



PROJECT FOR CSE471

8.5

## Title of the Project: E-Learning Platform

**Group Number: 09**

### **Group Members:**

Student ID	Student Name
21101098	Shaiane Prema Baroi
18301231	Ashfia Khanam
19301095	Moin Uddin Ahmed

## System Request

1. Project Sponsor: Shaiane Prema Baroi, CEO of Prema Organization LTD; Ashfia Khanam, Chief Managing Director of Khan Corporation; Moin Uddin Ahmed Chief Software Architect of Titanium Tech Industries LTD.
2. Business Need: This cross-platform web service will enable teachers and students to use one site for all educational purposes including an upgraded communication system, better enrollment and learning systems, and much more; making it the most dynamic educational platform.
3. Business Requirements:
  - a. The website will be accessible by admins, educators and students.
  - b. The admins will be able to –
    - update courses and its related materials
    - assign and update educators and students related to each course
  - c. The educators will be able to –
    - enroll students into courses
    - upload and update course materials and assessments
    - mark assessments
  - d. The students will be able to –
    - enroll into a course (if permitted)
    - view the course materials
    - submit and edit assessments
    - view their progress through the grade sheet

## ASSIGNMENT FOR CSE471

- e. There will be an automated grading system for certain type of assessments which would provide a final grade sheet of all courses attended and their cumulative marks
  - f. There will be public and private text, voice and video channels for all forms of communication within the users of the platform.
  - g. There will be unique individual student and educator profiles.
4. Business Value: The major goal of this service is to establish a positive and beneficial interaction between teachers and students by using an interactive communication system. The teachers and students can be sure to have a great experience and dependable service, due to the fact that our web service will have very competent administrators. As a result, the current teachers and students will be extremely delighted and faithful to us, which will generate significant profit for us. Thus, we can anticipate seeing this platform used more frequently in schools, colleges, and universities.

Conservative estimates of tangible values to the company include the following:

- a. Lite Plan: Consists course management and automated grading system. Approximately 100,000 Tk per year.
- b. Full Plan: Consists course management, automated grading system, communication system. Approximately 120,000 Tk per year.  
*→ customized package*

Conservative estimates of intangible values to the company include the following:

- a. improved learning service
- b. secured and accurate grading
- c. real-time communication without hassle of using other platforms like google classroom, discord, slack, etc.

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### 5. Special Issues or Constraints:

- a. There may be a weekly maintenance period downtime to improve security and reliability.
- b. There may be a possibility that there may not be a public communication system if the educators do not permit it.
- c. There may be a delay in service if the internet connection remains down accidentally.
- d. There is a possibility that this service may only run from urban areas because in rural areas there might be some problem of power loss and bandwidth limitation resulting in downtime.



PROJECT FOR CSE471

15

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## Functional and Non-Functional Requirements

### Functional Requirements

1. There will be separate login and/or registration for admins, course coordinators, educators and students.
2. There will be separate tabs on the homepage to consist general information about the university such as new announcements, news and notices, details about courses and educators, etc. which can be viewed with/without signing in.
3. All the users will be able to direct message each other, irrespective of their role.
4. All the users will have a profile which can be updated by the users themselves.
5. The admins will be able to add, remove or update changes to the different tabs on homepage.
6. The admins will be able to add, remove and update the information of new course coordinators, educators and students who can access their respective features.
7. The admins will be able to add, remove and update courses according to the university requirements.
8. The admins must initially assign one course coordinator to each course.
9. The admins will be able to add, remove and update course materials of any course.
10. The course coordinator will be able to add, remove or update educators and students assigned to each course.
11. The course coordinator will be responsible for the dashboard of the course. They will be able to add, remove or update the general materials of the course such as course outline, mark distribution, books, related notes, video contents, announcements etc.

ASSIGNMENT FOR CSE471

12. The course coordinator will be able to add, delete or update educators and students in the section-wise tabs.
13. The educators must be assigned to their respective courses by the course coordinator.
14. The educators will not be able to make any changes to the dashboard.
15. The educators will be able to invite, add, remove or update students in their section-wise tabs.
16. The educators will be responsible for their respective section-wise tabs. They will be able to add, remove or update additional course materials according to their own preference such as supplementary video contents, notes, announcements, etc.
17. The educators will be able to create private and public rooms (video + audio voice channels) to interact with the students of their sections.
18. The students will be able to enroll into a course upon invitation or enrolled directly by a course coordinator.
19. The students will be able to enroll into a section tab upon invitation or enrolled directly by a course coordinator or faculty.
20. The students should be able to view all course contents in the course dashboard and section-wise tab.
21. The educators will be able to conduct assessments such as quizzes, assignments and/or homeworks.
22. There will be a Progress tab in each course for each student consisting their marks from the given assessments.

### Non Functional Requirements

1. The website can be accessed from any devices (PC, Mobile, Tablets) through modern browsers.
2. Relatively faster loading time
3. The server can handle sudden peaks of web requests therefore less downtime.
4. The website's maintenance period should be on holidays so that students and teachers are comfortable.
5. There will be daily security checking for fid out whether there is any flaws in system.
6. Evaluation system is relatively faster so students will get their marks quickly.

