REQUIREMENTS DOCUMENT

CSC 440 Semester Project

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Iteration 1

Iteration 2

Iteration 3

Use Case UC1: Add Users

Primary Actor: Administrator, Registrar

Stakeholders and Interests:

- Administrator: Must ensure all faculty and registrar have an account and can access the system
- Registrar: Must ensure that all student accounts are created before classes begin

Preconditions:

- The user has logged into the system
- The user is an administrator or a registrar type user
- The system is available

Postconditions:

- One or multiple user accounts are added to the database

Summary: The user logs into the system, navigates to the admin page, and selects create users. The user can either complete a form by entering the first name, last name, account name, and password of the account to create, or they can upload a csv file containing a list of these values. Uploading a csv file will bulk add users. If an administrator is creating a user, they will also have the option to specify if the new user will also be an administrator

Basic Flow:

This flow describes the set of steps for a registrar user to create one new account

1. User navigates to the landing page
2. User logs into the system
3. User clicks the link to the admin page, and is redirected there
4. User selects “create users” option on admin page, and is redirected to the create users page
5. User fills out the form, specifying the first name, last name, account name, and password for the new user
6. User clicks the “Create User” button
7. User is shown a confirmation popup that the new user has been created
8. User returns to the homepage

Alternate Flows:

*a. The system crashes or becomes unavailable

1) A custom error page is displayed with the IT helpdesk contact information

*b. The user clicks the logout button

1) The user is logged out and redirected to the landing page

4a. The user is not an admin or registrar user

1) The admin button will not be shown

5a. User would instead prefer to bulk upload users

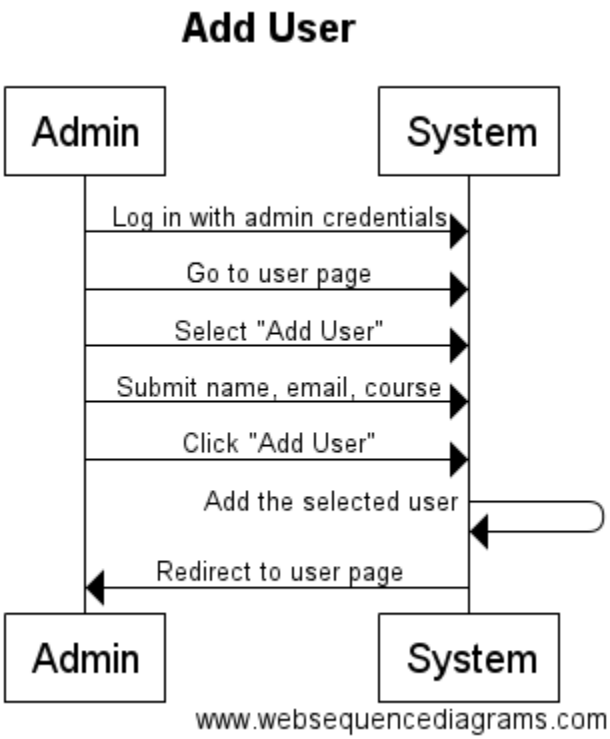
1) User clicks the Bulk Upload button
2) User is presented with a file picker dialog
3) User selects a .csv file containing the users to create, and the file is uploaded
4) The user clicks Create Users
5) User is shown a confirmation user stating how many users have been created by the bulk upload
    a. If the create fails, the user is instead shown a dialog stating that there was a problem creating the users, and to check the format of the .csv file.

5b. The user is an administrator, and would like to create another admin users

1) If the logged in user is an admin, and additional field will be present in the form, and will be required. This field will be a checkbox for whether the created user should be an admin or not.
    a. If this box is checked, the bulk upload button will no longer appear. Admins should only be able to create new admins one at a time.

7a. Any of the fields in the form have not been completed

1) Whichever field has not been completed is turned red



Use Case UC2: Edit User

Primary Actor: Administrator

Stakeholders and Interests:

- Actor must be able to edit Users if necessary

Preconditions:

- The current logged in user must be an administrator
- There must be an existing User account
- The system is available

Postconditions:

- The desired User is edited, and the Administrator is returned to the home page

Summary: The Administrator navigates to the Users page, clicks Edit, and makes desired changes.

