

IT314 Software Engineering

Lab 3: Use-case diagram and use-case description

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Group - 13



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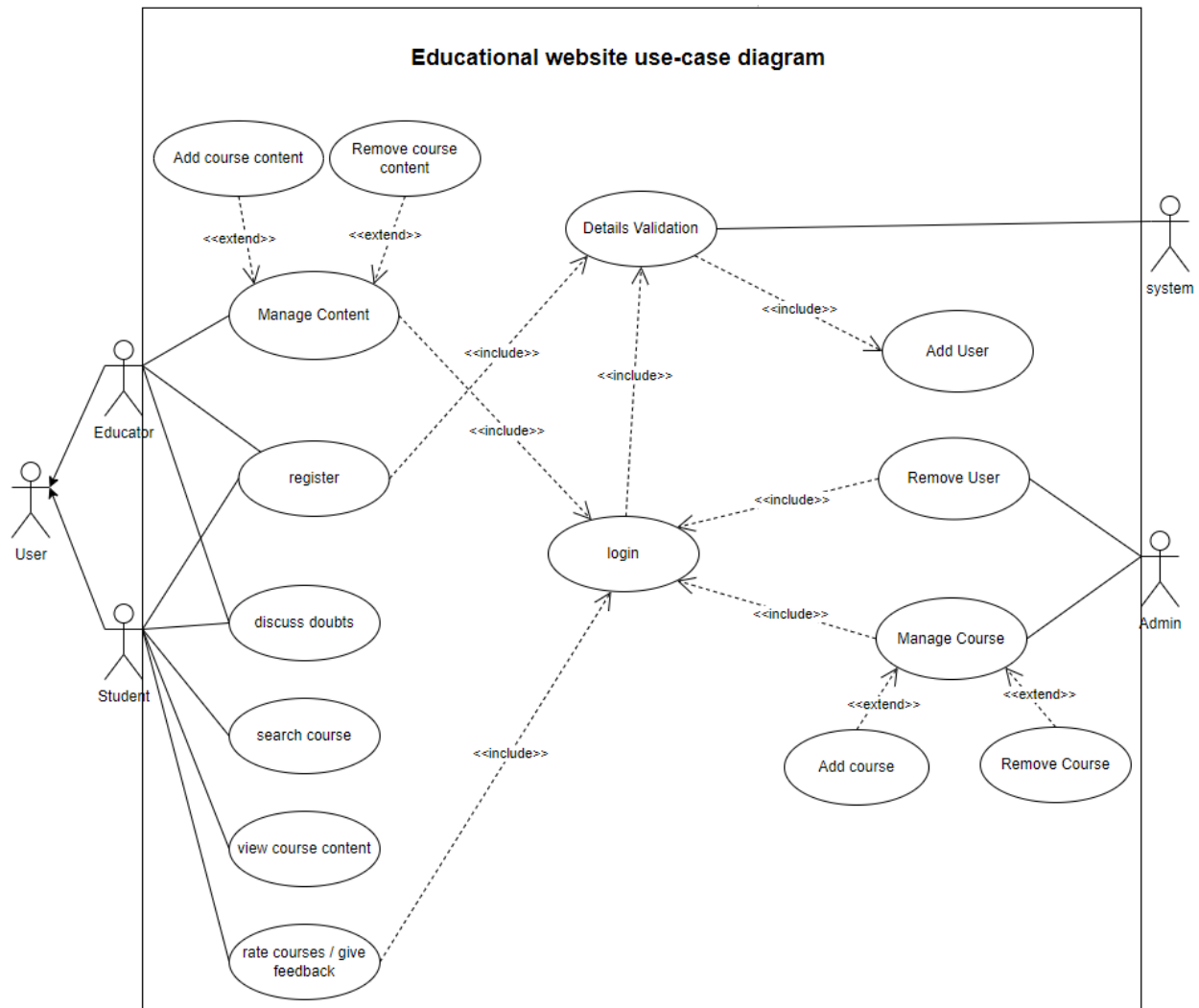
- **Actors:**

1. Student
2. Educator
3. Admin
4. System

- **Use-case:**

1. Manage course content
2. Add course content
3. Remove course content
4. Discuss doubts
5. Search course
6. View course content
7. Rate the courses
8. Add users
9. Remove users
10. Manage courses
11. Add courses
12. Remove courses

- Use-case Diagram:



Draw.io link:

<https://drive.google.com/file/d/1t19WykGcnNY0gtTNG-1SUpvixgC9KuRg/view?usp=sharing>

- **Use-case description:**

1. Manage content

Actors: Educators

Precondition: The user is logged in to the system as an educator and has access to the course content management page.

