CS3410: Software Engineering Lab
Multi disciplinary Q & A Forum
Problem Specification

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We give the system specifications of an online platform for asking, answering questions and learning from peers. It is a network of students of the institute who can follow each other, add questions, topics and answers and respond to them by either up-voting or down-voting or by adding comments. They can also help other students by sharing some useful course materials like audio recordings of lectures, notes and other things which might help his/her batch mates in learning. Apart from this, the system also provide a platform where users can post questions to professional counselors to guide them when they are feeling low.

1 User Authentication

- For every user we maintain his/her first name, last name, his roll number which will be his/her user name, a password (which can be integrated with LDAP credentials).

- Apart from these, we also maintain a non-empty list of primary e-mail IDs which is stored for password recovery, and for sending updates and notifications to the user.

- Each user has a number of credits associated with the account which changes dynamically over time. It is a currency that describes his/her activity and success in the question-answer platform. The credits that a user has is a non-negative integer initialized to 100 when he/she creates an account.

- An user is allowed to add topics, questions and answers. User can also add comments to questions and answers. Users can up-vote or down-vote a particular answer or a comment. Users can follow other users. If user A follows user B, then user A is notified about the activities of B in the forum which include answers for which B has up-voted/down-voted, answers B added, topics followed by B, questions followed by B. Users are allowed to follow particular topics or questions.

- Every user is also a member of a group consisting of students from his/her batch. In this group an user is allowed to add lecture notes, pointers to other helpful online resource materials, share audio recordings of lectures, or share voice-over for power point presentations and so on which might help other students of the batch in preparing for an exam. Every material that is added by a student is up-voted or down-voted by students of the same group regarding its relevance and utility. More the number of up-votes an user's material gets more credits is added to the user's account.

- User can add questions and answer them anonymously. In that case, a question or an answer cannot be linked to a particular user.

2 Questions

- Questions are added by users. Each question is associated with text associated with the question, Date on which question was added, the user who added the question, unique question ID, a set of followers IDs, the topics to which the question belongs, and set of comments.

- When a user adds a question, the platform shows set of related questions (using the phrases used in the text) and asks the user whether his question is completely new.

- The user is also expected to give a non-empty set of topics to which the question is relevant to. Once the question is posted all the users who are following those topics are notified about the added question.

- Each question can be followed by a number of users. For every answer added to the question, all the users who are following the question are notified about the answer.

3 Answers

- Answers are again added by users. An answer's attributes consist of the text associated with it, the date on which it was added by the user, a unique AnswerID, user IDs who have up-voted, set of comments added to the answer.Every answer is a response to exactly one question.

- User ID's who have up-voted include the users who have up-voted the answer is a set of users who have viewed the answer and are endorsing it.

- For every answer that is added to a question, the asker and the followers of the question are notified about it.

- Every up-voted answer receives 10 credits which are added to the user's credits account. An answer which is up-voted by the user who asked the question received 50 credits.

4 Topics

- The set of topics is initialized with Academics, Extra curricular activities (includes Tech-soc and Lit-Soc), Sports, Mess issues, Hostel issues.

- Users can create topics; every question must fall under at least one such topic.

- A topic has the following attributes: the name, set of users following the topic, a unique TopicID and the date on which a user added the topic.

- Once a question is added to the topic all the users who are following it are notified about it.

5 Study Materials

- An user can upload media and documents (of limited size) which might help other students in preparing for an exam to the group which is dedicated to his batch.

- Each media which is uploaded is attributed with an unique ID, user who added it, set of users who have up-voted, date in which it was added, courses for which it is relevant to.

- When a media or a document file gets up-voted the user who added it gets notified.

- Whenever a media file gets uploaded, all the users who are in the same batch are notified.

6   Comments

- The comment consists of the comment text, a unique CommentID, set of users who have up-voted or down-voted the comment.

- A comment that is posted under an answer is either a 'parent' comment or is a reply to some other comment under the same answer.

- Once a comment is added to the answer, the user who added the answer is notified about it.

7   Crediting system

- For every question which is added by the user, 10 credits is deducted from the user account.

- For every up-vote an answer receives 10 credits are added to the answerer's account. The system does not penalize the user for getting down-voted. If an answer gets up-voted, then the user who added the answer is notified about the user who has up-voted.

- For every follower a question gets, 10 credits are added to the questioner's account. If a question gets followed by an user, the questioner is notified about it.

- If an answer is up-voted by the questioner then the 50 credits are added to the answer's account.

- If a media file which is uploaded by an user gets up-voted then the user who uploaded it gets 10 credits.

8   Professional Counseling

- The users can post questions anonymously and they can be viewed only by the counselors.

- The counselors can post answers to the students questions. Once, a user's question is answered by the counselor the user gets notified.

- Each student can post questions anonymously and no counselor can know which student has posted a particular question.