Basic Flow:

1. User with Administrator privileges logs in.
2. Administrator navigates to the Users page.
3. Administrator clicks “Edit User”.
4. Administrator makes desired changes.
5. Administrator clicks “Update User”.
6. Administrator is redirected back to the Users page.

Alternate Flows:

*a. The system crashes or becomes unavailable

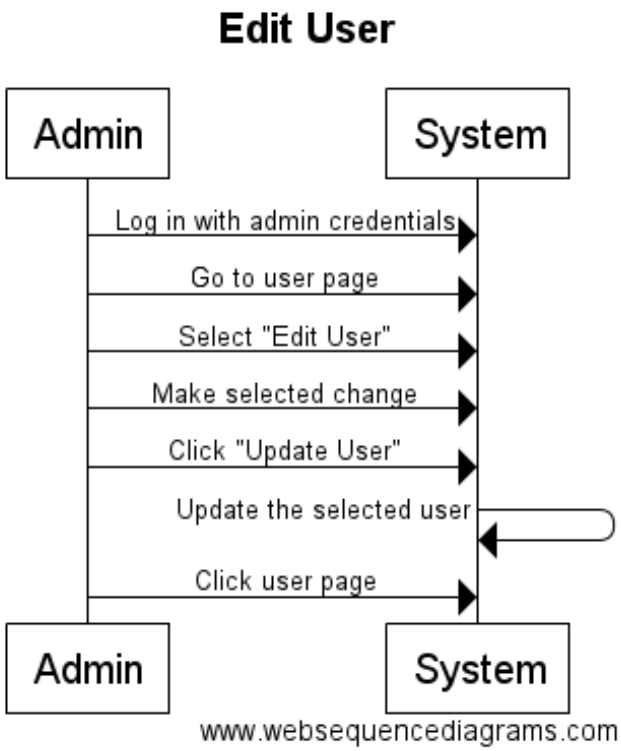
1) A custom error page is displayed with the IT helpdesk contact information

3a. User does not have Administrative privileges

1) “Edit User” button is not available

5a. Administrator leaves a field blank, or incorrectly formatted

The field is turned red, and the user is alerted that the username is not in the correct format, and the correct format is show



Use Case UC3: Ask Question

Primary Actor: Student

Stakeholders and Interests:

- Student: Wants to ask question to better understand material or if they have a question about the course

Preconditions:

- Student is logged in
- The system is available

Postconditions:

- The Students question is posted where other users can see and vote on the question

Summary: The Student navigates to the question board. Student selects new question option, enters question, and selects post. The question is then posted to the question board.

Basic Flow:

1. Student navigates to question board.
2. Student selects the option to post a new question.
3. Student enters question.
4. Question is posted to question board.

Alternate Flows:

*a. The system crashes or becomes unavailable

1) A custom error page is displayed with the IT helpdesk contact information

*b. Student logs out

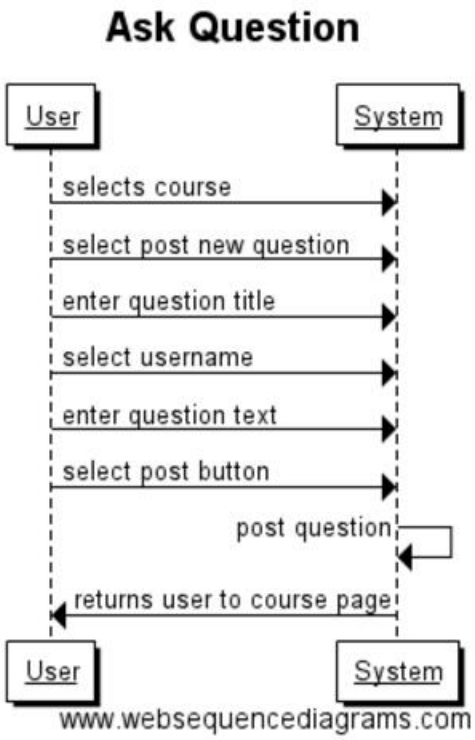
1) Return to log in screen

3a. Student navigates away before posting question

1) Post is discarded

4b. Question is not posted

1) Display error and ask to try posting again later



Use Case UC4: Answer Question

Primary Actor: Student

Stakeholders and Interests:

- Student: Wants to help classmate by answering question

Preconditions:

- Student is logged in
- The system is available
- There must be at least one question on the question board

Postconditions:

- The Students response is posted to the question

Summary: The Student navigates to the question board. Student selects the question they want to answer, enters response, and selects post. The response is then posted to the original question.