Goal: Educators should be able to manage content of course.

Basic Flow:

1. The educator will be navigated to the course management page for a particular course.
2. The system will display all existing content.
3. Educator will select “add the content” and “remove the content”.

Alternate Flows:None

Post-Condition: Educator will be navigated to add content page or remove content page.

2. Add Course Content

Actors: Educators

Precondition: The user should be logged in and have proper permissions to add the content

Goal: Educators should be able to add the content.

Basic Flow:

1. Educator will select the "Add content" option.
2. Educators will be prompted to fill the content addition form.
3. Educator will enter the details about course content like content description, File upload link etc.
4. System will ask the user "Are you sure to add this content?".
5. Educator will choose "Yes" .
6. If the content details are valid, the system creates a new course content and adds it to the list of course content.

Alternate Flows:

- 5a. If the user chooses "No" then the system doesn't add the new course content.
- 6a. If content details are not valid then the system doesn't add the new course content.

Postcondition: Educators will be able to add content in course.

3. Remove Course Content

Actors: Educators

Precondition: The user should be logged in and have proper permissions to remove the content

Goal: Educators should be able to remove content of course.

Basic Flow:

1. Educator will select the "Remove content" option.
2. Educators will be prompted to fill the content to remove the display .
3. Educator will enter the Content name again to confirm that he/she wants to delete the content.
4. System will ask the user "Are you sure to remove this content?".
5. Educator will choose "Yes" .
6. If the content name(reentered) is valid, the system removes the course content and adds it to the list of course content.

Alternate Flows:

5a. If the user will choose "No" then the system doesn't Remove the course content.

6a. If the content name(re-entered) is not valid then the system doesn't Remove course content.

Post-Condition: Educators will be able to remove course content from course.

4. Discuss doubts

Actors: Educator, student

PreCondition: Educator/student must be logged in to the system.

Goal: students' questions can be solved

Basic Flow:

1. Students will be prompted to the discussion forum page.
2. If a student wishes to ask doubt then click the "ask doubt" option.
3. System will prompt students to enter his doubt details.
4. Students will enter a doubt description in the forum and click the "post" button.
5. System will post this doubt on a discussion forum and be available to everyone to answer.
6. If a student wants to answer a particular doubt then click on reply and then he/she will enter an answer to that doubt.

Alternative Flow:

- 6a. If a doubt asker is not satisfied with the answer he can ask for more details by replying to that answer.

PostCondition: Students will be able to ask doubts and get answers to the doubts.

5. Search course

Actors: student

PreCondition: User should have the right URL of the website.

Goal: Students will be able to see various courses on the system.

Basic Flow:

1. Students will select the drop-down menu for searching courses.
2. Student will select the course for which he wants to see the content.
3. System will display the course content available for that course.

Alternative Flow:

- 1a. Students will select no-option then the system will do nothing and display a message please select valid option.

PostCondition: Students will be able to see course content.

6. View course content

Actors: student

PreCondition: The student is logged in to the system

Goal: Students are able to view the course content

Basic Flow:

1. Students will search the course they want to see the content.
2. System will display course content available for the searched course.
3. Students will select the course content they want to see.

Alternative Flow: None

PostCondition: Students will be able to see the content of the course.

7. Rate the courses

Actors: student

PreCondition: :The student is logged in to the system

Goal: Student will be able to rate the course based on its quality

Basic Flow:

1. If a student wants to rate a particular course then he has to click on 'Rate course' .
2. Display shows 5 stars. 1 is equal to unsatisfied and 5 is equal to satisfied.
3. User has to click on them as his choice .
4. User has to click on 'submit response'.

Alternative Flow:

- 3a. If the user presses more than 1 star, select only the last pressed one.
- 4a. If user does not want to respond than click 'cancel'
- 4b. If the user does by mistake then click on 'submit another response'.

