

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DEPARTMENT MANAGEMENT SYSTEM

→ Introduction

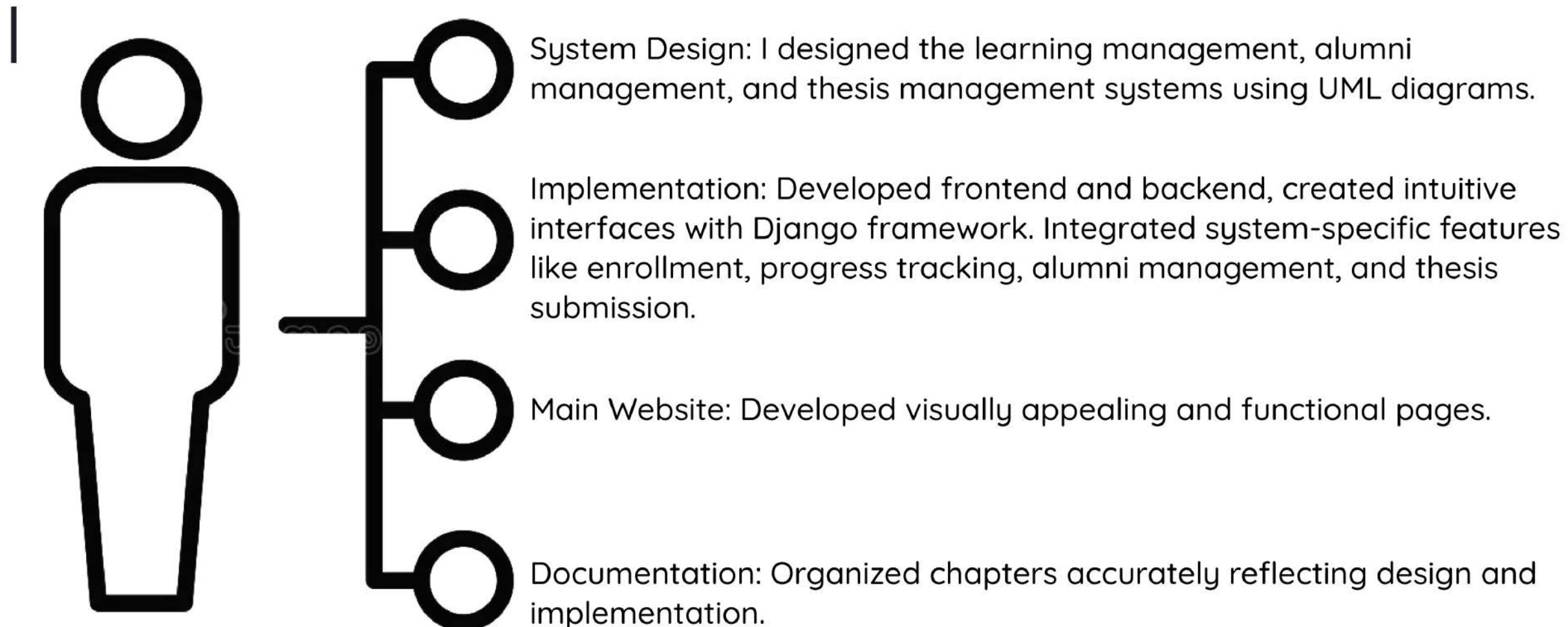


The DTDP Department Management System website is a user-friendly and comprehensive platform aimed at streamlining and optimizing various administrative and academic processes within the department. It offers centralized management of faculty, subjects, students, attendance, marks, library resources, learning materials, alumni information, and thesis details. Administrators can effortlessly handle tasks such as data management, visualization, and authentication. Faculty members benefit from features like attendance marking, grading students, managing schedules, uploading assignments, and sending notices. Students have access to a personalized dashboard to check attendance, grades, assignments, and utilize library resources.

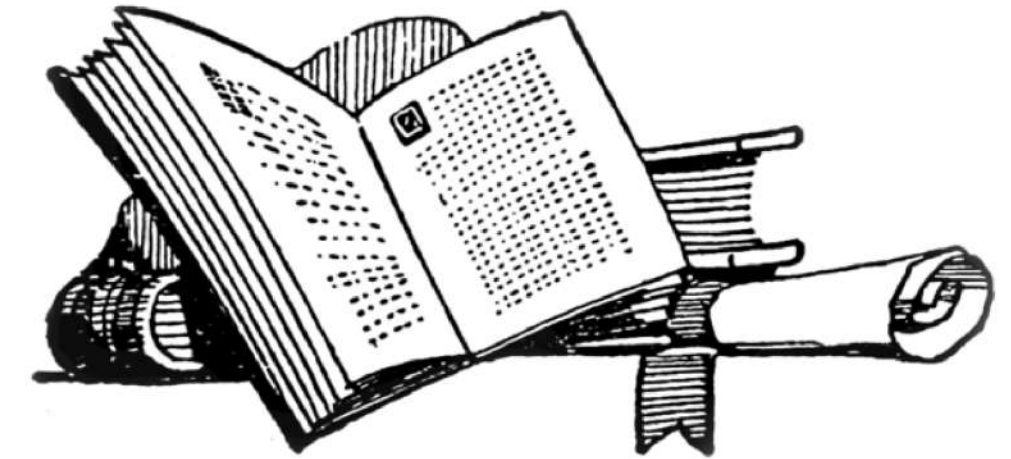
The system ensures enhanced efficiency, accuracy, data security, and simplifies resource management. It fosters improved communication, collaboration, and transparency among faculty, administrators, and students. With its user-friendly interface and intuitive design, the system eliminates manual errors, reduces reliance on extensive manpower, and saves time. By optimizing departmental performance and providing a seamless learning and administrative experience, it contributes to the overall growth and success of the DTDP department.

Role & → Responsibility

Role : FRONT-END DEVELOPER
BACK-END DEVELOPER

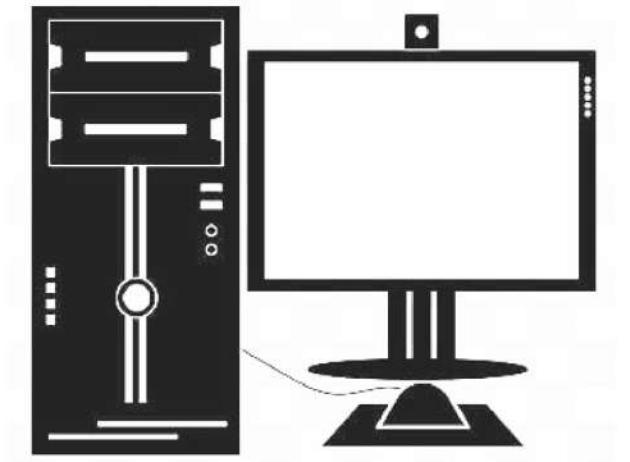
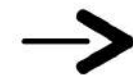


→ Literature Survey



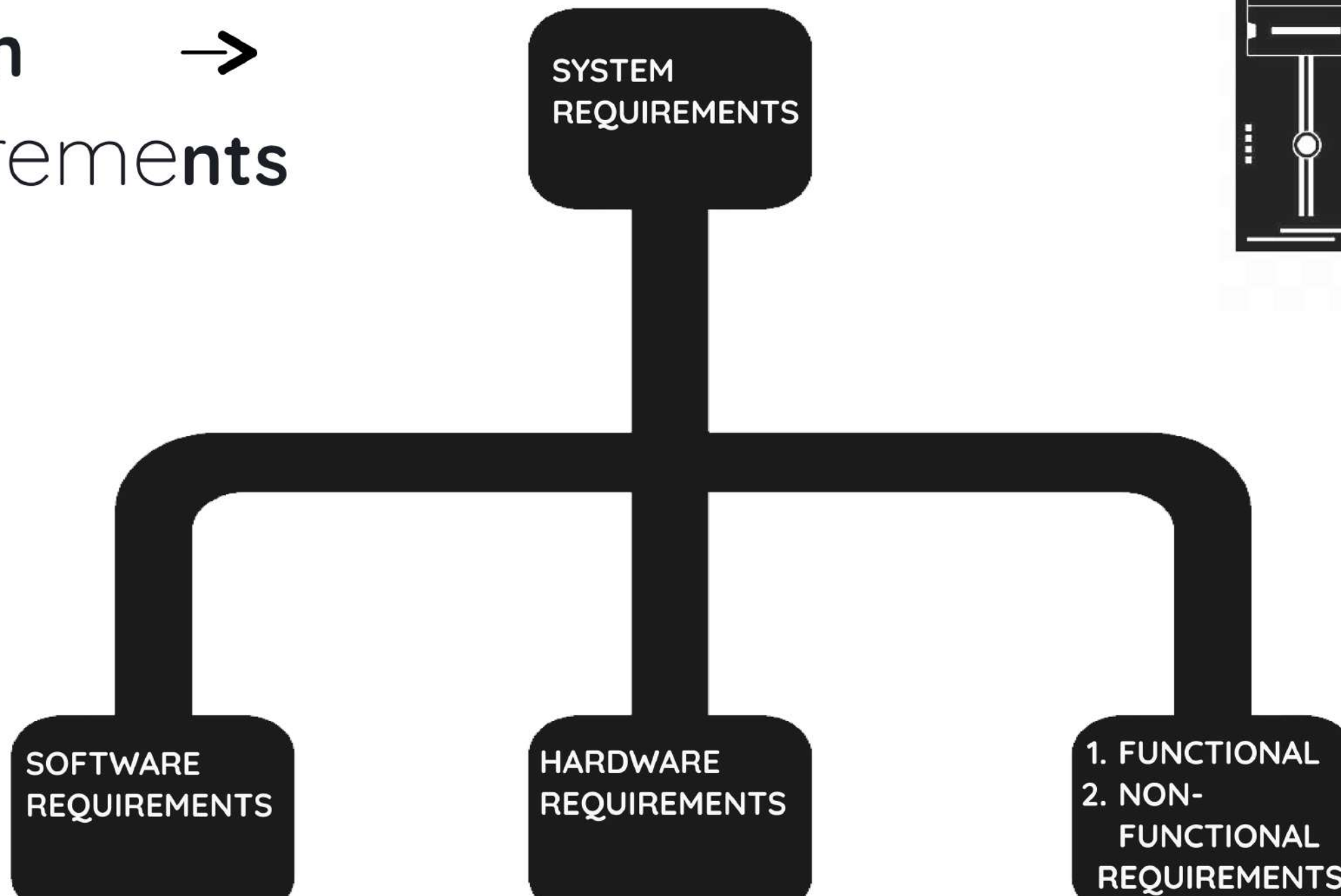
PAPAER TITLE	AUTHOR NAME	PUBLISHED YEAR	SOURCE	INFORMATION
Online Attendance and Feedback System	Kartiki Datakar	2016	International Journal of Computer Science and Mobile Computing	The paper discusses the development of software for daily student attendance and feedback in educational institutions. It allows easy access to student information in specific classes.
Research Paper on College Management System	Lalit Josh	2015	International Journal of Computer Applications	The paper presents a college management system that includes user authentication, subsystem-specific access control, and data validation. It aims to streamline information access and processing for staff and students, reducing processing time.