Basic Flow:

1. Student navigates to question board.
2. Student selects the question they want to respond to.
3. Student enters response.
4. Response is posted to original question.

Alternate Flows:

*a. The system crashes or becomes unavailable

1) A custom error page is displayed with the IT helpdesk contact information

*b. Student logs out

1) Return to log in screen

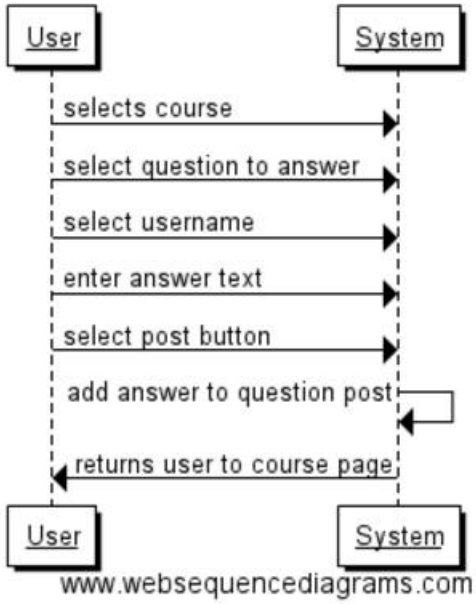
3a. Student navigates away before posting response

1) response is discarded

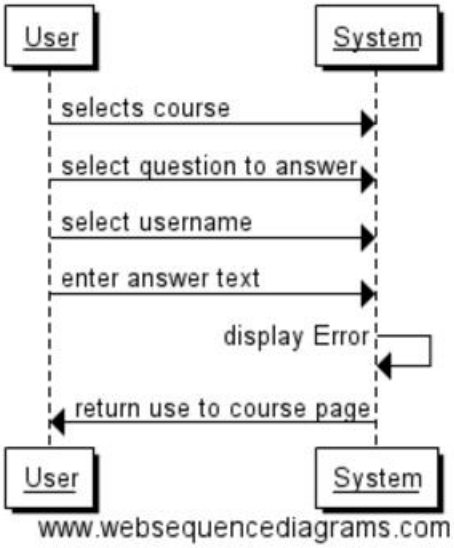
4b. Response is not posted

1) Display error and ask to try posting again later

Answer Question



Answer Question Alternate Flow



Iteration 2

In the second iteration of NKUnet, we've added more key features to the application. The main features that have been implemented in this iteration are Authentication and Voting. Users will now log in to view Courses, Questions, and Answers. When a user posts a question or answer, other users will now be able to vote on it. The question and answer sort order are determined by the number of votes. This will cause useful content to rise to the top of the page. We have also implemented the concept of "Admin Users". The Add Users and Edit Users pages are now hidden from view, and protected from access by non-admins.

Use Case UC5: Authenticate User

Primary Actor: Administrator, Faculty, Registrar, Student

Stakeholders and Interests:

- All actors must be able to authenticate their username in order to access the system

Preconditions:

- The user has a valid username
- An account exists for the user in the system
- The system is available

Postconditions:

- The user is authenticated, and redirected to the homepage of the system

Summary: The user navigates to the landing page of the system, types in their username, clicks login, then is redirected to the homepage.

Basic Flow:

7. User navigates to the landing page
8. User selects the username field
9. User enters their username in the correct format
10. User clicks the login button
11. User is redirected to the homepage

Alternate Flows:

*a. The system crashes or becomes unavailable

2) A custom error page is displayed with the IT helpdesk contact information

3a. User enters their username in an incorrect format

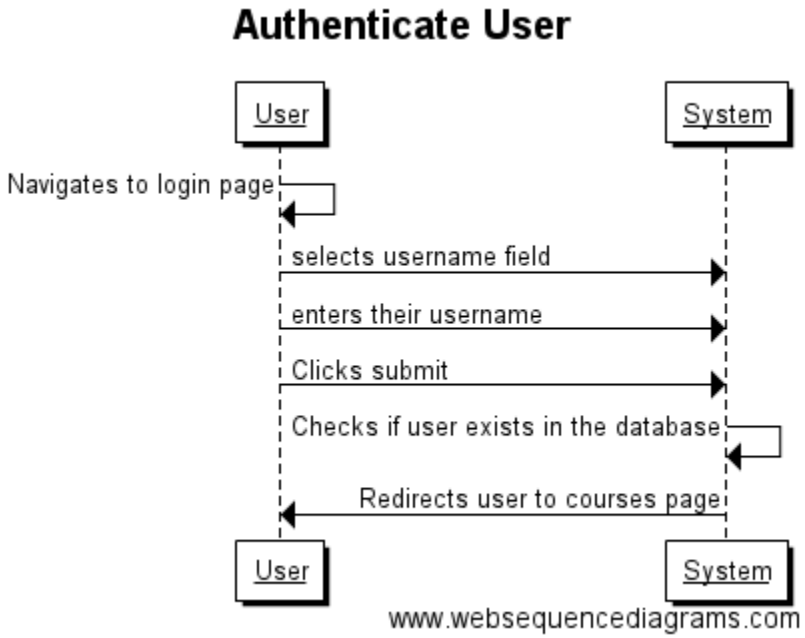
1) Red text is displayed below the login button stating that either the username is invalid

6a. Username is incorrect

2) Red text is displayed below the login button stating that either the username is invalid

6b. The username has not been entered

1) Whichever field has not been entered is turned red



Use Case UC6: Vote on Question

Primary Actor: Student, Faculty

Stakeholders and Interests:

- Student: The students want relevant questions to rise to the top, so they have a better chance of being answered
- Faculty: The faculty wants the most relevant questions to be easily visible for students.
- University: They want to have good information easily available.

Preconditions: User is authenticated and has navigated to a question they want to vote on

Postconditions: Question has been voted on and the user receives feedback for the vote with an indicator and updated counter.

Summary: The user is logged into the system. They click on the class that they want to vote on a question for. They select a question. They click on the up or down arrow next to the question. They log out of the system.

Basic Flow:

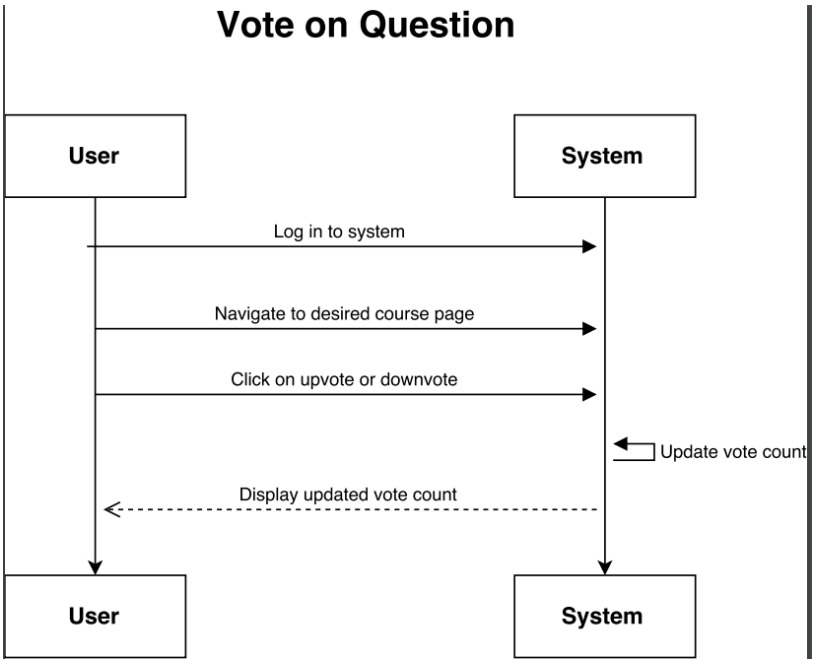
1. User logs into the system.
2. User clicks on a class that is listed.
3. They select a question that is listed.
4. The click on the up arrow.
5. They log out of the system.

Alternate Flow:

4a. The user clicks on the down arrow

5a. The user clicks on the course on the top of the page to view other questions.

5b. The user clicks the home button at the top to return to the list of courses.



Use Case UC7: Vote on Answer

Primary Actor: Student, Faculty

Stakeholders and Interests:

- Student: The students want to be able to reward quality answers so others are able to easily see them.
- Faculty: The faculty wants useful answers to be easily visible for students.
- University: They want to have good information easily available.