Add more security feature



59

PROJECT FOR CSE471

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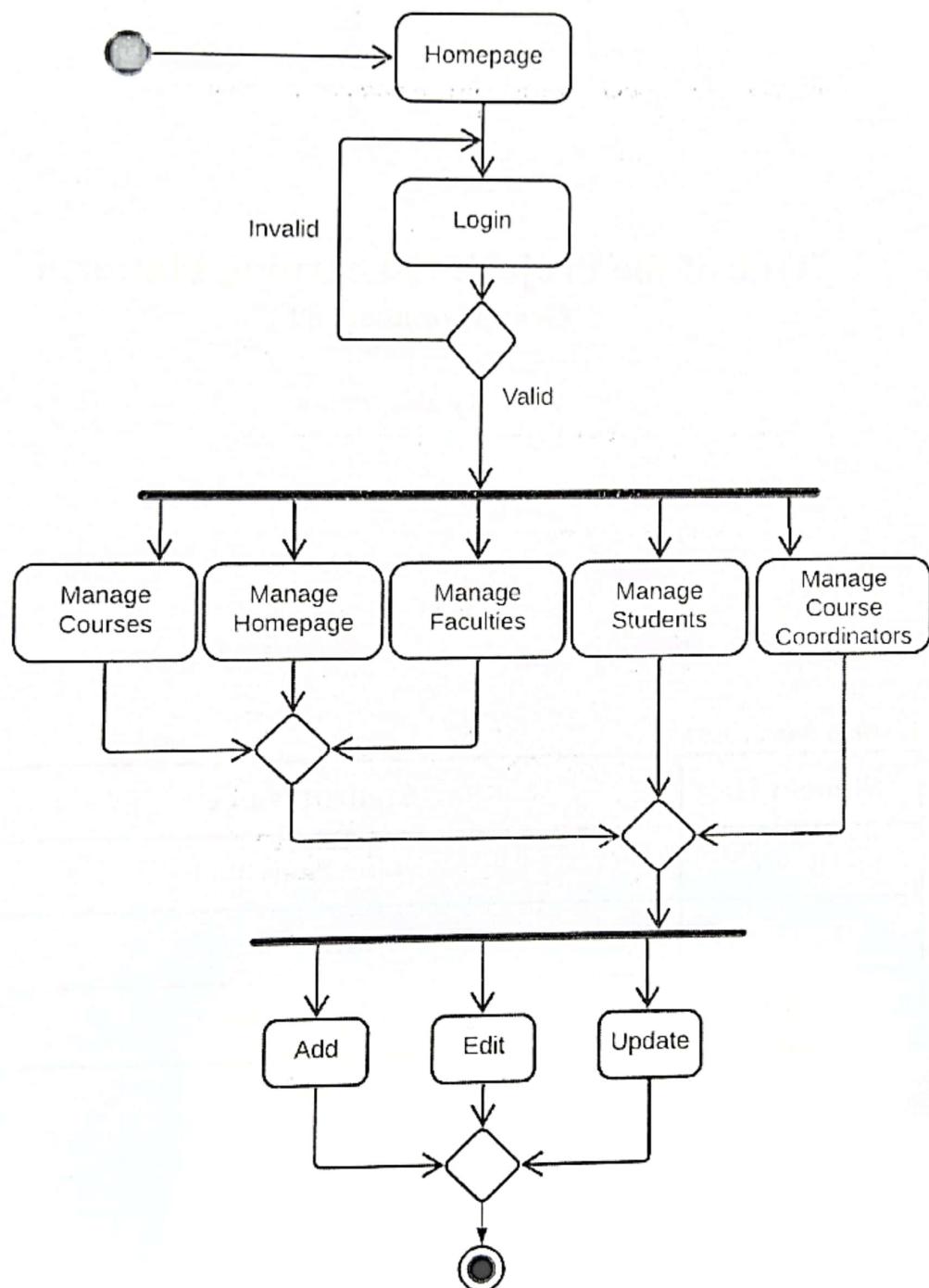
**Activity Diagrams**