System Requirements



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1. Python
2. Django
3. VS Code (Visual Studio Code)
4. XAMPP
5. MySQL

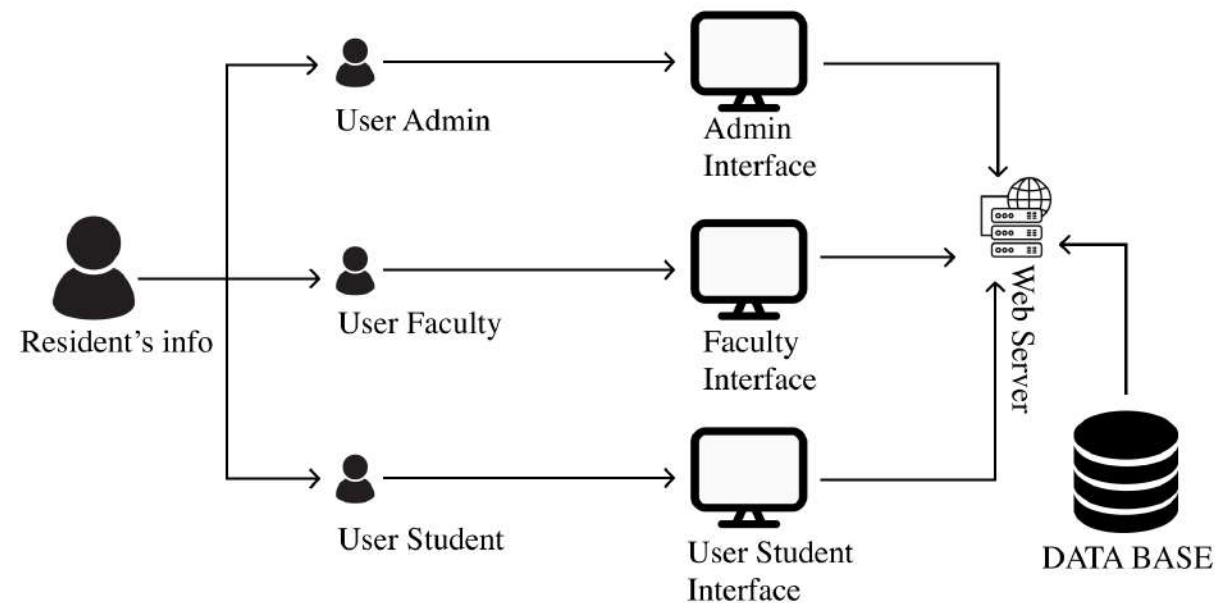
1. Windows 10 64bit OS
2. Processor : Intel i5
3. RAM : 4GB or more
4. Space on Hard Disk : minimum 1TB
5. Any Browser

1. Manage student and faculty records, course registration, and financial aid.
2. Implement security measures for data protection and user privacy.
3. Ensure reliable operation, scalability, and user-friendly functionality.

System Design



SYSTEM ARCHITECTURE OF THE SYSTEM

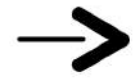


The goal of system architecture is to create a system that is well-designed, efficient, and easy to maintain. By defining the components and interfaces of the system, system architecture can help to ensure that the system is built correctly and that it can be easily modified in the future.

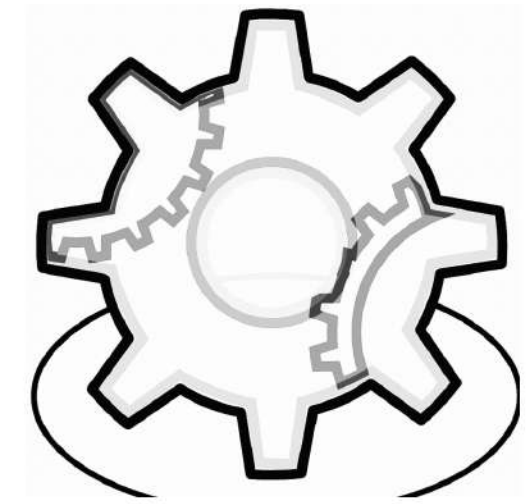


UML diagrams provide a standardized visual representation of a system's structure, behavior, and relationships. They encompass various types, including use case diagrams, class diagrams, sequence diagrams, activity diagrams, and more. These diagrams help stakeholders gain insights into the system's functionality, interactions, and overall architecture. They aid in analyzing and designing complex systems, identifying requirements, modeling software components, and facilitating communication between developers, designers, and project stakeholders. UML diagrams also enable documentation and serve as a blueprint for system understanding, maintenance, and future enhancements. By visually capturing system elements and their interdependencies, UML diagrams promote clarity, collaboration, and effective decision-making throughout the software development lifecycle.

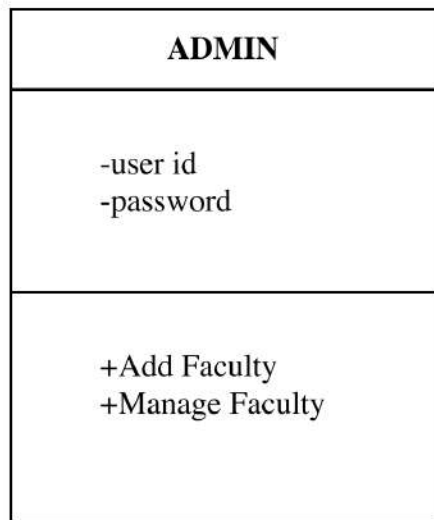
System Design



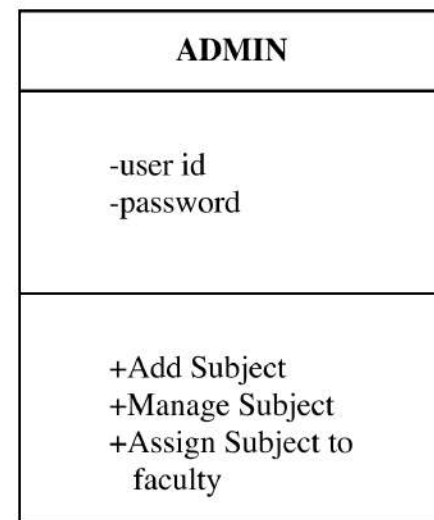
BLOCK DIAGRAMS



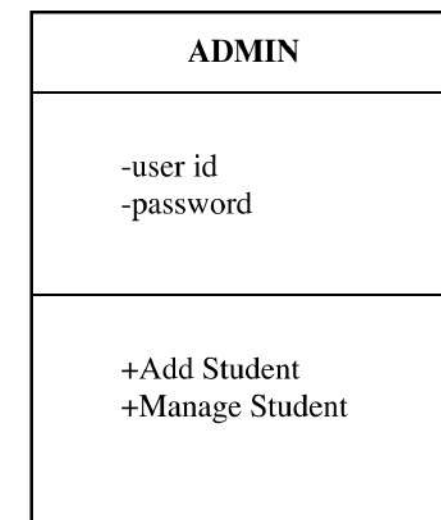
FACULTY MANAGEMENT



SUBJECT MANAGEMENT

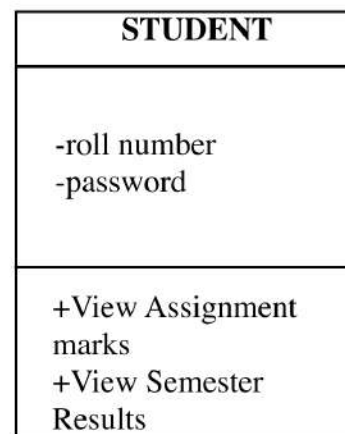
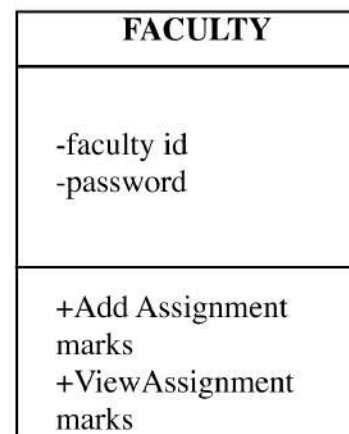
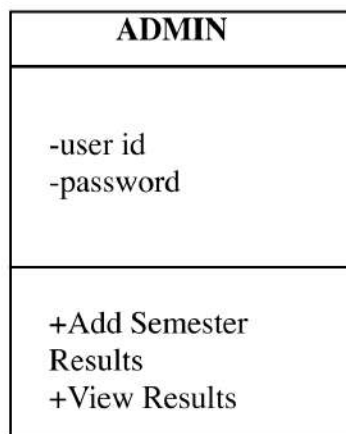


STUDENT MANAGEMENT

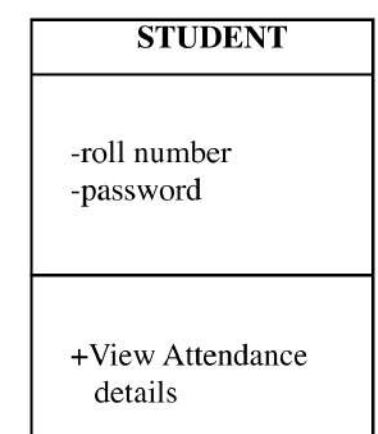
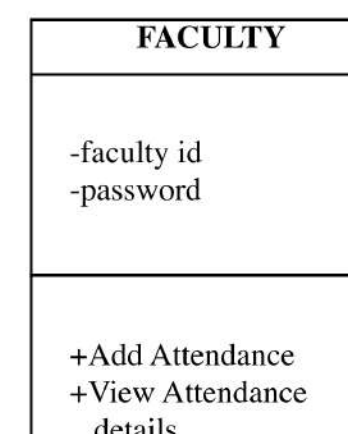
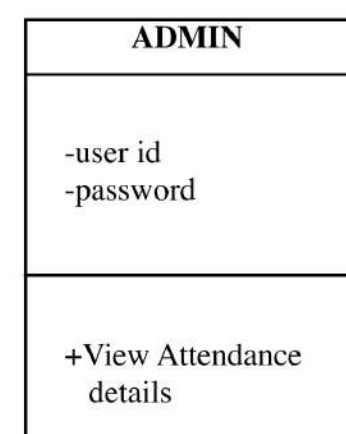


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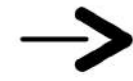
MARKS & RESULTS MANAGEMENT