Preconditions: User is authenticated and has an answer that they want to vote on.

Postconditions: Answer has been voted on and the user receives feedback for the vote with an indicator and updated counter.

Summary: The user is logged into the system. They click on the answer that they want to vote for. They select a question. They find an answer that they want to vote on. They click on the up arrow next to the answer. They log out of the system.

Basic Flow:

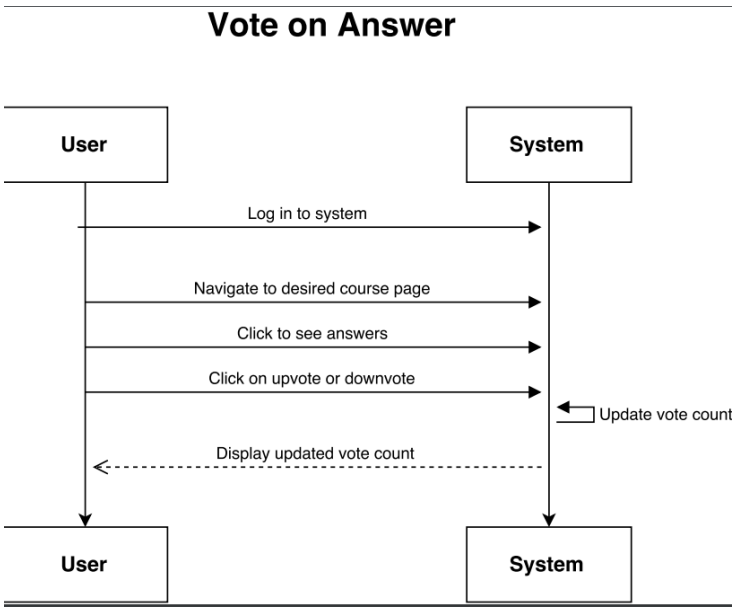
6. User logs into the system.
7. User clicks on a class that is listed.
8. They select a question that is listed.
9. They find an answer that they want to vote on.
10. The click on the up arrow.
11. They log out of the system.

Alternate Flow:

5a. The user clicks on the down arrow

6a. The user clicks on the course on the top of the page to view other questions.

6b. The user clicks the home button at the top to return to the list of courses.



Use Case UC8: Log Out User

Primary Actor: Student, Faculty

Stakeholders and Interests:

- User: Wants to be able to log out so other people can't gain access to account.

Preconditions: User is logged in.

Postconditions: User is logged out.

Summary: The user is logged into the system. They click on log out button and are returned to the log in page and are successfully logged out.

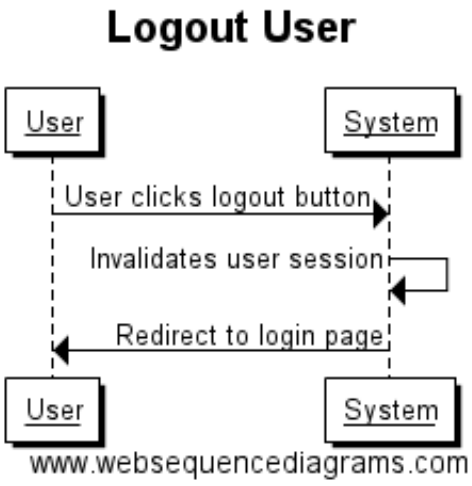
Basic Flow:

12. User is logged into the system.
13. User clicks on the log out button.
14. User is logged out.
15. User is directed to the log in screen.

Alternate Flow:

2a. User clicks on the home button

1. User is directed to the home screen



Use Case UC9: View Profile

Primary Actor: Student, Admin, Faculty, Registrar

Stakeholders and Interests:

- All users: Users want to be able to see their own information, such as current email address, as well as their accumulated score for questions they have asked or answered.
- University: wants people to be able to check that their information is correct in the system

Preconditions: User exists, and is authenticated.