**Group Members:**

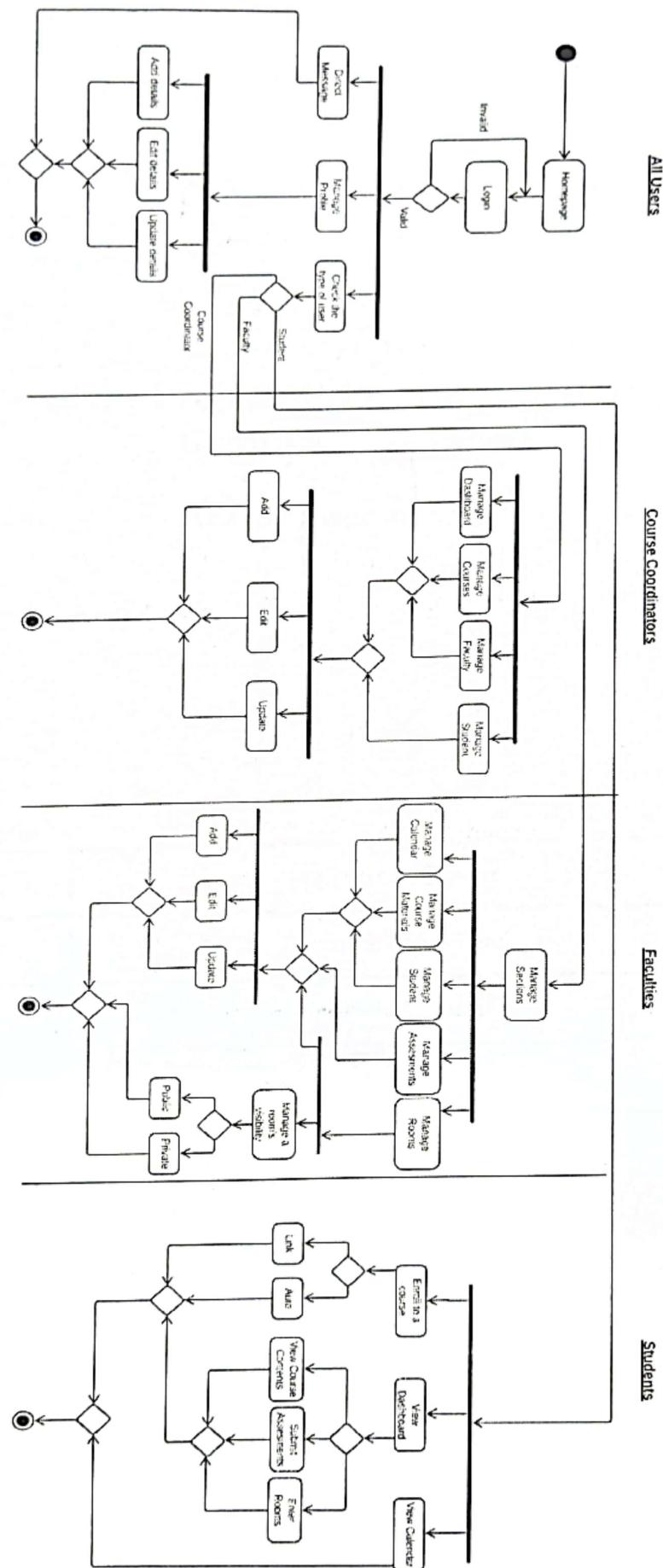
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ASSIGNMENT FOR CSE471

Admin:



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All Users

Course Coordinators

Faculties

Students

PROJECT FOR CSE471



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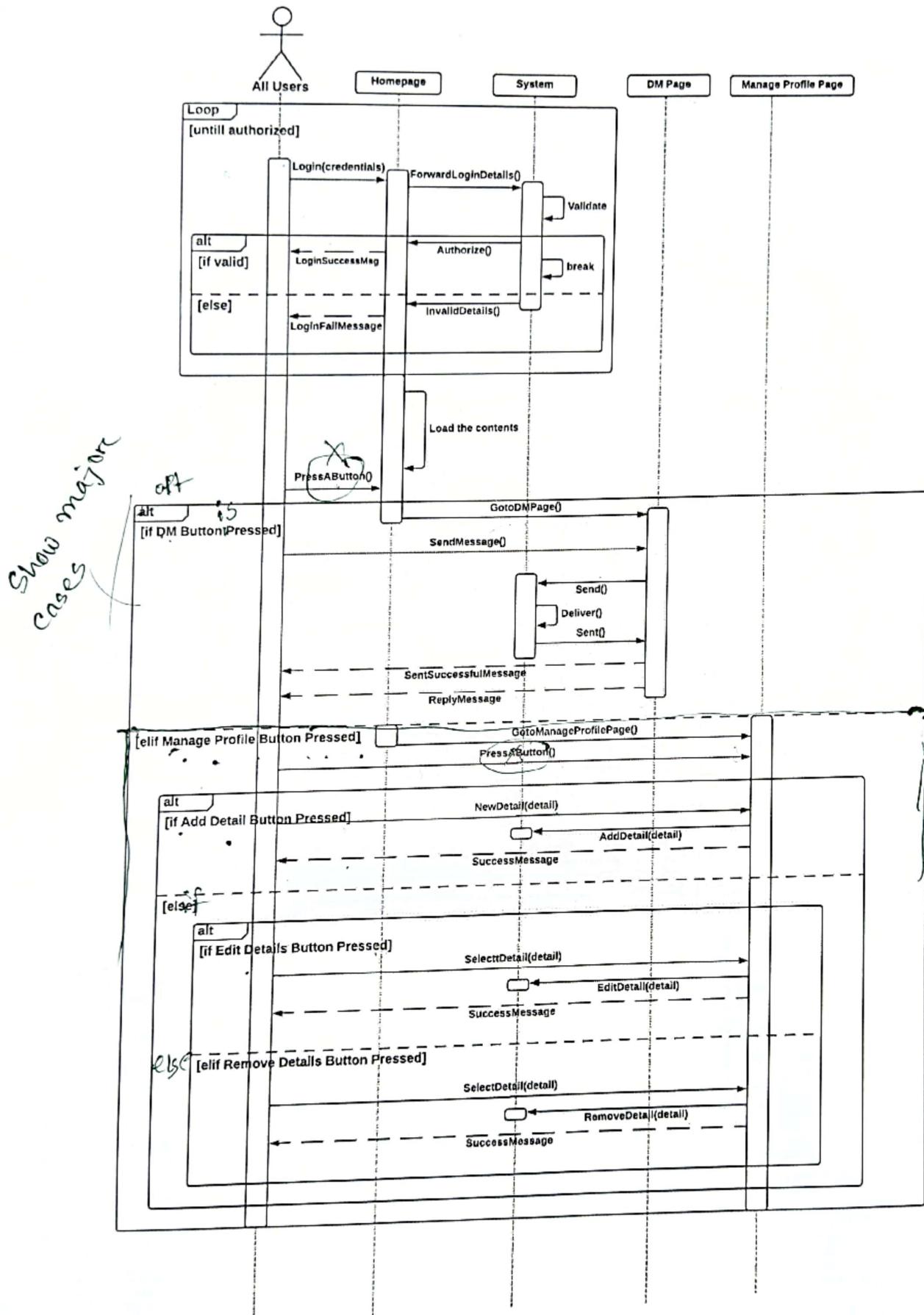
### Sequence diagrams