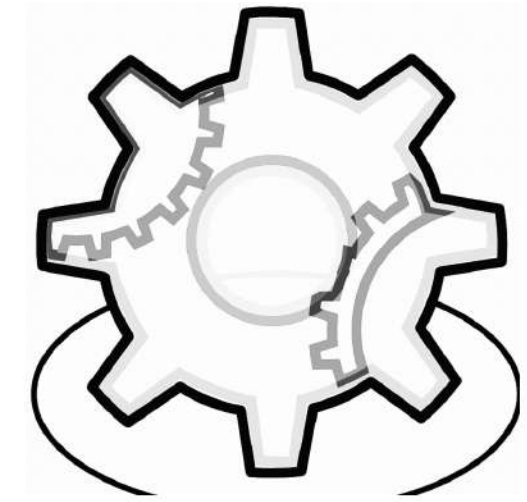
ATTENDANCE MANAGEMENT



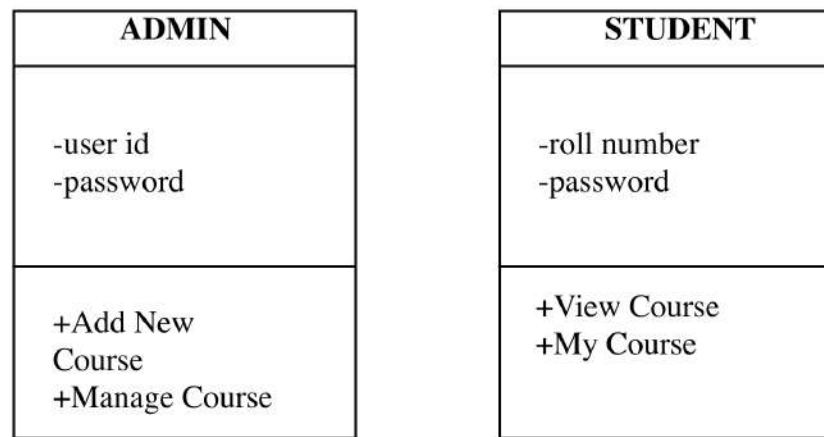
System Design



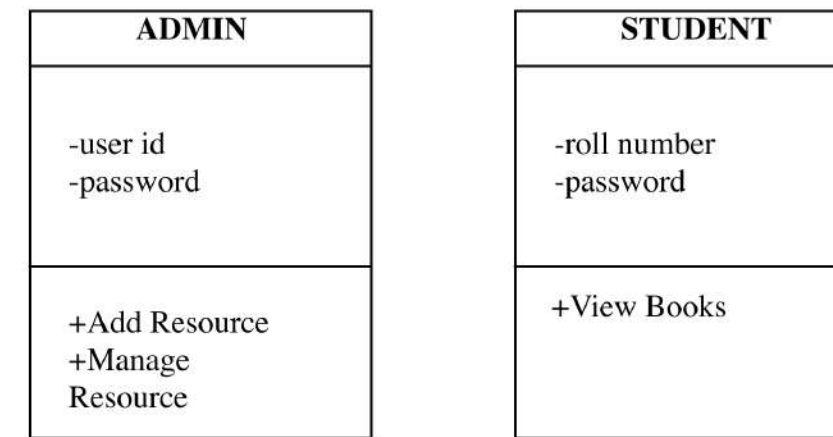
BLOCK DIAGRAMS



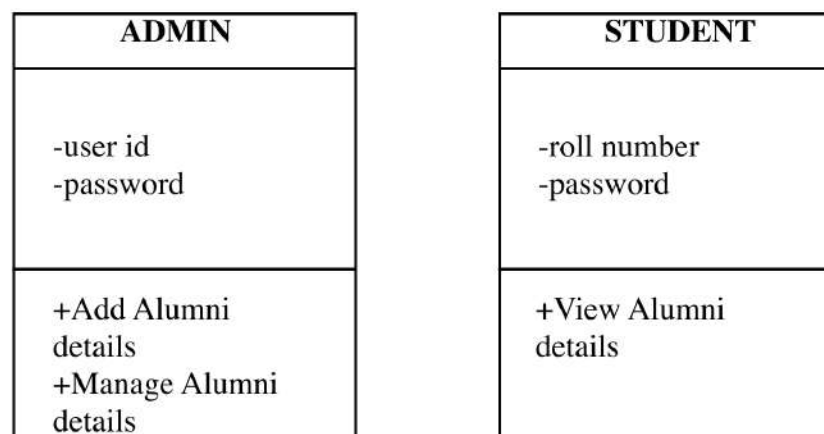
LEARNING MANAGEMENT



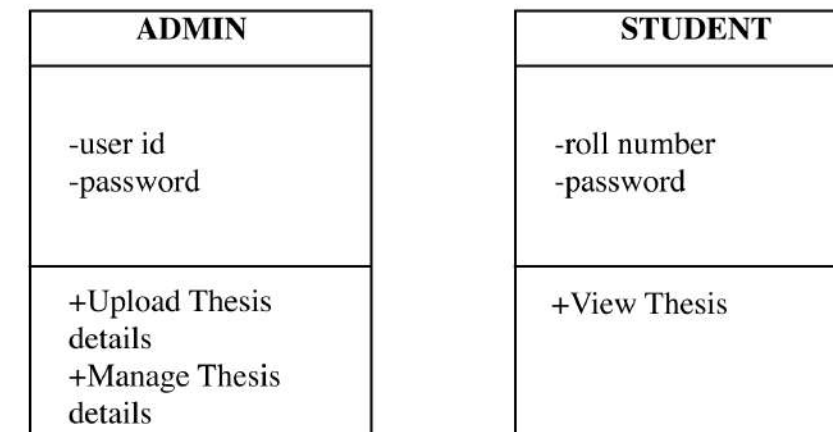
LIBRARY MANAGEMENT



ALUMNI MANAGEMENT

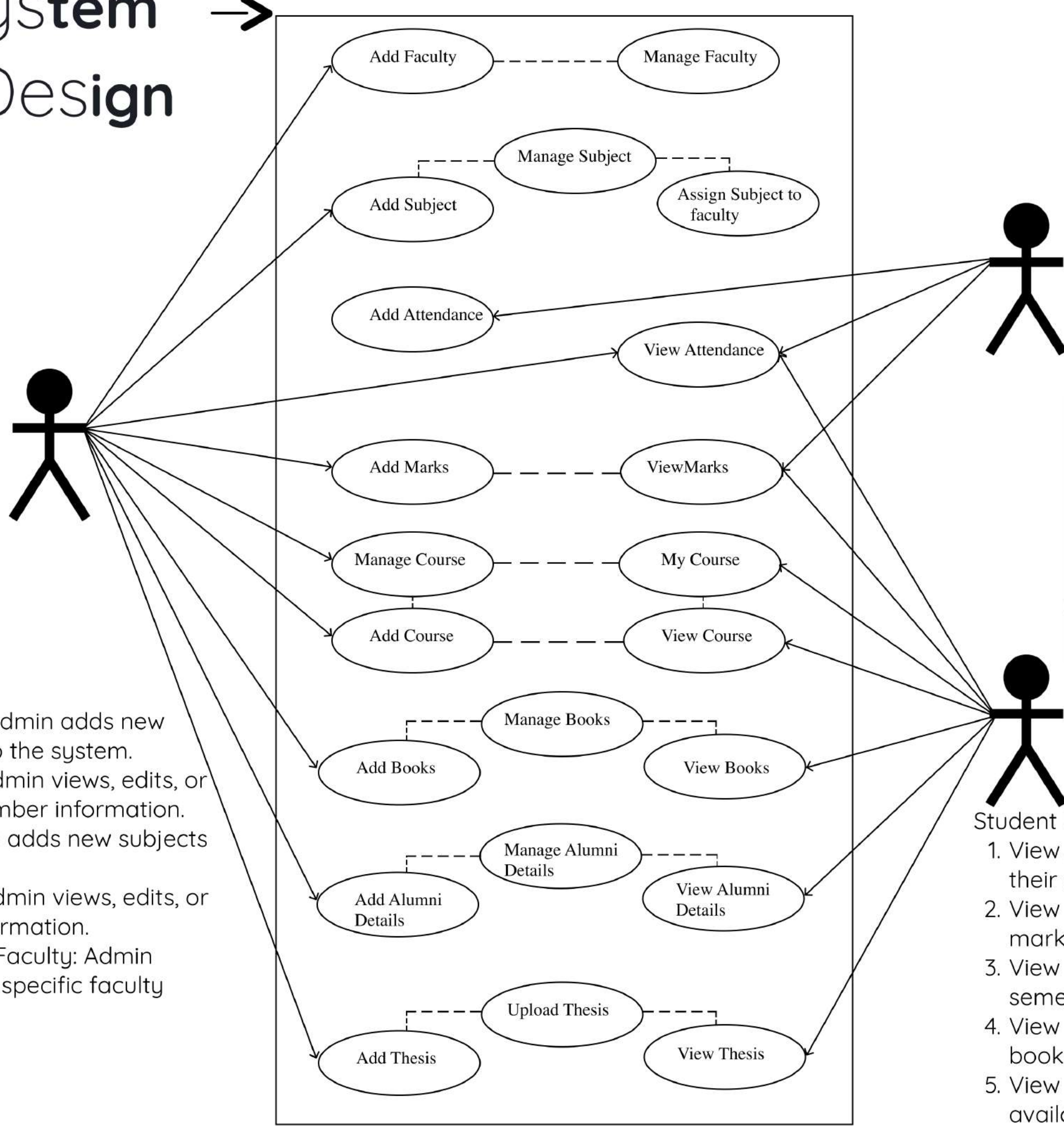


THESIS MANAGEMENT



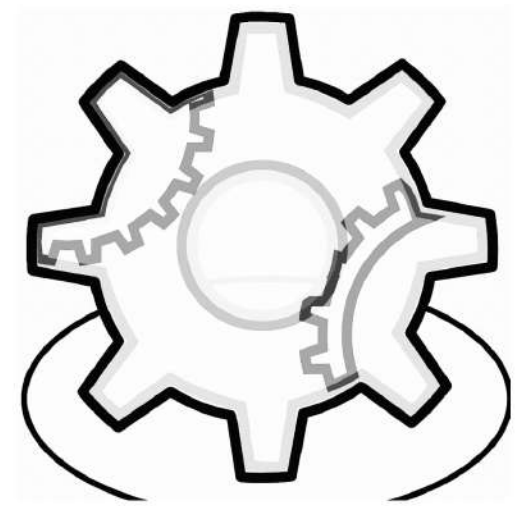
USE-CASE DIAGRAM FOR WHOLE SYSTEM

System Design



Faculty Use Cases:

1. Add Attendance: Faculty marks attendance for their assigned students.
2. View Attendance: Faculty views attendance records of their students.
3. Add Marks: Faculty enters marks for their assigned students.
4. View Marks: Faculty views marks details of their students.
5. Manage Courses: Faculty manages the courses they are responsible for.



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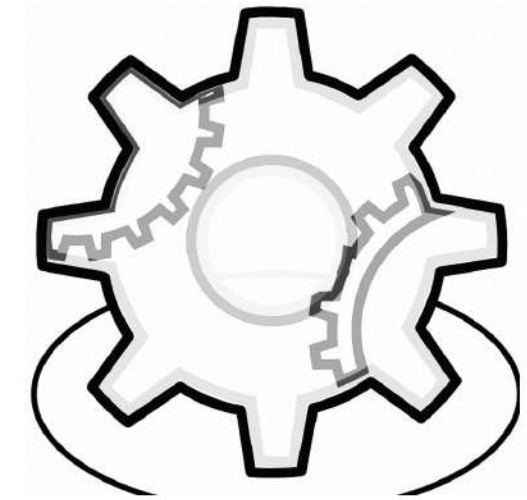
Admin Use Cases:

1. Add New Faculty: Admin adds new faculty members to the system.
2. Manage Faculty: Admin views, edits, or deletes faculty member information.
3. Add Subject: Admin adds new subjects to the system.
4. Manage Subject: Admin views, edits, or deletes subject information.
5. Assign Subjects to Faculty: Admin assigns subjects to specific faculty members.

Student Use Cases:

1. View Attendance Details: Students view their attendance records.
2. View Marks Details: Students view their marks details.
3. View Results: Students view their semester results.
4. View Books: Students browse and view books available in the library.
5. View Courses: Students browse and view available courses.

System Design



INTERACTION DIAGRAMS FOR THE SYSTEM



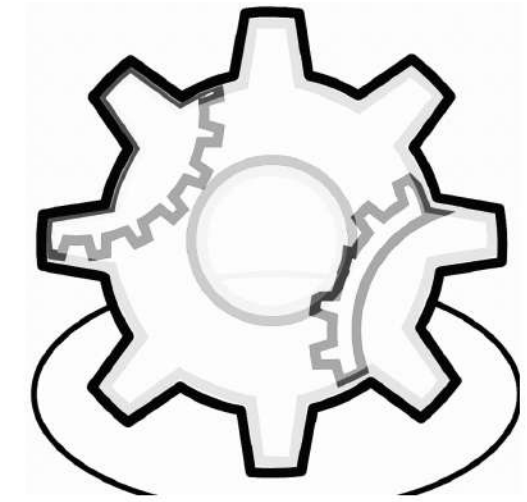
Admin and Faculty Interaction:

1. Admin manages faculty and subjects: Admin logs in, accesses the dashboard, manages faculty members by adding, editing, or deleting their information. Admin also assigns subjects to faculty members by selecting the "Subject Management" option and updating the database accordingly.
2. Faculty manages attendance: Faculty member logs in, accesses the dashboard, selects the "Attendance Management" option, views the list of assigned students, marks attendance for each student, and updates the attendance records in the database.
3. Faculty manages marks: Faculty member logs in, accesses the dashboard, selects the "Marks Management" option, views the list of assigned students, adds or views marks for each student, and updates the marks details in the database.