Postconditions: User has viewed their profile information

Summary: The user is logged into the system. The click on the Account dropdown, then click on "Profile" and view their profile

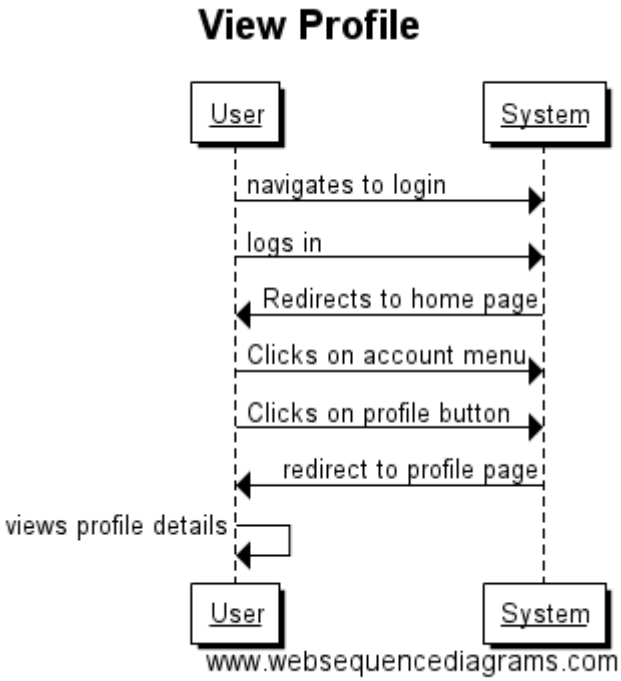
Basic Flow:

16. User logs into the system.
17. User clicks on "Account" drop down on navigation bar
18. User clicks on "Profile" button
19. User is redirected to profile page for themselves
20. User can view Name, Email, Courses enrolled in, and score.

Alternate Flow:

1a. The user does not have an account

i. The user receives invalid login alert



Use Case UC10: Search for Question

Primary Actor: Student, Faculty

Stakeholders and Interests:

- Student: Students need to be able to look up previous questions for quick answers so that they do not post questions that have already been asked before.
- Faculty: Be able to look up frequently asked questions to modify their courses to better cover certain subjects.
- University: The university wants to make sure that information is easily available for students.

Preconditions:

- User is properly identified and authenticated.
- User is currently enrolled in the university

Postconditions:

- User can view a previous thread.
- The user is prompted to ask a new question if the system cannot find a similar question.

Summary: The user logs into the system and clicks on search. The user then types in search words to find a similar question. The user then can click on the thread with a similar question or creates their own. The user then logs out of the system when they are done.

Basic Flow:

1. User logs into the system.
2. User clicks on the search bar on the page.
3. User types in key phrases similar to their question.
4. User then views the results from the page.
5. User clicks on the question related to their search.
6. User logs out of the system.

Alternate Flows:

*a. The system crashes or becomes unavailable

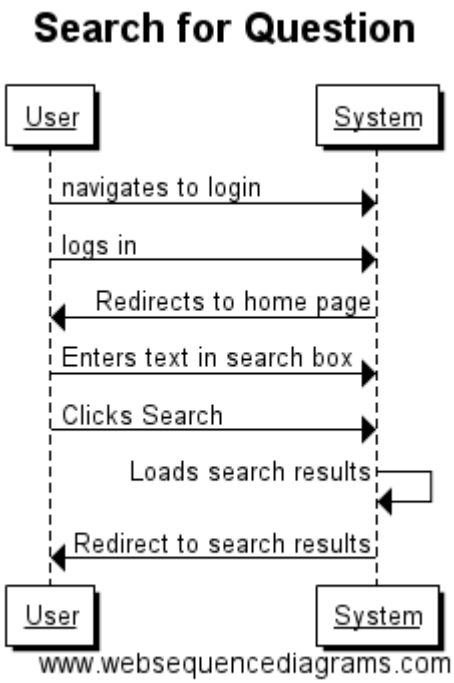
1) A custom error page is displayed with the IT helpdesk contact information

*b. Student logs out

1) Return to log in screen

4a. Page returns no similar questions

1) A button appears that allows the user to post a new question regarding this topic



Use Case UC11: Edit Question

Primary Actor: Student, Admin

Stakeholders and Interests:

- Student: The students want to be able to edit their own questions in case they make a mistake
- University: They want to have good questions on their website.
- Admin: They want the questions to be appropriate

Preconditions: Student or Admin is authenticated. Student has a previous question already posted for a course.

Postconditions: Question has been edited as needed.

Summary: The user is logged into the system. They click on the question that they want to edit. They edit the question. They log out of the system.

