

IT314 Software Engineering

Lab 2: Requirements Analysis

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Group - 13



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Needs for the project:

1. We will provide an interface to students through which all available online materials of particular topics from various different organizations are clustered at one place, saving their time for browsing.
2. It helps teachers/online tutors to increase their reach by sharing their content on this platform. Any teacher having required skills can impart knowledge via this medium
3. Students can easily ask their doubts anytime and it is made easy here via Q&A section.
4. Students will be able to discuss their innovative ideas on our platform with a large number of students interacting with one another.
5. Educators shouldn't have to use paper and pen for creating their content, and able to create interactive content so the user can include
6. This website can be accessible from remote destinations as well. So a student can learn sitting at his place.

Features of this project:

Assumption: Our website will offer some selected topics of engineering as of now, but this can be extended to large scale in real time.

For admin:

- Admin can login/register into website.
- Admin has manage access to add user, edit user or delete user.
- Admin can create daily beneficial tips and share to students registered in this website.
- Admin has feature to add course.

For student:

- Student Authentication: Students will be able to sign up/login using userID and Password.
- Students will be able to view content, download course files, ask doubts and give quizzes.
- Students can rate/ give feedback on any of the course content which might be helpful for other students.
- Students can put their doubts on Q&A Section and can get easily solved.
- Students can search for any particular topic and also have a sorting feature to sort content according to feedback and number of students enrolled.

For Educators:

- Educator can login as a teacher and add content in any course.
- Educators will be able to create courses, manage content in his/her course, solve doubts, conduct quizzes etc.
- Educators should be able to express their experience on the course which they are providing content.

Additional features:

- The website should be able to handle community growth with an increasing number of students and educators.
- The personal information of students and Educators will be stored securely on the website.
- Website should have an attractive UI/UX design along with some good functions to provide students and educators a great experience.
- The Website should load quickly even with a large amount of traffic on site.

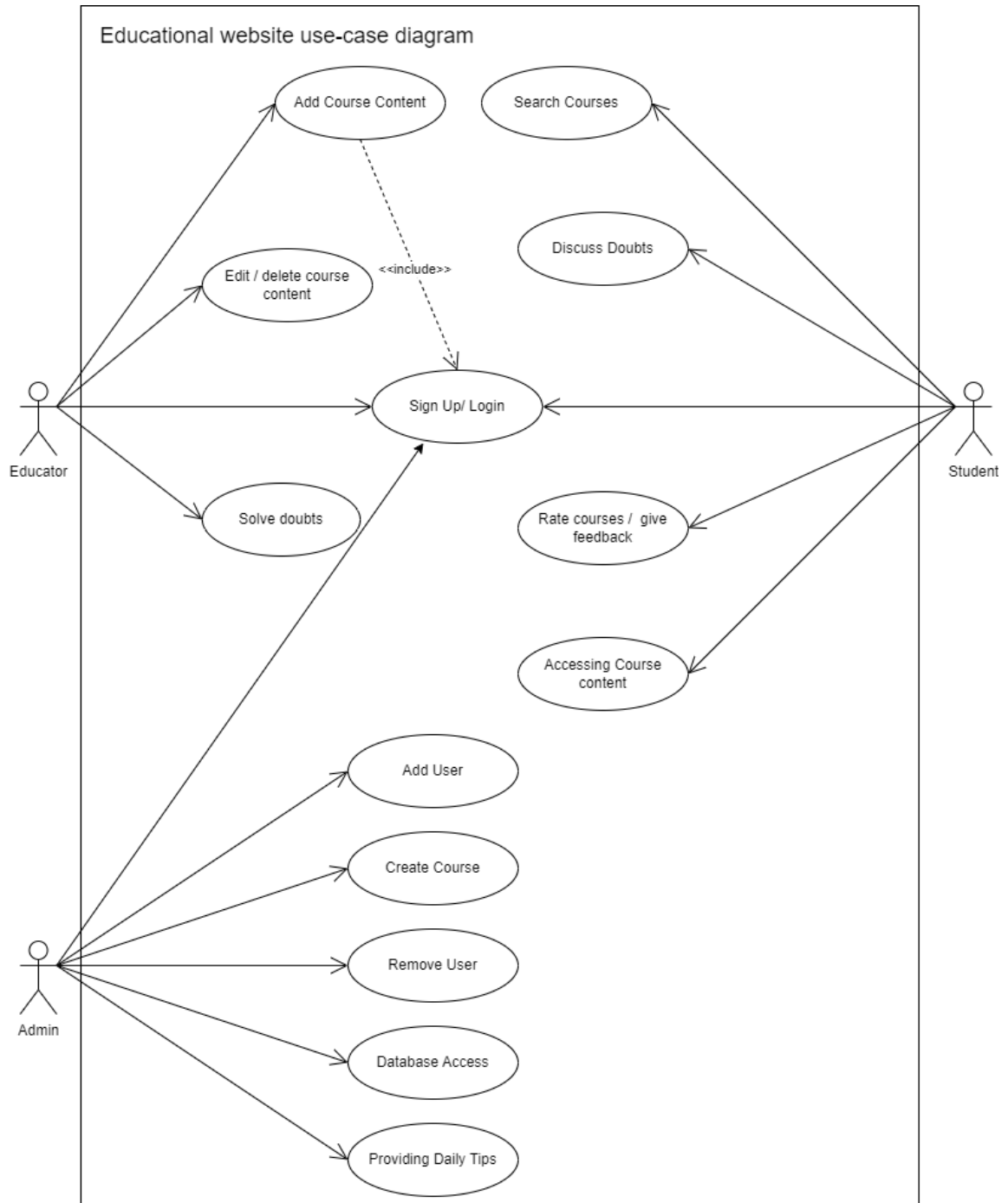
Functional Requirements:

1. **User authentication:** Users will be able to sign up/login using userID and Password.
2. **Content Creation for Educators:** Educators will be able to create courses, manage content in his/her course, solve doubts, conduct quizzes etc.
3. **Content access for Students:** Students will be able to view content, download course files, ask doubts and give quizzes.
4. **Feedback/Rating System:** Students can rate/ give feedback on any of the course content which might be helpful for other students.
5. **Role management:** The system should have management access, functionality and security roles for students, educators and an administrator.
6. **Q&A Section:** Students can put their doubts on Q&A Section and can get easily solved.
7. **Browsing:** Students can search for any particular topic and also have a sorting feature to sort content according to feedback and number of students enrolled.
8. **Everyday Tips:** Students will get everyday study tips from our system.
9. **Experience sharing:** Educators should be able to express their experience on the course they are providing on the website.

Non-Functional Requirements:

1. **Scalability:** The website should be able to handle community growth with an increasing number of students and educators.
2. **Security:** The personal information of students and Educators will be stored securely on the website.
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.
4. **Performance:** The Website should load quickly even with a large amount of traffic on site.
5. **Maintainability:** Addition of content or deletion of content should be immediately visible to the database even if there is a server crash.

Use case diagram:



Software Process Model:

- The **Incremental Model** is a good choice for our project because of its **iterative and flexible approach to software development**.
- In our software development model where requirements may change as new information and resources become available, an incremental model will be best suited for us.
- Errors are easy to recognise as well as testing and debugging is easy.
- The testing phase checks the performance of each existing function as well as additional functionality.
- Risk management is simpler as it is easy to handle iteratively.