**Group Number: 09**

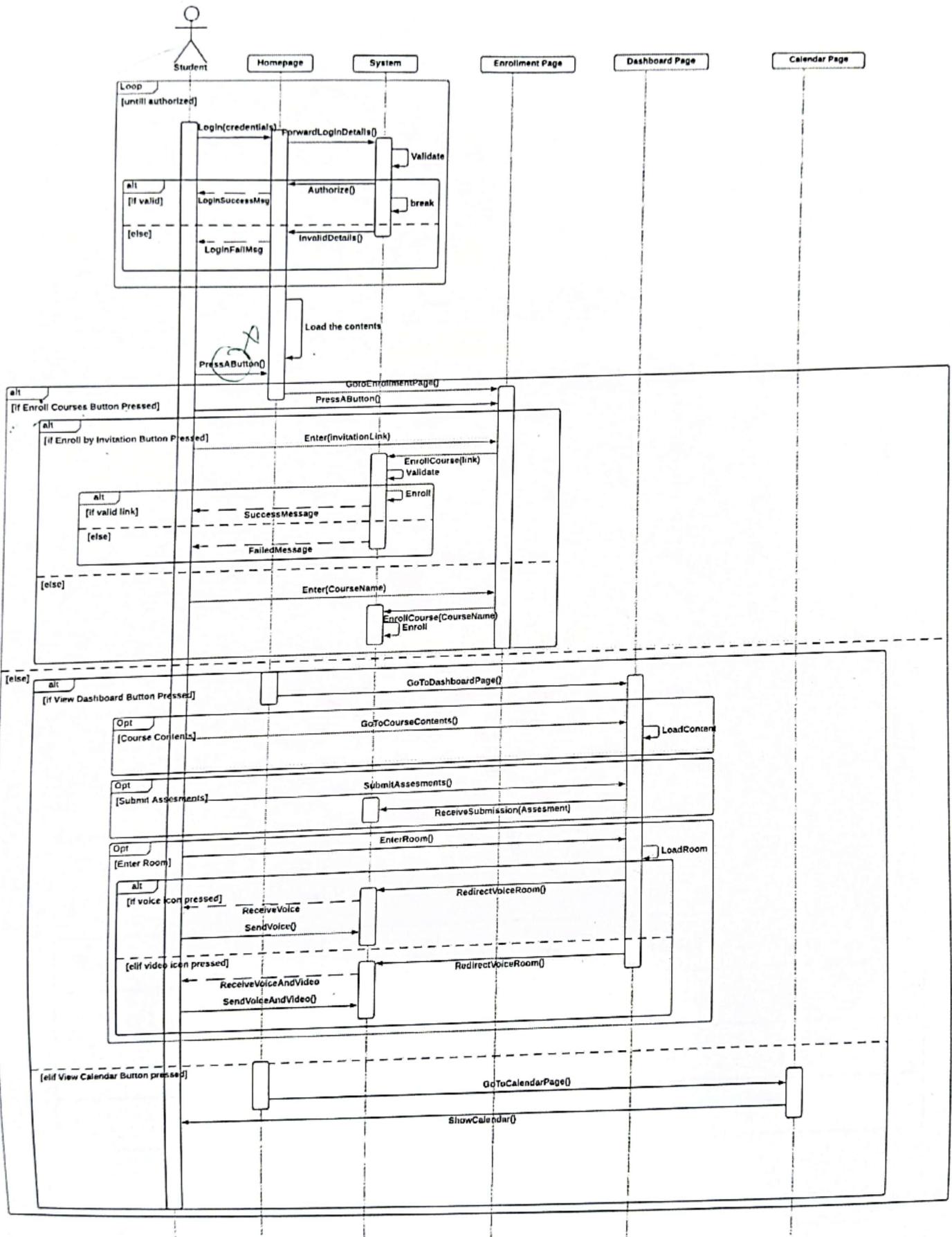
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# ASSIGNMENT FOR CSE471



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(4)

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### Dataflow diagrams

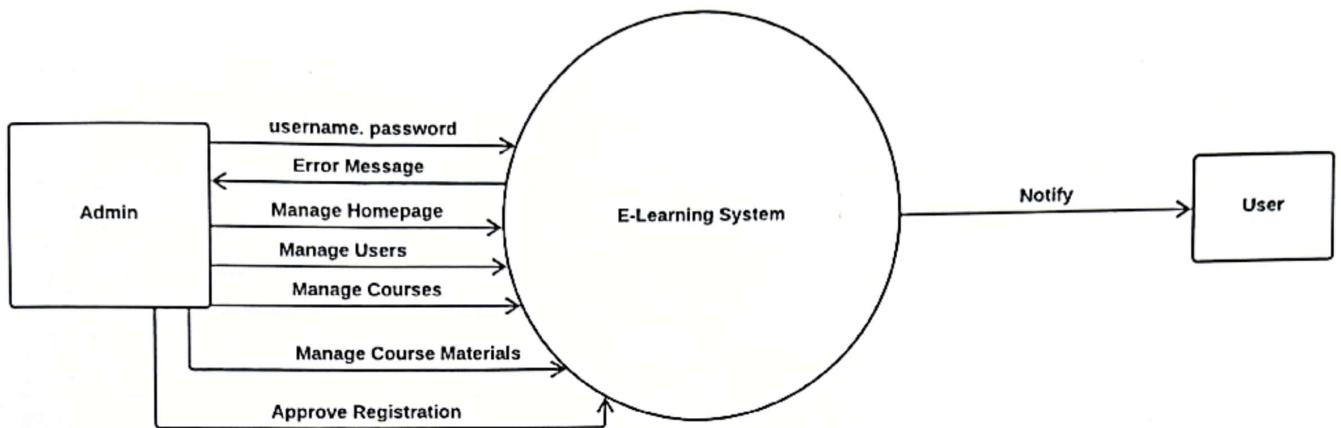
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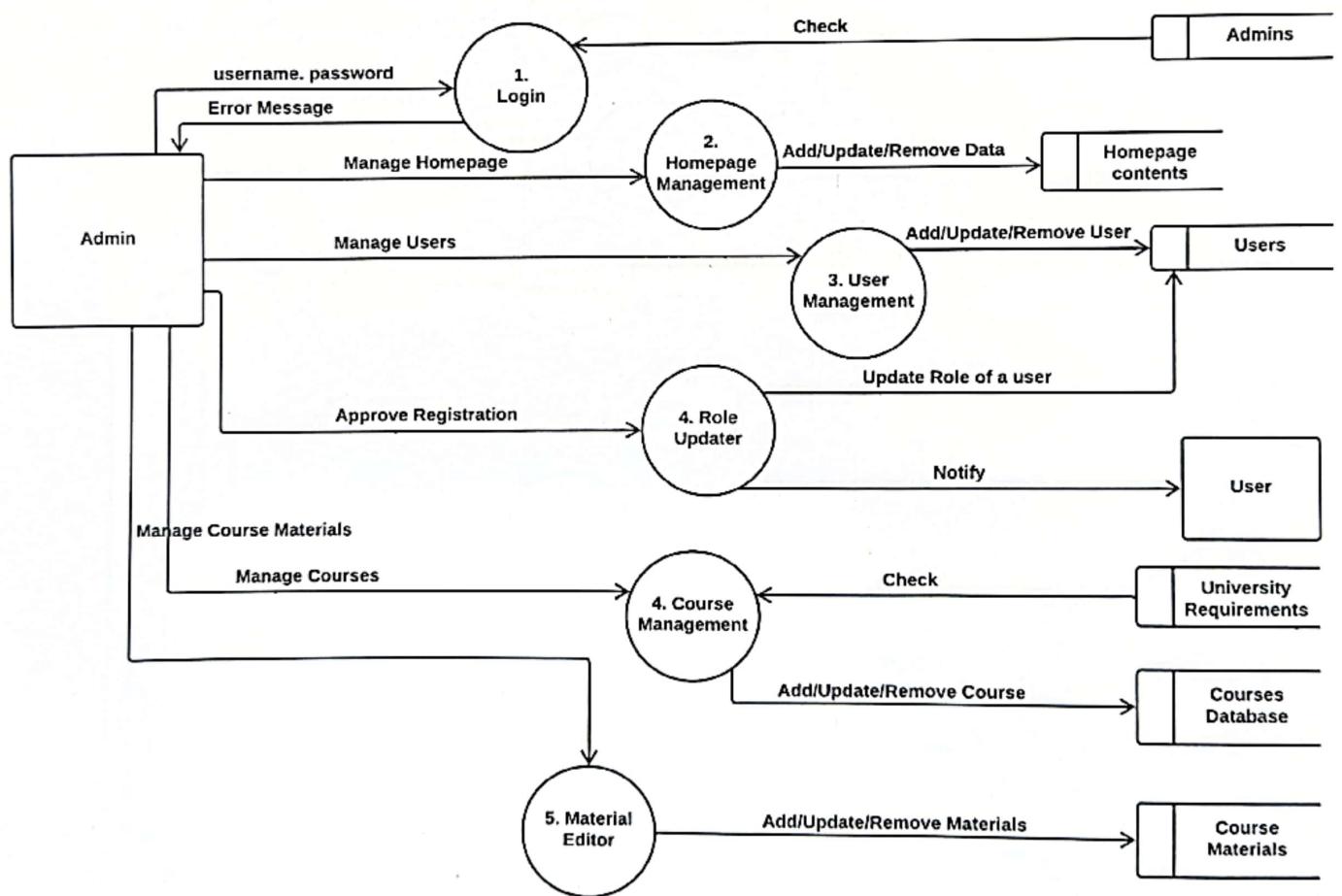
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Admin:

Level 0



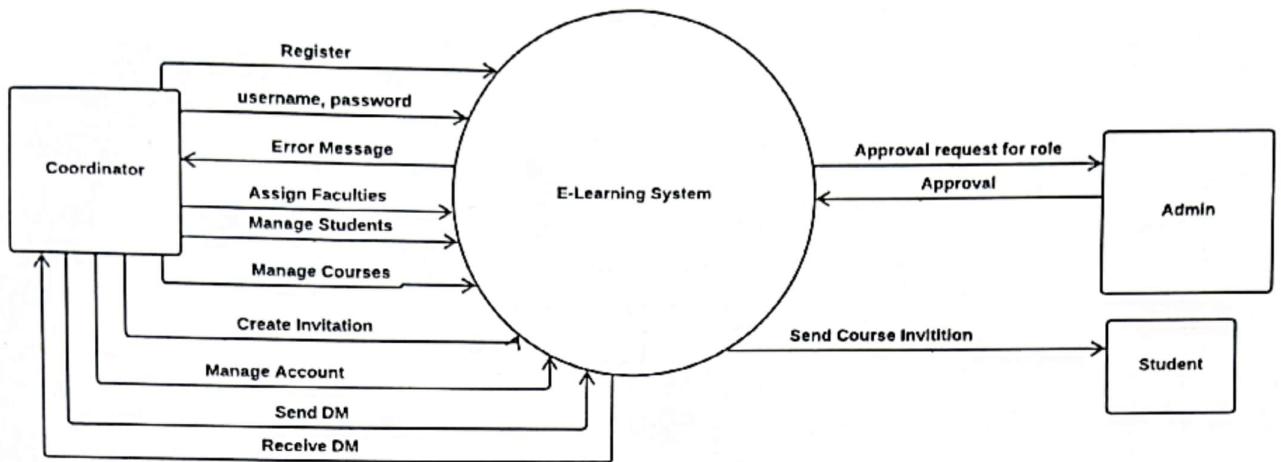
Level 1



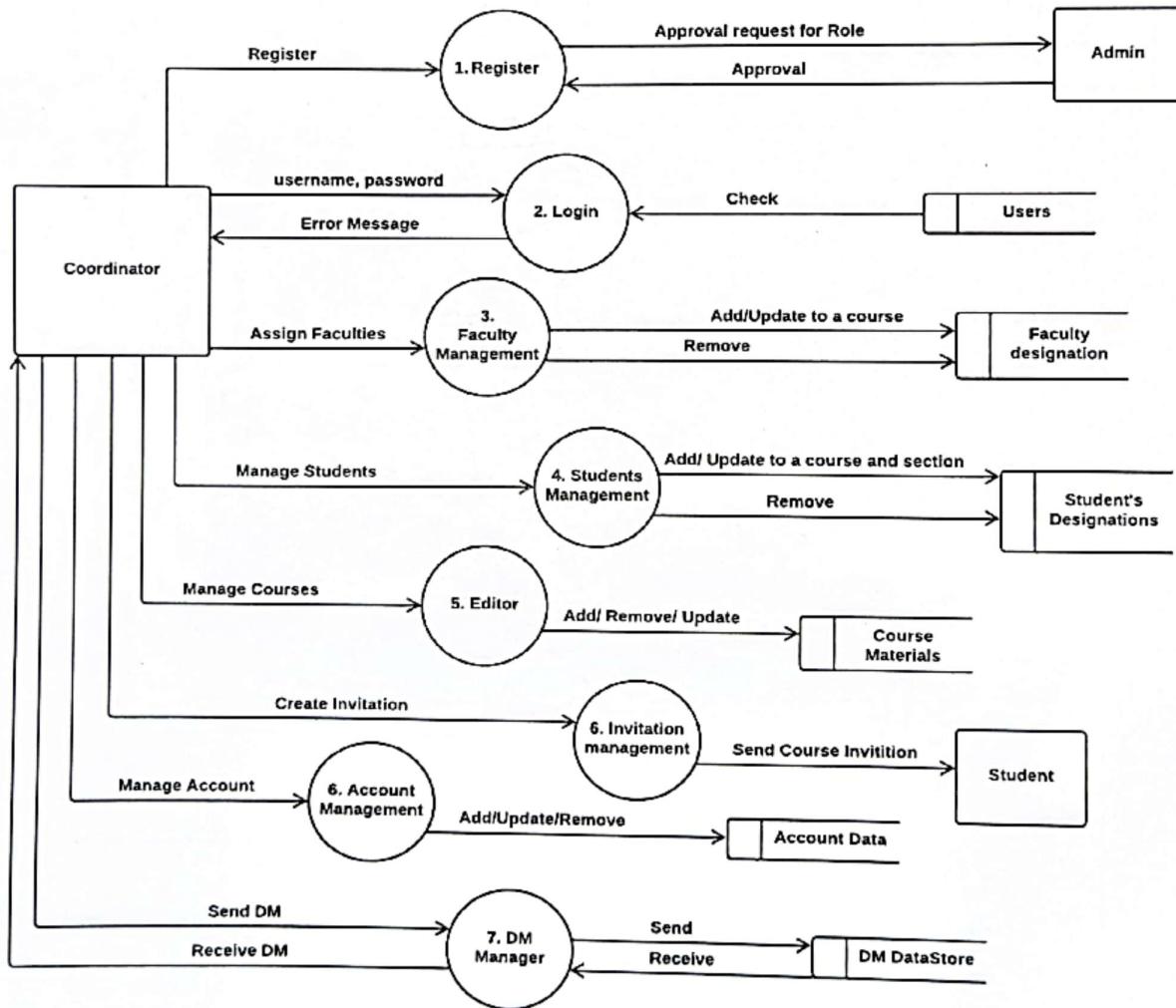
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**Coordinator:**

## Level 0

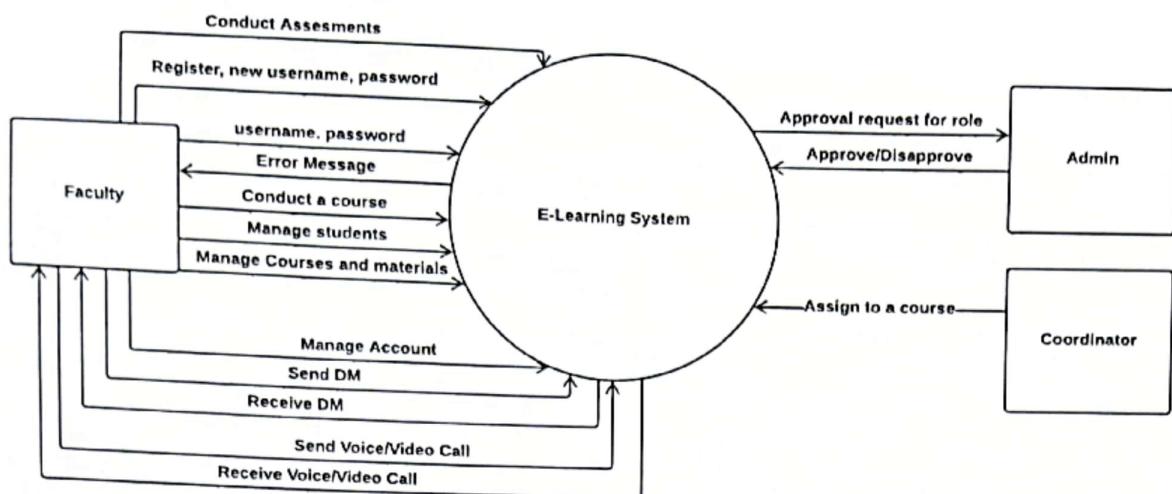


## Level 1

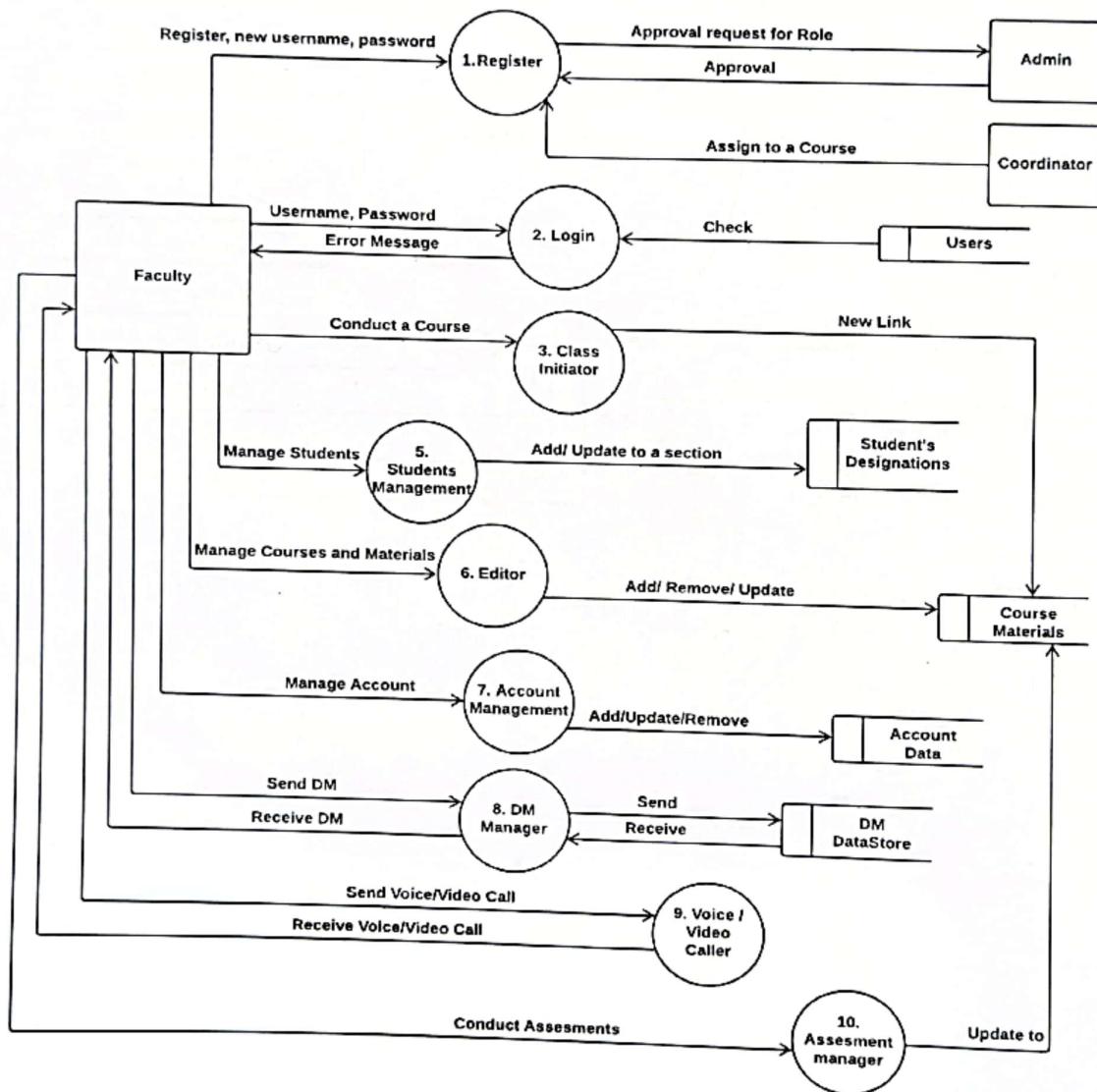


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**Faculty:**



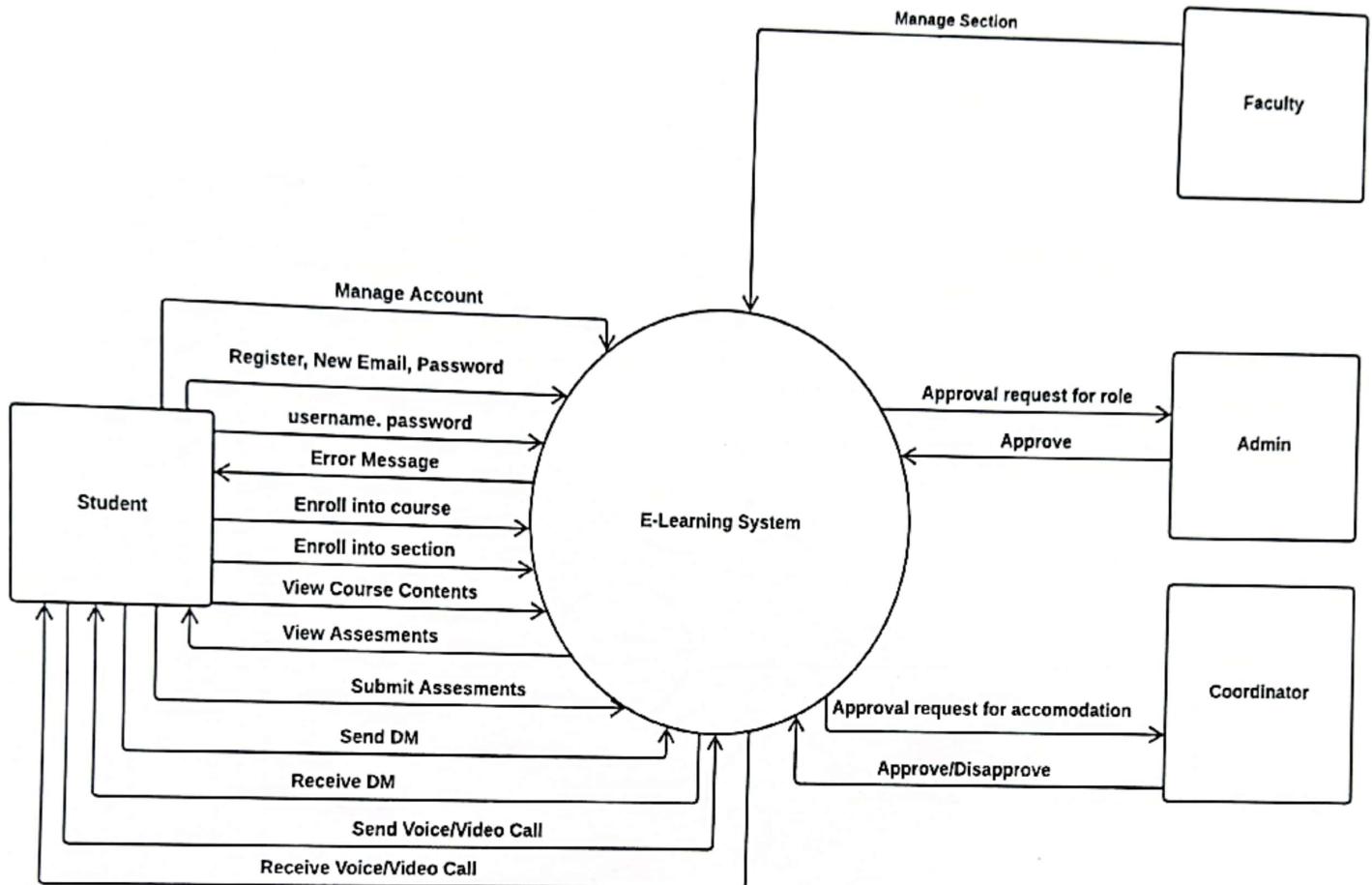
**Level 1**



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Student:

Level 0



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Level 1