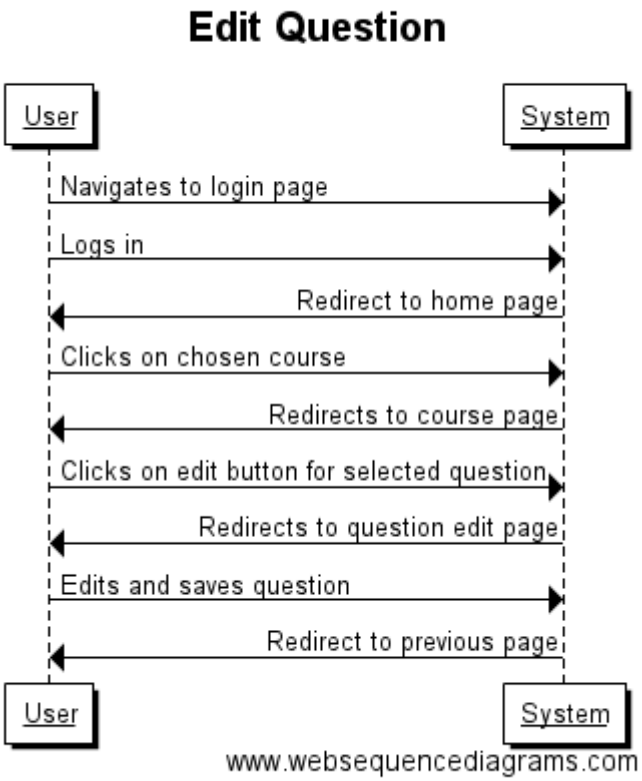
Basic Flow:

21. User logs into the system.
22. User finds a question that they want to edit.
23. User clicks on the edit button.
24. User logs out of the system.

Alternate Flow:

1a. The user does not have administrative privileges.

2a. There is no question to edit.



Use Case UC12: Edit Answer

Primary Actor: Student, Admin

Stakeholders and Interests:

- Student: The students want to be able to edit their own answers in case they make a mistake
- University: They want to have good answers on their website.
- Admin: They want the answers to be appropriate

Preconditions: Student or Admin is authenticated. Student has a previous answer already posted for a question.

Postconditions: Answer has been edited or deleted as needed.

Summary: The user is logged into the system. They click on the answer that they want to edit. They edit the answer. They log out of the system.

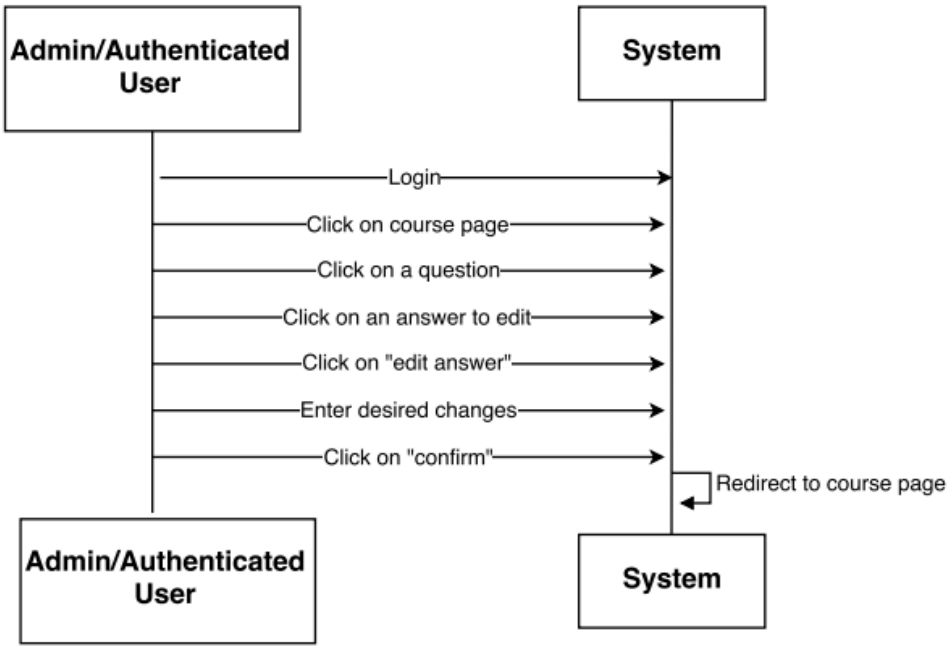
Basic Flow:

25. User logs into the system.
26. User finds an answer that they want to edit.
27. User clicks on the edit button.
28. User logs out of the system.