PostCondition: System should count users for every star, then show the average for that course.

8. Add users

Actors: System

PreCondition: The user should have entered details in login

Goal: To validate the user and add him.

Basic Flow:

1. When a user clicks on the register button, the system should validate the information about the user.
2. The system should add users to the database.
3. System should display the message "Registered successfully."

Alternative Flow:

- 1a If the user is not validated, the system gives a message saying "Invalid details" ..

PostCondition: The user has been added successfully to the database.

9. Remove users

Actors: system database, admin

PreCondition: The admin should be logged in.

Goal: Inappropriate person can be removed

Basic Flow:

1. Admin will able to see the list of all user
2. If an admin wants to remove any person, he has to click the “-” button located beside the user name.
3. Admin will be asked “Are you sure to delete the user?”.
4. Admin will select “Yes”.
5. System will delete the user from the database.

Alternative Flow:

4a If the admin will select “No” , the user will not be removed from the database.

PostCondition: User will be removed from the database.

10. Manage courses

Actors: admin

PreCondition: The admin should be logged in.

Goal: Admin should be able to manage the courses on the platform.

Basic Flow:

1. The educator will be navigated to the course management page for a particular course.
2. The system will display all existing content.
3. Educator will select “add the content” and “remove the content”.

Alternative Flow: None

PostCondition: Admin should be able to manage the course content

11. Add courses

Actors: admin

PreCondition: The admin should be logged in.

Goal:Admin should be able to add courses on the system.

Basic Flow:

1. Admin will select the "Add course" option.
2. Admin will be prompted to fill the content addition form.
3. Admin will enter the details about the course like course name, course description etc.
4. System will ask the user "Are you sure to add this course?".
5. Admin will choose "Yes" .
6. If the course details are valid, the system creates a new course and adds it to the list of courses.

Alternative Flow:

- 5a. If the user chooses "No" then the system doesn't add the new course content.
- 6a. If content details are not valid then the system doesn't add the new course content

PostCondition: New course will be added to the system.

12. Remove courses

Actors: admin

PreCondition: The admin should be logged in.

Goal: To remove the course

Basic Flow:

1. Admin will select the "Remove course" option.
2. Admin will be prompted to enter the course name again to confirm the deletion of course.
3. System will ask the user "Are you sure to remove this course?".
4. Admin will choose "Yes" .
5. If the course details are valid, the system removes the course and deletes it from the list of courses.

Alternate flows:

- 4a. If the user will choose "No" then the system doesn't Remove the course.
- 5a. If content names(re-entered) are not valid then the system doesn't Remove course.

PostCondition: The course deleted by the admin is removed from the system.

● Non-Functional Requirements

1. **Scalability:** The website should be able to handle community growth with an increasing number of students and educators.
 - In the real world, when a large number of students are using this website, then the website should handle more requests at the same time without lagging.
 - The response time should be reasonable with respect to the number of users. The website should take into consideration a potential growth in number of users and simultaneous sessions and define improvement of the functionality of the system without impacting the performance.
2. **Security:** The personal information of students and Educators will be stored securely on the website.
 - Here, students and educators both are sharing their personal information through this website which needs to be secure.
 - The course content provided by educators should also be secured and saved efficiently in the database so that it should not be edited by anyone else other than the creator.
3. **Ease of Use:** The Website should have an attractive UI/UX design along with some good functions to provide students and educators a great experience.
 - This defines how effectively the system can be used or utilized to achieve required goals.
 - For example, the portal for discussion forums should be user friendly for both types of users, educators and students such that they can easily ask their doubts and can learn through it.
4. **Performance:** The Website should load quickly even with a large amount of traffic on site
 - This metric mainly defines how long a user must wait before the target operation happens given the overall number of users at the moment.
 - This may describe a background process invisible to users like storing data to the backend and fetching data from the database in as less time as possible.

→ As users can't wait for a longer time this is one of the most important non-functional requirements needed for such systems.

5. Maintainability: Addition of content or deletion of content should be immediately visible to the database even if there is a server crash.

→ The system must be capable of being maintained cost-effectively over its expected lifetime and can incorporate additional requirements such as modifiability, extensibility and interoperability.

→ The adding or deleting of course or course content should be effective and maintained efficiently.