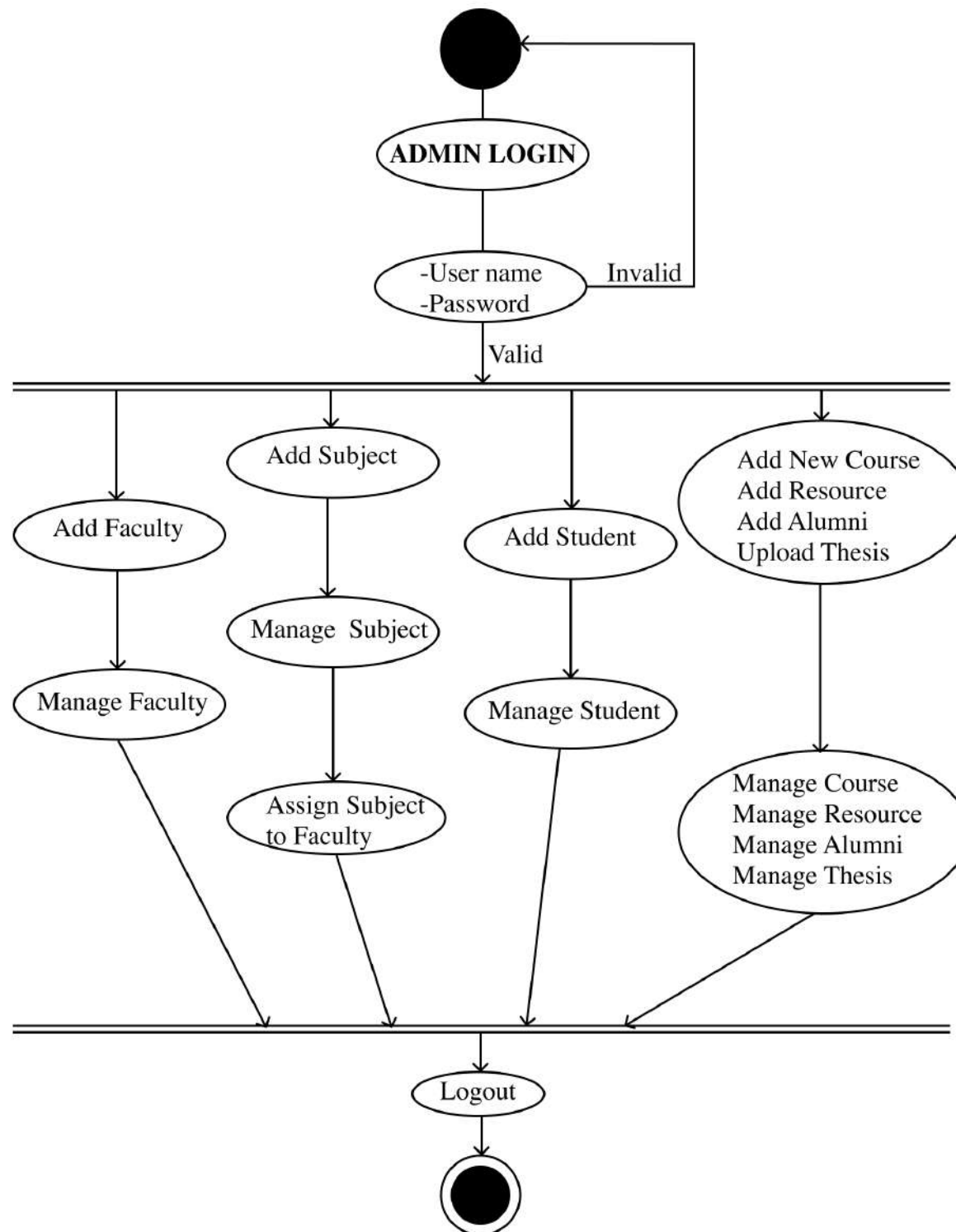
Student and Admin Interaction:

1. Student views results and attendance: Student logs in, accesses the dashboard, selects the "Results Management" option, views semester results retrieved from the database. Student also selects the "Attendance Management" option to view their attendance details.
2. Student explores resources: Student accesses the dashboard, selects the "Library Management System" option to view available books in the library and selects the "Learning Management System" option to view available courses.
3. Admin manages students: Admin logs in, accesses the dashboard, manages students by adding, editing, or deleting their information. Admin retrieves the list of students from the database, performs necessary actions, and updates the student information accordingly.

System Design



ACTIVITY DIAGRAM FOR ADMIN USER



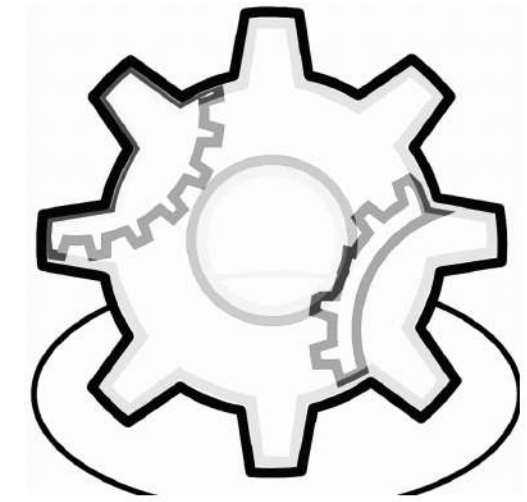
Main System:

1. Login: The system starts at the main login page where users can choose to log in as an admin, faculty member, or student.
2. User Dashboard: After successful login, each user is directed to their respective dashboard.

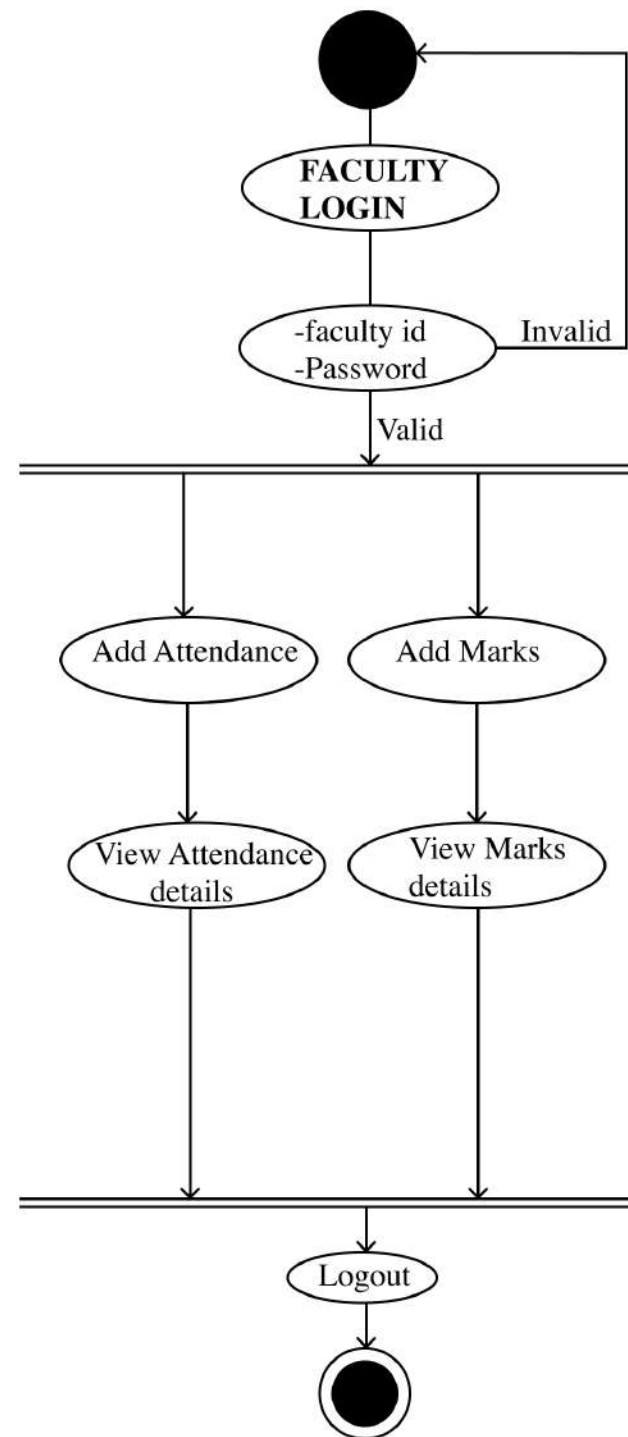
Admin Activities (On the admin dashboard):

1. Faculty Management:
 - Add new faculty: Admin can add details of a new faculty member.
 - Manage faculty: Admin can view, edit, or delete faculty member information.
2. Subject Management:
 - Add subject: Admin can add details of a new subject.
 - Manage subject: Admin can view, edit, or delete subject information.
 - Assign subjects to faculty: Admin can assign subjects to specific faculty members.
3. Student Management:
 - Add student: Admin can add details of a new student.
 - Manage student: Admin can view, edit, or delete student information.
4. Attendance Management:
 - View attendance details: Admin can view attendance records for all students.
5. Marks Management:
 - Add semester marks: Admin can enter marks for students.
 - View marks details: Admin can view marks details for all students.
6. Library Management:
 - Add resources: Admin can add new resources to the library.
 - Manage resources: Admin can view, edit, or delete library resources.
7. Learning Management System:
 - Add new courses: Admin can add new courses to the learning management system.
 - Manage courses: Admin can view, edit, or delete courses.
8. Alumni Management:
 - Add alumni details: Admin can add details of alumni.
 - Manage alumni details: Admin can view, edit, or delete alumni information.
9. Thesis Management:
 - Upload thesis details: Admin can upload thesis details.
 - Manage thesis details: Admin can view, edit, or delete thesis information.

System Design →



ACTIVITY DIAGRAM FOR FACULTY USER

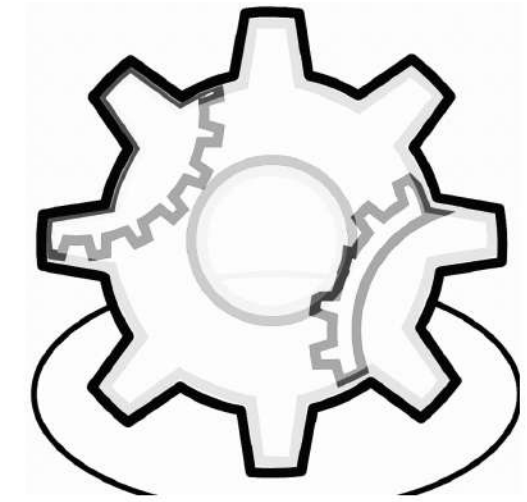


Faculty Activities (On the faculty dashboard):

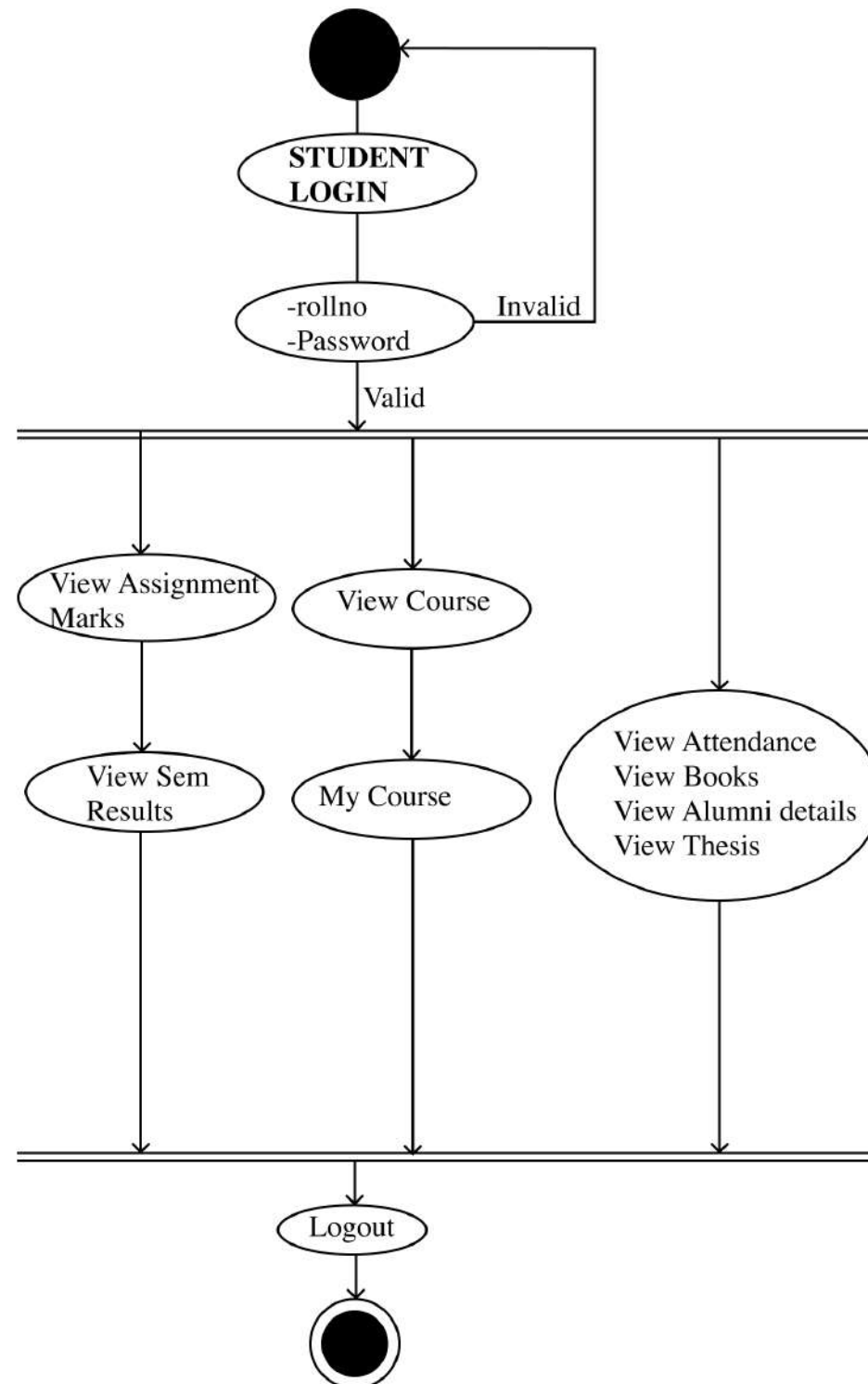
1. Attendance Management:
 - Add attendance: Faculty members can mark attendance for their assigned students. They can record the presence or absence of students during class sessions.
 - View attendance: Faculty members can view the attendance records of their students. They can access and review the attendance history for each student.
2. Marks Management:
 - Add marks: Faculty members can enter marks for their assigned students. They can input the scores or grades achieved by students in various assessments, tests, or assignments.
 - View marks: Faculty members can view the marks details of their students. They can access and review the marks obtained by each student in different subjects or courses.

By managing attendance and marks, faculty members can effectively track and evaluate student performance, monitor attendance patterns, and provide necessary feedback to enhance learning outcomes. These activities allow faculty members to maintain accurate records and stay updated on student progress, enabling them to make informed decisions and provide appropriate support when needed.

System Design



ACTIVITY DIAGRAM FOR STUDENT USER



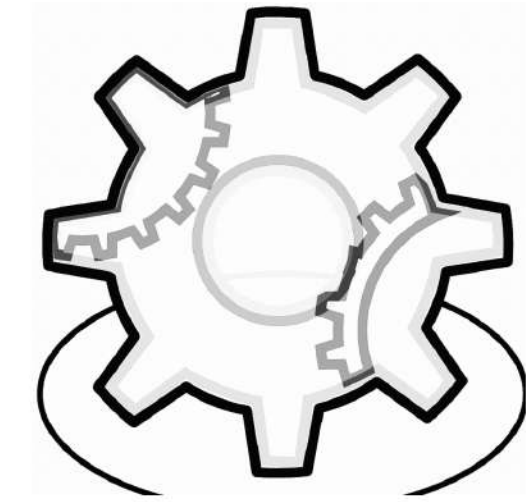
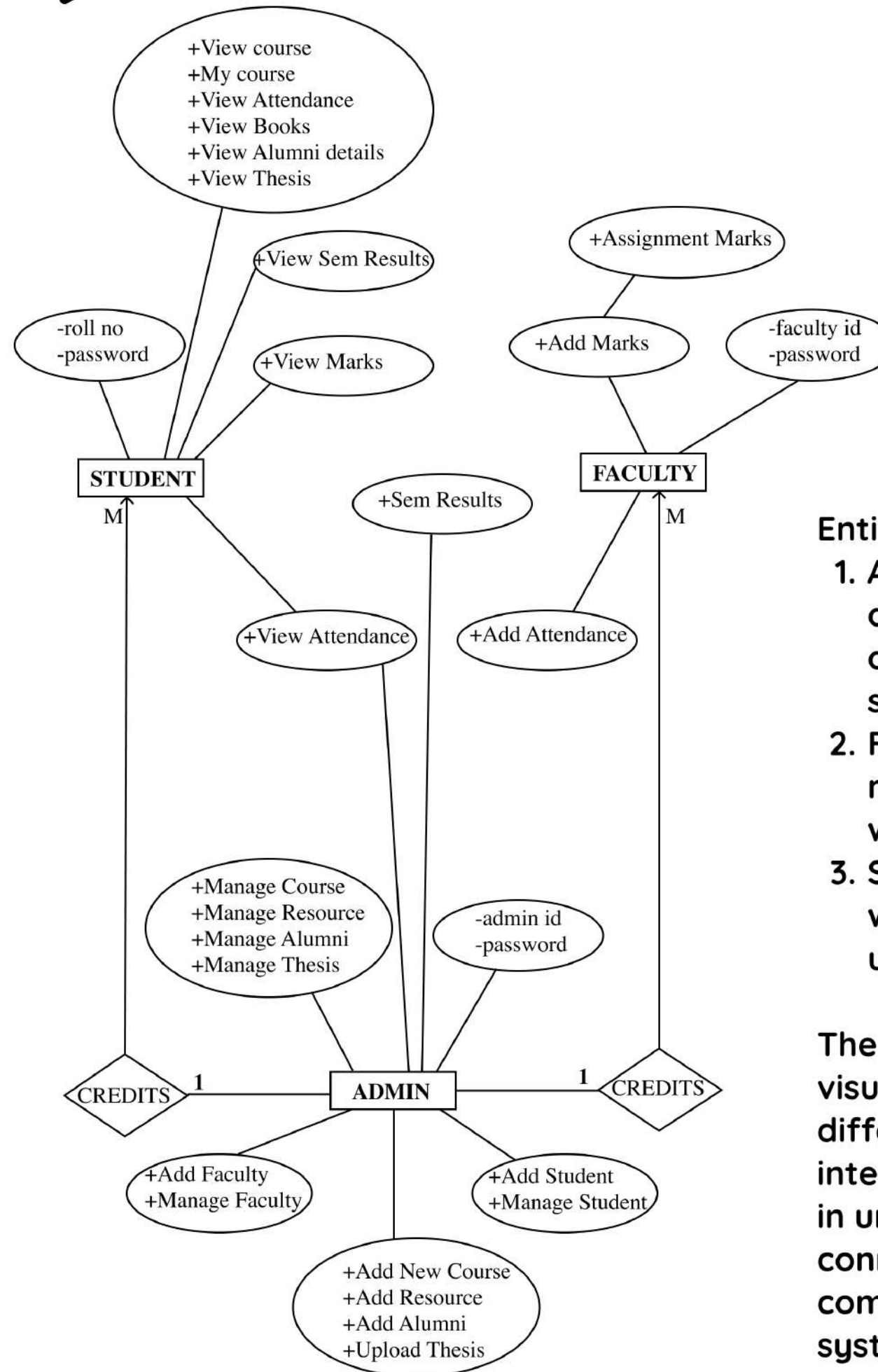
Student Activities (On the student dashboard):

1. Attendance Management:
 - View attendance details: Students can access and view their attendance records. They can check their attendance history to monitor their presence in class sessions.
2. Marks Management:
 - View marks details: Students can view their marks details. They can review the scores or grades they have achieved in various assessments and assignments.
3. Results Management:
 - View results: Students can view their semester results. They can check their overall performance and grades obtained in each subject or course.
4. Library Management System:
 - View books: Students can browse and view the books available in the library. They can search for specific books or explore different categories.
5. Learning Management System:
 - View courses: Students can browse and view the available courses. They can explore different subjects, course descriptions, and course materials.
 - My courses: Students can view the courses they are enrolled in. They can access course materials, assignments, and other relevant information specific to their enrolled courses.
6. Alumni Management:
 - View alumni details: Students can access and view details of alumni. They can learn about the accomplishments and career paths of former students.
7. Thesis Management:
 - View thesis: Students can view thesis details. They can access and read research work or projects submitted by other students.

The student dashboard provides students with convenient access to important information related to their attendance, marks, results, available resources, courses, alumni network, and academic achievements. It empowers students to track their progress, stay informed about their academic journey, and utilize various educational resources effectively.

System Design

ENTITY - RELATIONSHIP DIAGRAM FOR SYSTEM



Entities:

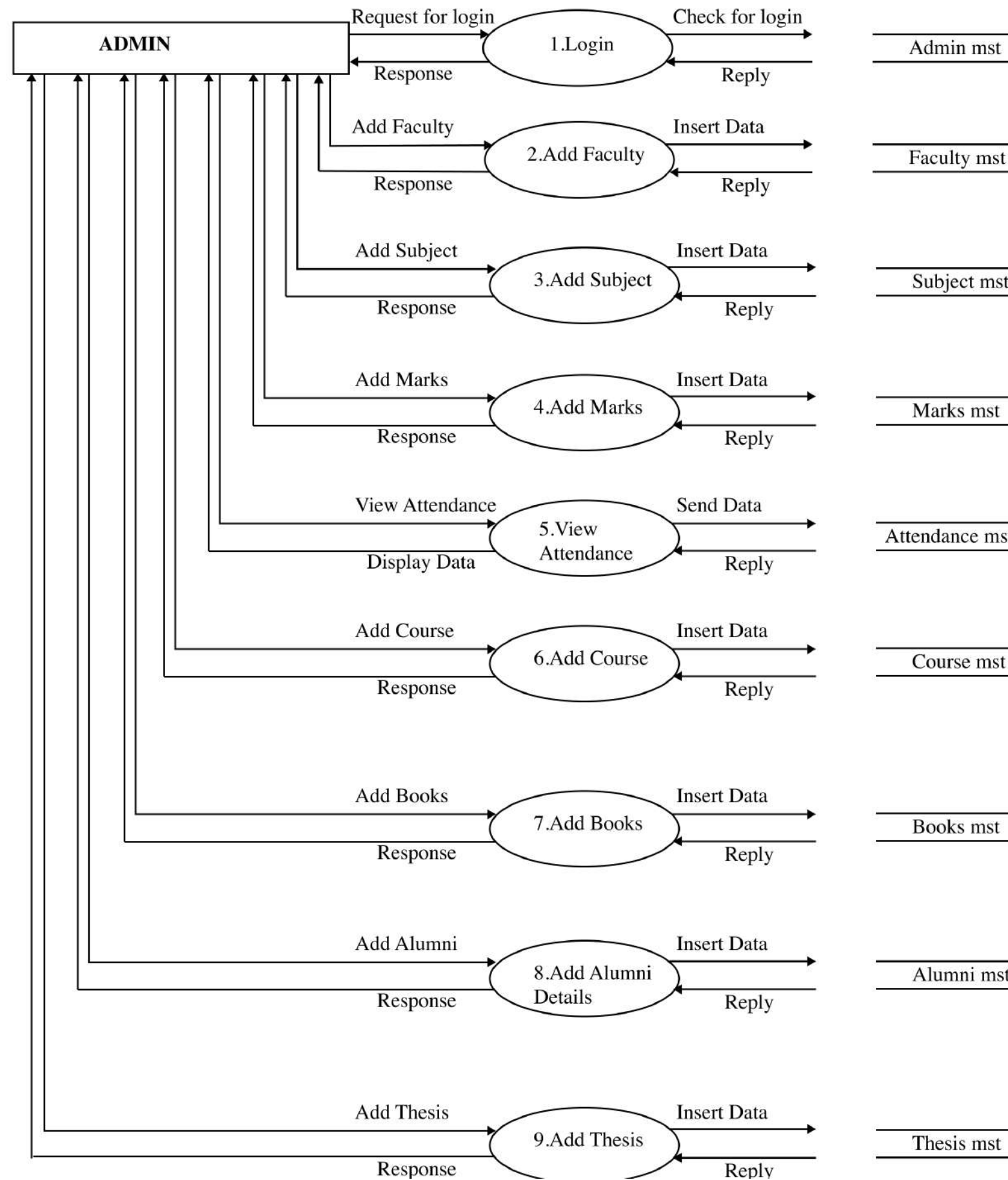
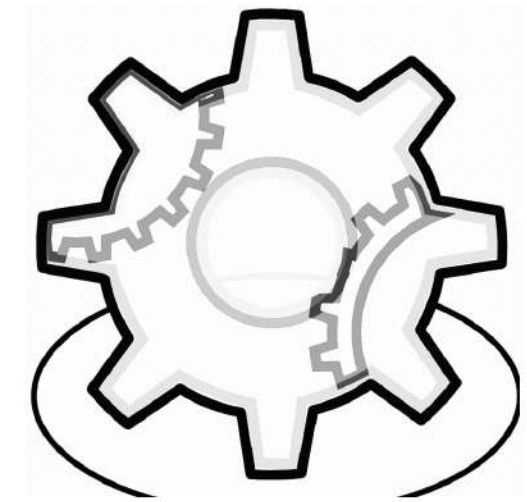
1. Admin: Represents the administrator or system administrator who manages the system.
2. Faculty: Represents the faculty members or teachers who interact with the system.
3. Student: Represents the students who are enrolled in courses and utilize the system.

The Entity-Relationship Diagram visualizes the relationships between different entities and their interactions within the system. It helps in understanding the data flow and connections between various components, facilitating effective system design and development.

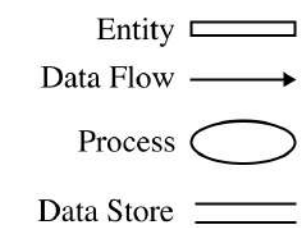
System Design



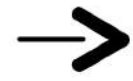
DATA FLOW DIAGRAM FOR THE ADMIN USER



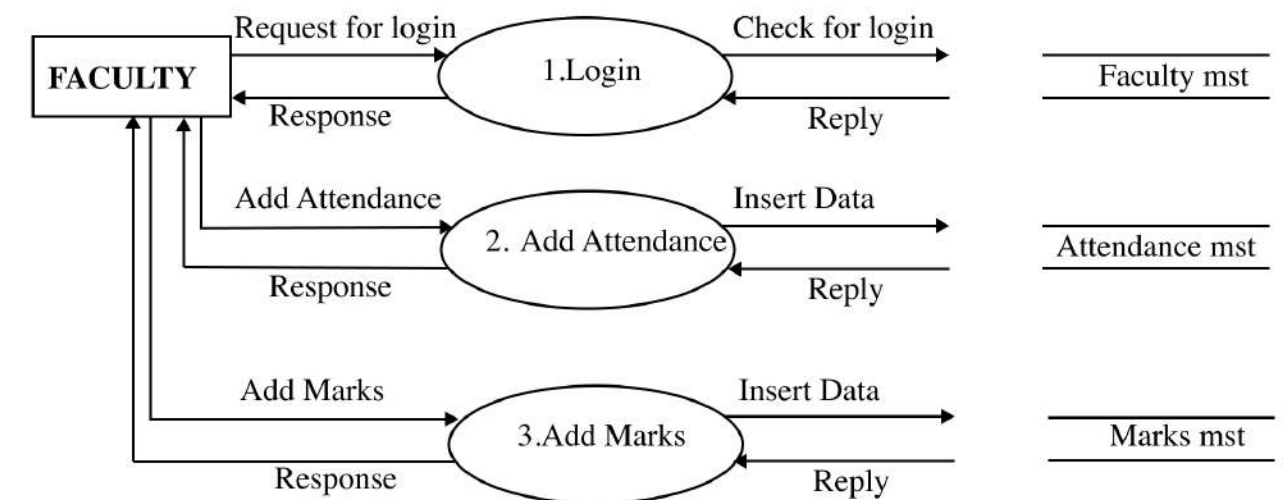
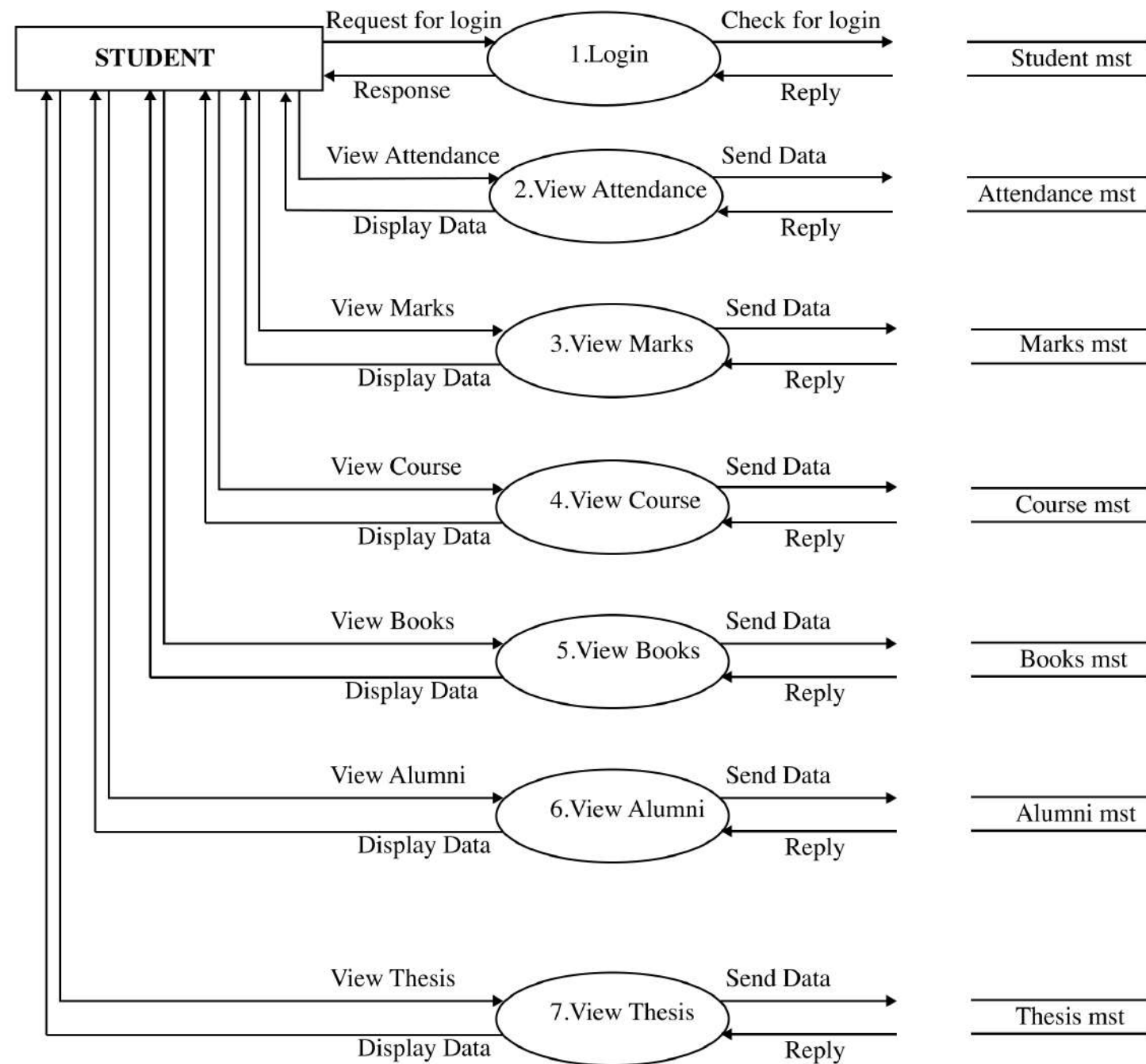
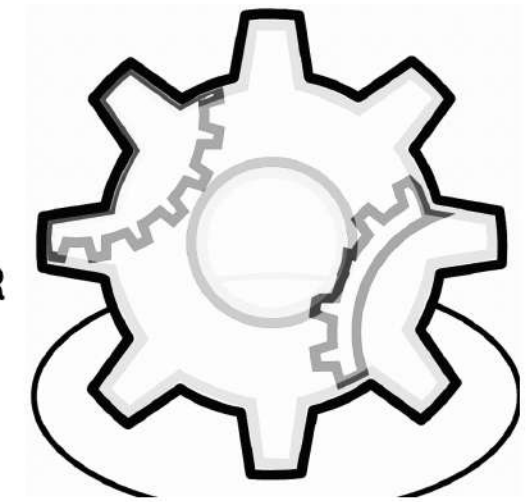
MST - MINIMUM SPANNING TREE



System Design



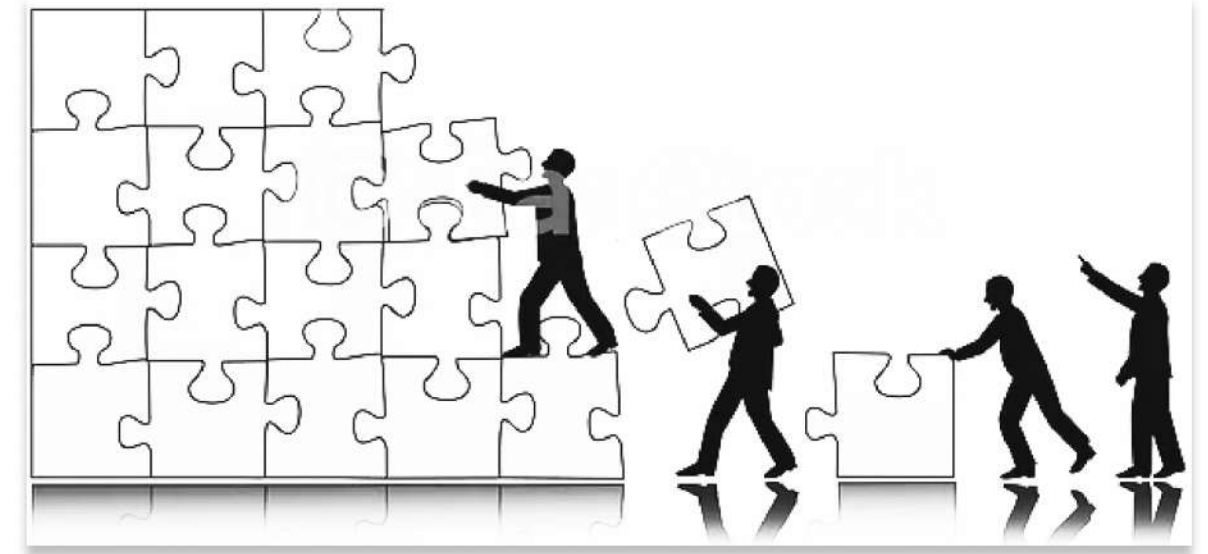
DATA FLOW DIAGRAM FOR THE STUDENT & FACULTY USER



MST - MINIMUM SPANNING TREE

- Entity
- Data Flow
- Process
- Data Store

Implementation



Step 1: Install Django

- Ensure that Django is installed on your system. You can install it using pip:
- pip install Django
-

Step 2: Create Project Folder

- Create a folder named "department_Management_System" (or any desired name) for your project.
- Open the project folder using your preferred integrated development environment (IDE), such as VS Code.
-

Step 3: Create Django Project

- Open the terminal within the project folder.
- Run the following command to create a new Django project named.
-

Step 4: Create Apps

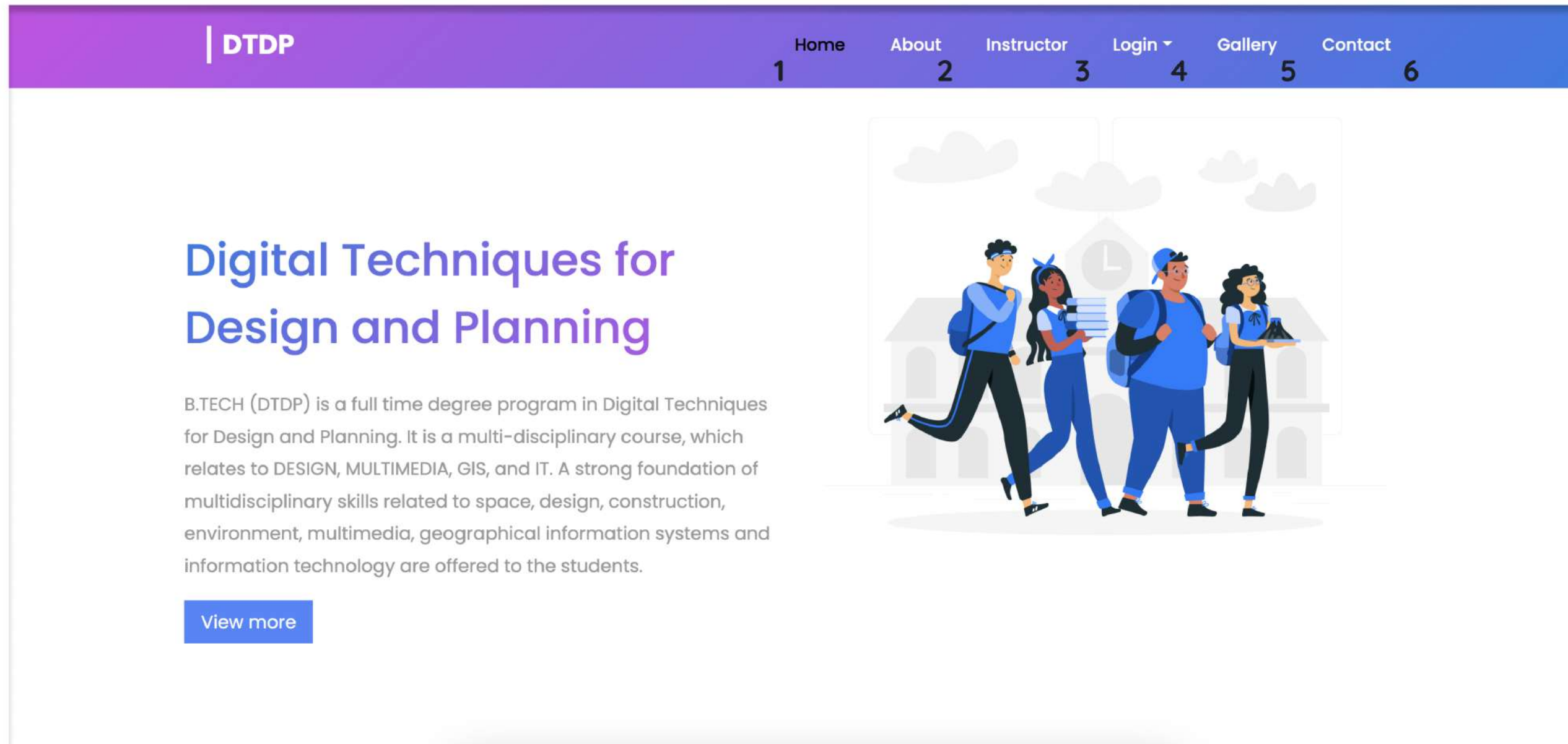
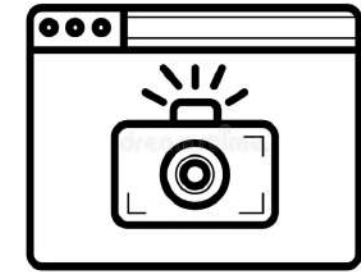
- Enter inside the "department_Management_System" folder created earlier.
- Create four Django apps for different functionalities of the system: "adminapp", "facultyapp", "studentapp", and "mainapp".
-

Step 5: Configure Installed Apps

- Open the "settings.py" file located inside the folder.

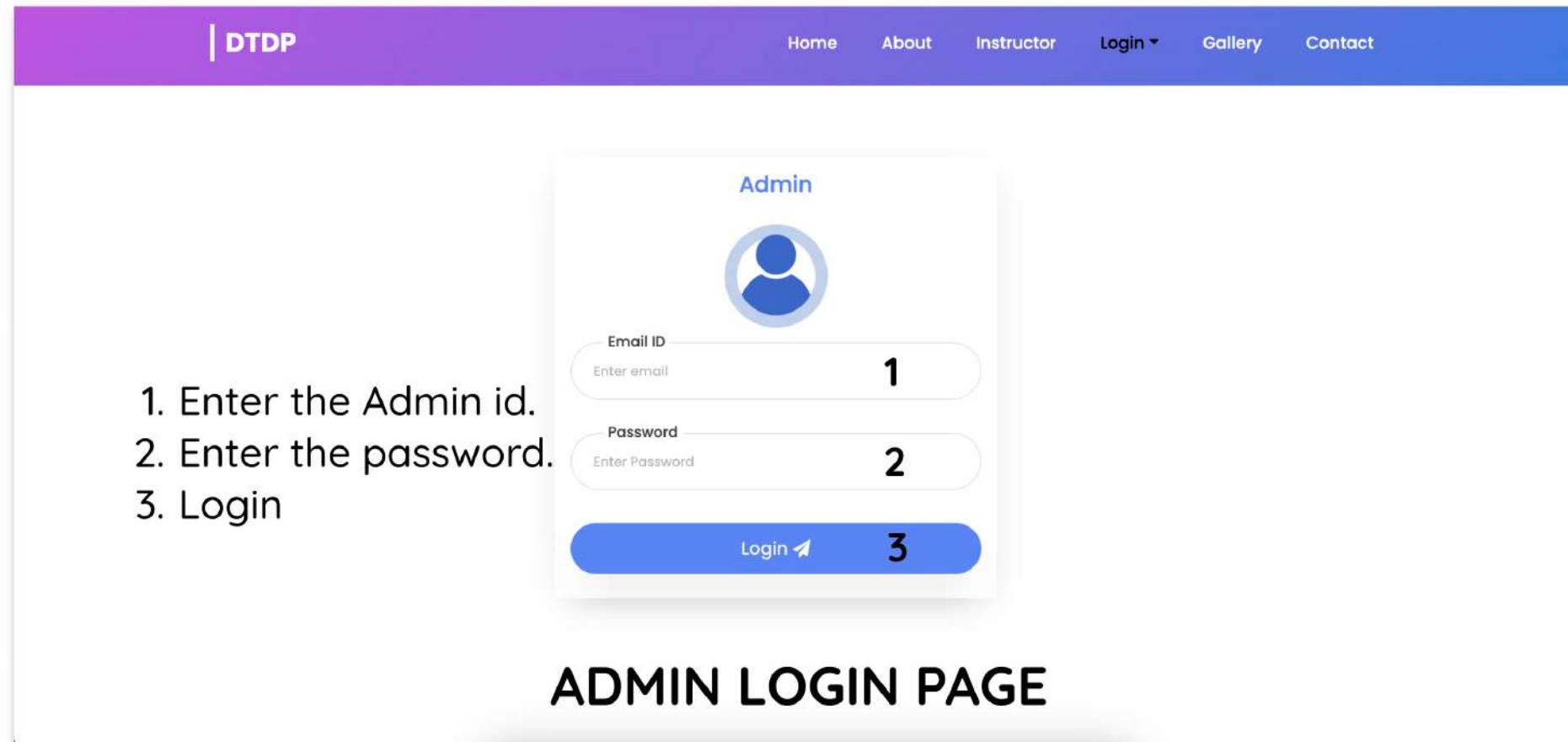
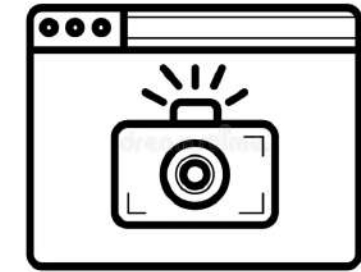
```
INSTALLED_APPS = [  
    'django.contrib.admin',  
    'django.contrib.auth',  
    'django.contrib.contenttypes',  
    'django.contrib.sessions',  
    'django.contrib.messages',  
    'django.contrib.staticfiles',  
    'adminapp',  
    'facultyapp',  
    'mainapp',  
    'studentapp',  
]
```

By following these steps, have set up the basic structure of your Django project for the DTDP department management system. No



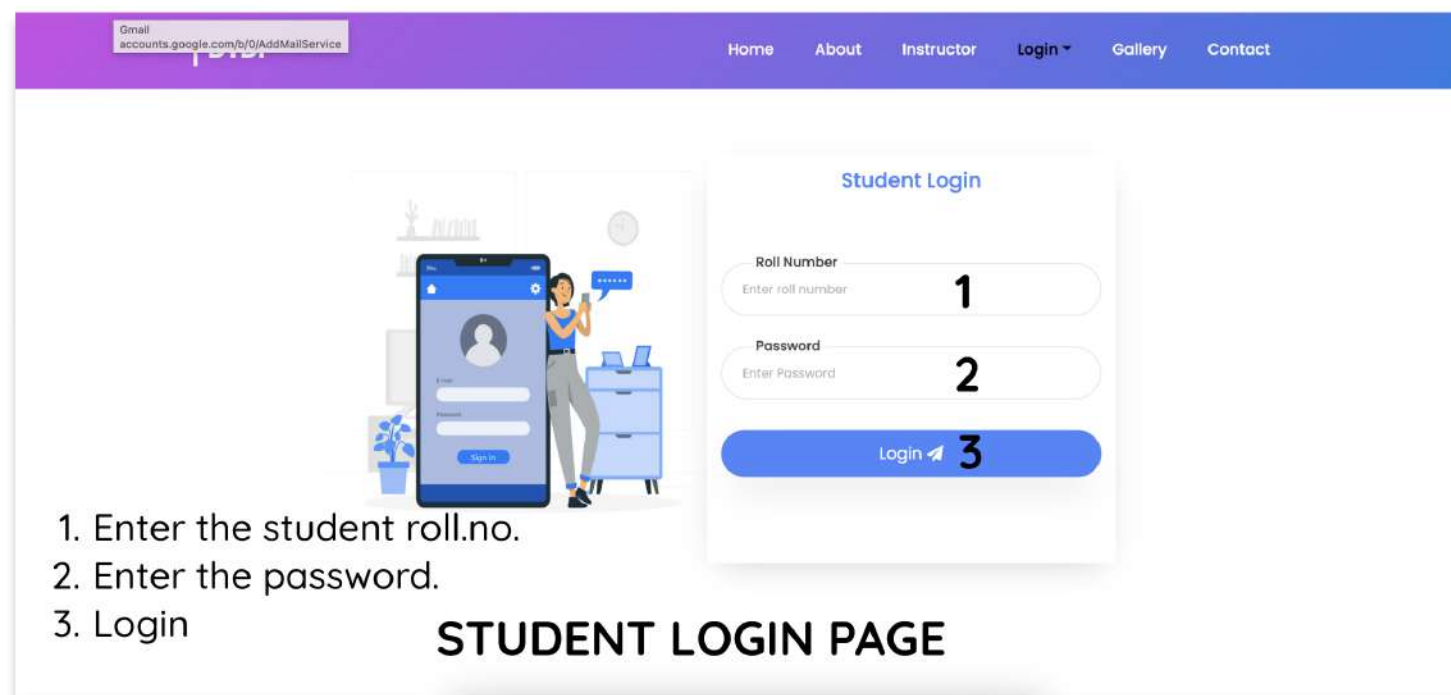
1. Home page of our website.
2. About page of the website
3. The instructors of our Department.
4. Login for 3 users Admin, Faculty and Student.
5. Gallery of our Department is shown here.
6. Contact page for contacting to our Department.

Screenshots



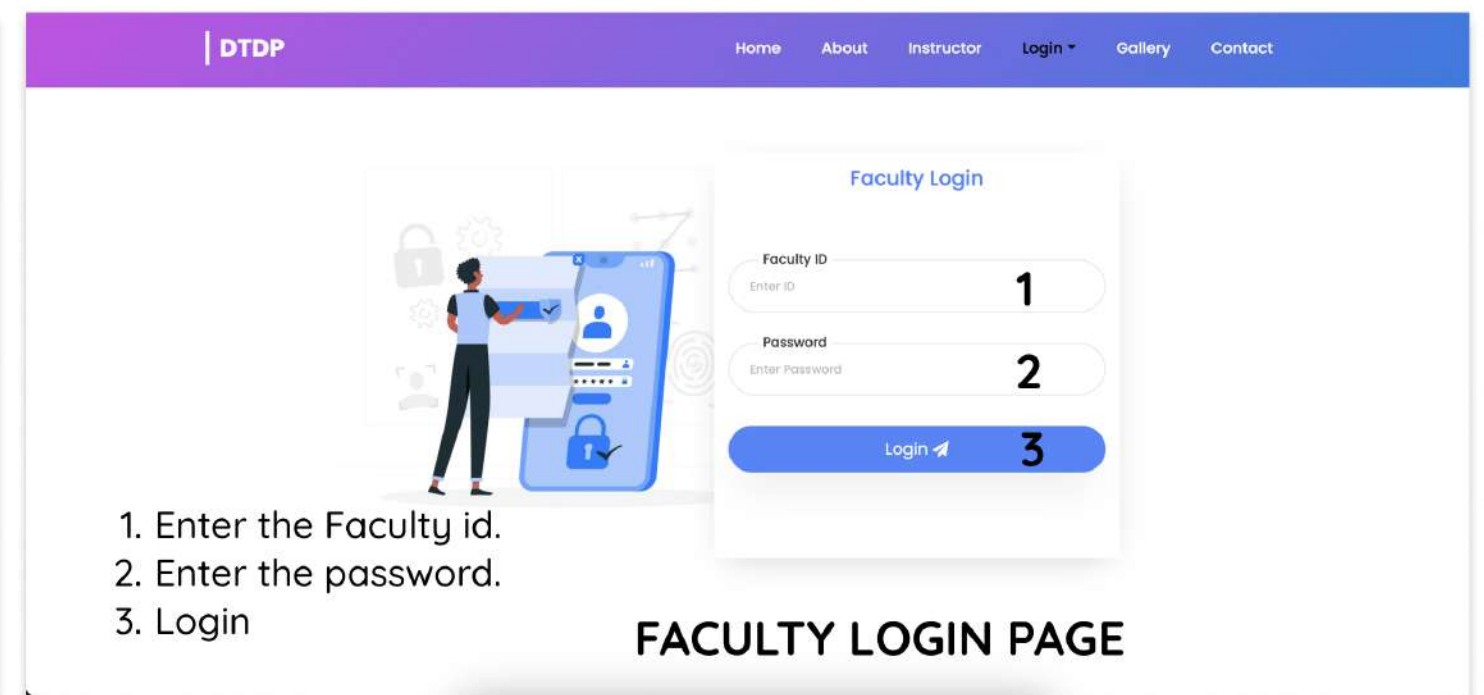
1. Enter the Admin id.
2. Enter the password.
3. Login

ADMIN LOGIN PAGE



1. Enter the student roll.no.
2. Enter the password.
3. Login

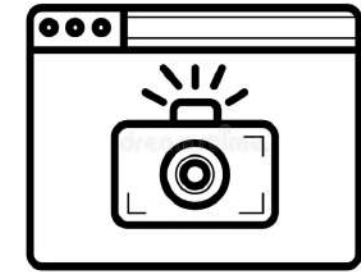
STUDENT LOGIN PAGE



1. Enter the Faculty id.
2. Enter the password.
3. Login

FACULTY LOGIN PAGE

Screenshots →



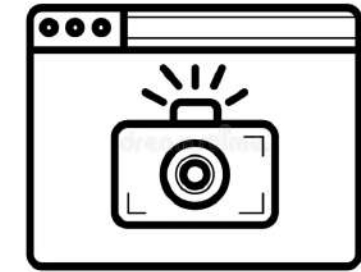
#	Profile	Faculty Name	Faculty ID	Faculty Email	Status	Action
1		K. Vineeth Kumar	6		accepted	1 Change Status Delete 2
2		M. Sarah Nireekshana	5		accepted	Change Status Delete
3		B. Prithvi Raj	4		accepted	Change Status Delete
4		S. RAVI KIRAN	1		accepted	Change Status Delete
5		P.S.S Nagalakshmi	2		accepted	Change Status Delete
6		L. Lavanya Das	3		accepted	Change Status Delete
7		P. Sunitha	7.		accepted	Change Status Delete
8		Bhargava Teja Srikanta	8		accepted	Change Status Delete

1. We have to Change the Status of acceptance/reject.
2. Delete the faculty.
3. Logout.

#	Student Name	Student RollNumber	Student Batch	Status	Action
1	AVIRE ANUSHA	09011BC004	2009	Alumni	Delete 2
2	SNEHA SRUJANA N	08011BC038	2008	Alumni	Delete
3	RAVI KIRAN S	08011BC028	2008	Alumni	Delete
4	BHARATHI BHARADWAJA K K	08011BC006	2008	Alumni	Delete
5	PRITHVI RAJ BADDULA	08011BC023	2008	Alumni	Delete
6	BALANAGA VENKATA HARISH G	08011BC005	2008	Alumni	Delete
7	ADITYA SRINU SRIRANGAM	08011BC002	2008	Alumni	Delete
8	ANITHA GAJIELA	08011BC004	2008	Alumni	Delete
9	ABHILASH KONALA	08011BC001	2008	Alumni	Delete

1. We have to Search the alumni with batch.
2. Delete the alumni.
3. Logout.

→ Screenshots



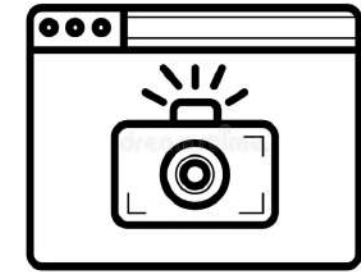
1. We have to enter the thesis name here.
2. We have to choose the file which we wanted to upload.
3. We have to submit the file which we uploaded.
4. Logout .

1. We have to enter the student name.
2. We have to enter student email.
3. We have to select the semester.
4. We have to enter the student contact number.
5. We have to enter the student roll number.
6. We have to select the branch by default it is DTDP.
7. We have to enter the student Address .
8. We have to Choose the profile pic of the student.
9. Logout

1. We have to enter the subject name.
2. We have to choose which semester student is studying .
3. We have to submit after the selection.
4. We have to select the branch by default it is DTDP.
5. Logout .

1. We have to add the title name.
2. We have to add the publisher name.
3. We have to add the author name.
4. We have to select the branch.
5. If we submit the resource to it the data will store in database.
6. Logout.

Screenshots →



Faculty ID 123456A 6 Logout

Attendance Management / Add Attendance

Branch: Select Branch **1** Semester: Select Semester **2** Subject: Select Subject **3**

Submit **4**

#	Student Profile	Student Name	Student Rollnumber	Action 5
1		Ravi Chandran	Varun Yadav	<input type="checkbox"/>
2		Ravi Chandran	Varun Yadav	<input type="checkbox"/>
3		Ravi Chandran	Varun Yadav	<input type="checkbox"/>
4		Ravi Chandran	Varun Yadav	<input type="checkbox"/>
5		Ravi Chandran	Varun Yadav	<input type="checkbox"/>

file:///Users/radhakrishnadeshpande/Downloads/Dept ERP/faculty template/index.html

- 1.Faculty have to Select the Brach by default DTDP.
- 2.Faculty have to select the semester.
- 3.Faculty have to select the subject to which we can add.
- 4.If faculty click on submit then he can view the students who are there in those customized selection.

- 5.Faculty can action the present if clicked absent if not clicked.
- 6.Logout

Faculty ID 123456A 6 Logout

Marks Management / Add Marks

Branch: Select Branch **1** Semester: Select Semester **2** Subject: Select Subject **3**

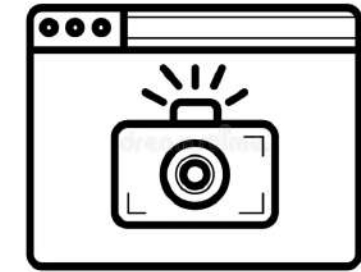
Submit **4**

#	Student Profile	Student Name	Student Rollnumber	Add Marks 5
1		Ravi Chandran	R123456	<input type="text"/>
2		Ravi Chandran	R123456	<input type="text"/>
3		Ravi Chandran	R123456	<input type="text"/>
4		Ravi Chandran	R123456	<input type="text"/>
5		Ravi Chandran	R123456	<input type="text"/>

- 1.Faculty have to Select the Brach by default DTDP.
- 2.Faculty have to select the semester.
- 3.Faculty have to select the subject to which we can add.

- 4.If faculty click on subn
- 5.Faculty can add Mark:
- 6.Logout

→ Screenshots



#	Subject Name	Marks(20)
1	JAVA	18
2	PYTHON	6
3	DIANGO	18
4	ENGLISH	6
5	MATHS	18

- 1.Student have to Select the Semester.
- 2.If student submit the semester he can view the marks he scores.
- 3.Logout.

#	Thesis Name	Thesis File
1	Python	Open File
2	English	Open File
3	Maths	Open File
4	HTML	Open File
5	Java	Open File

- 1.Student can open the respective thesis file for requirement .
- 2.Logout.

#	Book Title	Author Name	Publisher Name	Preferred Branch
1	Data Structures	Ravi Chandran	Varun Yadav	CSE
2	Data Structures	Ravi Chandran	Varun Yadav	CSE
3	Data Structures	Ravi Chandran	Varun Yadav	CSE
4	Data Structures	Ravi Chandran	Varun Yadav	CSE
5	Data Structures	Ravi Chandran	Varun Yadav	CSE

- 1.Logout.
Student can view library resources here

#	Course Photo	Course Name	Course Price	Course Description
1		Django Development	RS.3900	Django is a free and open-source, Python-based web framework that follows the model-template-viewsarchitectural pattern. It is
2		Python Development	RS.5200	Python is a advanced and open-source, Python-based web framework that follows the model-template-viewsarchitectural

- 1.Logout.
Student can view Courses here.

Conclusion



In conclusion, the DTDP Department Management system website provides a comprehensive solution for efficiently managing various aspects of the department. With features such as login, user-friendly dashboards, and extensive functionality, the administrator can effectively manage faculty, subjects, students, attendance, marks, library resources, learning materials, alumni, and thesis details. Faculty members can access personalized dashboards to handle attendance, marks, and stay updated with departmental information. Students can log in to view attendance details, marks, results, library resources, learning materials, alumni information, and thesis details. This website enhances efficiency, organization, and communication within the department, benefiting administrators, faculty members, and students. With its user-friendly interface and robust features, the DTDP Department Management system greatly improves departmental management.



Future Scope



To further enhance the DTDP Department Management system, several key features can be implemented. Integration with the university's Student Information System would streamline data synchronization, while advanced reporting and analytics would provide valuable insights on student performance and resource utilization. Online course registration would automate the enrollment process, and robust communication features would facilitate seamless interaction between administrators, faculty, and students. A document management system would ensure efficient storage and collaboration of important documents. Integration with Learning Management Systems would create a unified platform for academic activities. A mobile application would offer greater accessibility, and feedback and alumni engagement modules would contribute to continuous improvement and networking opportunities. Integration with external systems would provide additional resources and partnerships.