Alternate Flow:

1a. The user does not have administrative privileges.

2a. There is no answer to edit.



UC12: Edit Answer

Use Case UC13: Delete Question

Primary Actor: Administrator

Stakeholders and interests:

- Administrator: Ensure that inappropriate or duplicate questions do not remain on the board.
- Students: Have a clean discussion board to post to.
- University: Ensure that the discussion board does not have inappropriate questions

Preconditions:

- User is logged into the system
- The user is an admin

Postconditions:

- The question has been deleted

Summary: The user logs into the system as an admin. The user selects the course that they want to delete the question from. The user selects the question. The user selects delete question.

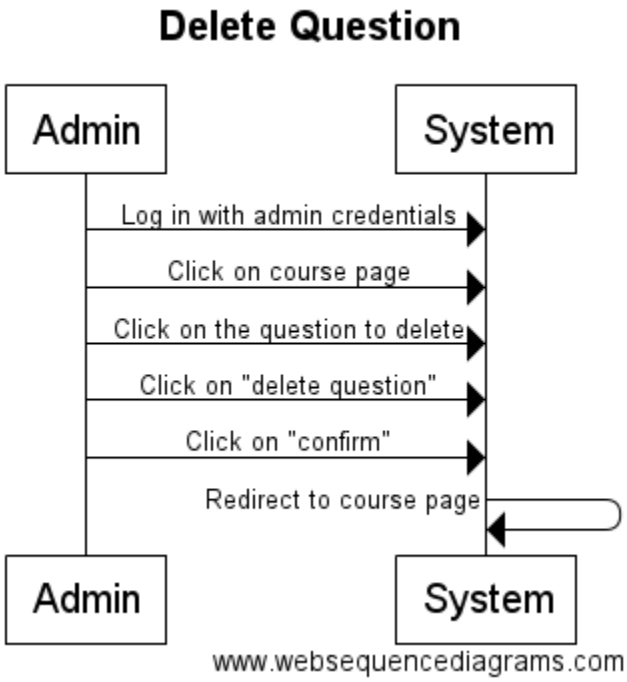
Basic Flow:

1. The user lands on the home page.
2. The user logs into the system.
3. The user clicks on the course.
4. The user clicks on the question to be deleted.
5. The user selects delete.
6. The user is redirected to the course page.

Alternate Flow:

1a. The user does not have administrative privileges.

2a. There is no question to delete.



Use Case UC14: Delete Answer

Primary Actor: Administrator

Stakeholders and interests:

- Administrator: Ensure that inappropriate or duplicate answers do not remain on the board.
- Students: Have a clean discussion board to post to.
- University: Ensure that the discussion board does not have inappropriate answers

Preconditions:

- User is logged into the system
- The user is an admin

Postconditions:

- The answer has been deleted

Summary: The user logs into the system as an admin. The user selects the course that they want to delete the question from. The user selects the question that contains the answer they want to delete. The user selects delete answer.

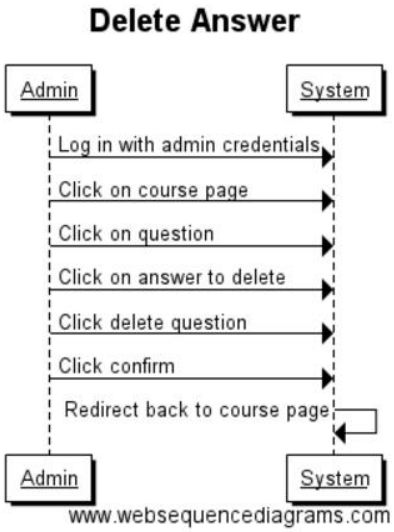
Basic Flow:

7. The user lands on the home page.
8. The user logs into the system.
9. The user clicks on the course.
10. The user clicks on the parent question to the answer.
11. The user selects delete answer
12. The user is redirected to the course page.

Alternate Flow:

1a. The user does not have administrative privileges.

2a. There is no answer to delete.



Context Model Diagram: