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**CSCI 5709 – ADVANCED WEB SERVICES**

**Assignment 1**

**Instructor:** Gabriella Mosquera

Group - 07

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**‘ClassMate’: School at your fingertips!**

# A1.1 (Project’s Purpose, Goals, and Intended Features)

## Purpose:

The classmate application provides a digital platform for students, professors, and campus administrators to efficiently manage and interact within an educational setting. It aims to streamline administrative tasks, facilitate effective communication between students and professors, and enhance the overall learning experience.

## Goals:

Our goal revolves around simplifying administrative processes, fostering effective communication between students and professors, and promoting a collaborative learning environment. We aim to provide Efficient Administration Management that enables professors, course, and student provisions to create an associative environment. Professor Dashboard provides assignment and quiz module administration. Using Student Dashboard, students can get notifications of upcoming deadlines for all enrolled courses in one place, for specific courses students can access assignments and quizzes and get grade updates. The Course Discussions tab provides a comprehensive discussion portal for students and professors for doubt resolution or other queries. A comprehensive newsletter that provides current news from admin university wide.

## Intended Features:

1. User Management:

Unified page for Professor Student registration (Accessible only to admins), login or deleting a specific account (Accessible only to admins). It also provides an option to reset a password through forgot password option.

**Tasks:**

* **Student and Professor registration:** Setting up the process for new student or professor to create an account and provide basic information such as first name, last name, email, and password.
* **User authentication:** Verifying the identity of users through login credentials using email and password and forgot password functionality.
* **User profile management:** Allowing users to view and update their information.
* **User account Deletion:** Once user becomes inactive only admins have authority to delete the account.

1. Student & Professor Dashboard

It provides students with a user-friendly interface to access their enrolled courses. Students will be able to submit assignments, take quizzes, and receive notifications for valuable information such as due dates and announcements. They should also be able to read course-specific announcements. Student will be able to update their profile.

**Tasks:**

**Analytics dashboard:**

* + - * **View Student Performance:** The analytics dashboard allows professors to access detailed information about student performance, such as individual grades, assignment scores, and test results. They can gain insights into how students are progressing and identify areas where additional support may be needed.
      * **Identify Passing and Failing Students:** Professors can use the analytics dashboard to identify students who are meeting or exceeding expectations (passing) as well as those who may be struggling (failing). This information helps professors intervene and provide appropriate guidance or resources to help students succeed.
      * **Track Enrollment Data:** The analytics dashboard provides data on enrolled students, allowing professors to monitor class size, enrollment trends, and student demographics. This information helps in understanding the composition of the class and making informed decisions about instructional strategies.
      * **Analyze Assessment Results:** Professors can analyze assessment results through the analytics dashboard to gain insights into how students are performing on specific assignments, tests, or quizzes. They can identify areas of strength and weakness in student understanding and adjust their teaching accordingly.

**List courses:**

* **For Student:** The "List Courses" feature allows students to conveniently access and view their enrolled courses in a well-organized manner. It provides a snapshot of essential course information, such as course names, instructors, and schedules, enabling students to easily navigate and engage with their academic content.
* **For Professor:** The "List Courses" feature provides professors with a clear and organized view of their courses, including key details like course names, enrollments, and schedules, streamlining course management and navigation.

**CRUD content:**

* **Share content:** The "Share Content" feature simplifies the process of distributing educational materials, allowing professors to manage and share course resources effortlessly. It promotes collaboration and enables students to access relevant materials for an enhanced learning experience.

**View content:**

* **Access materials:** The "View Content" feature enables students to conveniently access and explore course materials shared by their professors. It provides a user-friendly interface for browsing and engaging with educational resources, fostering a seamless learning experience.

**Announcement:**

* **For professor:** The "Announcement" feature enables professors to easily communicate important news and updates to their students, ensuring efficient information dissemination and keeping students informed.
* **For students:** The "Announcement" feature allows students to stay updated with important course information, such as deadlines, schedule changes, and general announcements, fostering effective communication between professors and students.

**Profile updates:**

* **For professor:** The "Profile Update" feature enables professors to keep their professional information up to date, including personal details, qualifications, and contact information, ensuring accurate and current representation.
* **For students:** The "Profile Update" feature allows students to maintain their personal information, update contact details, and provide relevant details such as interests or areas of study, ensuring accurate and comprehensive profiles within the educational platform.

1. Admin Dashboard:

The admin dashboard is designed to provide administrative control over the course management system. It allows the administrator to perform CRUD (Create, Read, Update, Delete) operations for courses, approve professors, and map professors to their respective courses.

**Tasks:**

**Course Management:**

* **Create Course:** The admin can create new courses by providing details such as course name, description, start date, and end date.
* **Read Course:** The admin can view the list of existing courses, including their details and associated professors.
* **Update Course:** If there are any changes to a course's information, the admin can update the course details, such as its name, description, or dates.
* **Delete Course:** In case a course is no longer needed or has been discontinued, the admin can delete it from the system.

**Professor Approval:**

* **Approve Professors:** When professors register in the system, their applications are sent for approval. The admin can review and approve professors based on their qualifications and credentials.
* **Read Professor Details:** The admin can view a list of professors awaiting approval, along with their personal information and qualifications.

**Professor-Course Mapping:**

* **Map Professors to Courses:** Once the professors are approved, the admin can assign them to specific courses. This mapping ensures that each course has the appropriate professor responsible for it.
* **Read Mapping Details:** The admin can access the list of courses and their assigned professors to keep track of the allocation.

### Assignment Management:

As our Brightspace or any online education platform suggests, professors can upload assignments and students can view those assignments and upload before the due deadline. The details of assignments feature are as follows:

**Tasks:**

**Professor Side Assignment View:**

* **Create & Upload Assignment:** Professor can create the assignment and upload it through file upload systems using either .pdf or .doc file. We will have a separate page for uploading files for an assignment.
* **Update Assignment:** Professor can also update the assignment as they feel it needs to be changed in future and set the deadline accordingly.
* **Assignment Constraints:** Professor is required to set some constraints regarding an assignment like Due date, visible date, description of assignment, assignment weightage and an attachment to that.
* **Visible Date:** Professor can set a visible date for an assignment to the students stating that this assignment should be visible to the students on a particular date or time otherwise not visible to them.

**Student Side Assignment View:**

* + **View Assignments:** On student dashboard, at the assignment tab, students can see their courses assignments listed with the basic details.
  + **Assignment constraints:** Students can see their assignments listed with detailed information like description, deadline, status of assignment (Either completed or in complete) and assignment names and its attachment.
  + **Submission:** Students can upload the submission file using file upload window systems, where they can upload either .pdf or .doc file along with some important description (let say some important links to the attachment). Once they submit the assignment, they can look into grades section for scores feedback.

1. Quiz Management:

To check the knowledge Professor set quiz which can be managed and updated. Students can view the quiz and submit their answers, to secure a good score. Below is the detail of this feature, distributed among professor and student:

**Tasks:**

**Professor Side Quiz View:**

* **Create Quiz:** By specifying the questions, response options, and any additional instructions or constraints, professors can construct quizzes.
* **Question Bank:** Professors can manage a question bank, by adding question through forms or uploading a csv file for multiple questions. This allows them to store and organize a pool of questions for reuse in multiple quizzes or assessments.

**Random Questions:** Professors can choose to randomize the order of questions for each student. This prevents cheating during quizzes, as students will receive different question sequences.

* **Quiz Time:** Professors set the time for specific quizzes. This ensures that students have a specific duration within which they need to answer the questions. It allows professors to control the pace of the quiz and ensures fairness among students.
* **Visible Date:** Professor can set a visible date for a quiz to the students stating that this quiz should be visible to the students on a particular date or time otherwise not visible to them.

**Student Side Quiz View:**

* **View Quiz:** On student dashboard, at the quiz tab, students can see their courses quizzes listed with the basic details.
* **Specific Quiz:** On a single quiz page, students can see the questions and options for each question.
* **Quiz Submit:** After successfully completing the quiz students can submit it and check their marks in the grade section.
* **Quiz review:** Students can learn from their mistakes by reviewing the correct answers. So, after completing the quiz, students can review their quiz results, i.e., correct and incorrect answers provided by the professor.

1. Grades:

Grade's function is made to manage and keep track of students' performance on various assessments, such as quizzes, projects, assignments, and exams. Grades can be viewed and configured per course. The following are the tasks and intended features for the grades feature:

**Tasks:**

**Professor Side Grades View:**

* **Weightage:** Professor can configure the weightage of different assessments such as assignment, quiz and exams. This allows for the calculation of weighted averages and helps determine final course grades accurately. This can be used to calculate the final grade of the course.
* **Grade Entry:** Professors enter grades for various assessments (quizzes, assignments, exams). They assign numerical scores, letter grades, or use a grading scale determined by the institution.
* **Grade Visibility:** Professor can set when to make the grades such as allowing students to see individual assignment grades, overall course grades, or both.
* **Grade comments/feedback:** Professor provides the feedback or comments for the assignments either via text or files. This will help students to understand their strengths and areas for improvement.

**Student Side Grades View:**

* **View Grades:** Student can view their individual grades summaries for all the assessments.
* **View Feedback:** Students can see the remarks and feedback provided by the professor for their tests or assignments. They can learn from this input about their strengths and weaknesses and adjust for upcoming assignments.

### Notifications Management

The Notification Management feature ensures effective communication and timely updates between professors and students within the course management system. It includes various types of notifications that inform students about assignment and quiz visibility, approaching due dates, grades/feedback, and newly created course content. Additionally, students can view their notification history.

**Tasks:**

* **Assignment and Quiz Visibility:** Whenever a professor opens a quiz or makes an assignment visible, notifications are automatically sent to all students enrolled in the course.
* **Due Date Approaching:** Students receive a notification one day before an assignment's due date is approaching.
* **Grades/Feedback:** Whenever a quiz grade is updated or when a professor provides grades and feedback for an assignment, students receive a notification.
* **Content Created:** Whenever a professor uploads new content specific to a particular course, such as lecture notes, slides, or additional resources, students receive a notification.
* **View Notifications:** Students have access to a dedicated notification center where they can view all their notifications in one place.

### University Newsletter Management

The Newsletter Management feature provides administrators with the ability to create, manage, and distribute newsletters within the course management system. Administrators can perform CRUD (Create, Read, Update, Delete) operations for newsletters, while professors and students have read-only access to view the newsletters.

**Tasks:**

1. Create Newsletter: Admins can easily create newsletters. They have the flexibility to customize the newsletter according to the specific needs and objectives.
2. Read Newsletter: Admins, professors and students can access the newsletters within their respective dashboards. They can view all the content shared by the administrators.
3. Update Newsletter: In case there are any changes required for a newsletter, admins can make necessary modifications to the content. This ensures that the information remains accurate and up-to-date.
4. Delete Newsletter: If a newsletter becomes obsolete or is no longer relevant, administrators can delete it from the system. This helps to maintain a streamlined collection of newsletters and avoids confusion or outdated information.

### Discussion Management

Professors can have multiple discussions possible per course so that they can communicate with the students easily.

**Tasks:**

1. **Create Discussion:** Professor will create a chat option once a professor will require to pass some important news / announcements with students:
2. **Read Discussion:** Students on the other side will get the notification and they can open that chat once they go to Discussion tab at Student Dashboard. They can join the chat option.
3. **Update Discussion:** Professors and students can update their responses whenever they feel like they need to change it. It will be reflected on both the chat side (Professor side as well as student side).
4. **Delete Discussion:** Professors can **Only** delete the chat option as they feel they do not require to be communicate further. Once deleted it will be removed from both the dashboard (professor and student).

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Calendar

Shows deadline across all courses, both to the professor as well as student to get an overview of all the due dates at one place.

**Tasks:**

1. Course Integration: Calendar view of upcoming deadlines across all the courses.
2. Easy traversal: Student and professor can easily go to any course’s deadline and perform actions.
3. Divided between past deadlines & upcoming deadlines for quick overview.

# A1.2 User Personas and Intended Scenarios

## User Personas

### Admin

A screenshot of a web page

Description automatically generated with low confidence

Figure 1: User persona for Admin.

### Student



Figure 2: User Persona for student.

1. Professor

A screenshot of a computer

Description automatically generated with medium confidence

Figure 3: User persona for professor.

## Intended Scenarios

### Student and professor dashboard

#### Create content

The Professor– Dr. Greg Blesser effortlessly creates and shares lecture notes, slides, readings, and videos with his students using the "Share Content" feature. This promotes collaboration, engagement, and easy access to relevant course materials, enhancing the overall learning experience.

Table 1: Share content Intended scenario

|  |  |
| --- | --- |
| Persona | Professor (Dr. Greg Blesser) |
| Feature | Create content (professor) |
| Need | The "CreateContent" feature addresses the need for seamless distribution of educational materials, ensuring easy access to resources for students and facilitating effective teaching practices for professors. |
| Context | Professor wanted to share relevant content with their students |

#### View content

Professor Dr. Greg Blesser utilizes the "View Content" feature to access and review shared course materials. This allows him to conveniently view lecture notes, readings, and other resources uploaded by himself or other professors, enabling him to stay informed and prepared for class discussions and lectures. The "Read Content" feature facilitates efficient content consumption and supports effective teaching practices.

Table 2: View Content Intended Scenario

|  |  |
| --- | --- |
| Persona | Professor (Dr. Greg Blesser) |
| Feature | Create content (professor) |
| Need | The "Read Content" feature addresses the need for convenient access to course materials, enabling professors to review shared resources for effective teaching and preparation. |
| Context | Professor wanted to view content shared with their students |

#### Delete Content

Professor Dr. Greg Blesser utilizes the "Delete Content" feature to remove outdated or irrelevant course materials from the platform. This ensures that students have access to the most up-to-date and accurate resources, maintaining the integrity and relevance of the course content. The "Delete Content" feature allows for efficient content management, streamlining the learning process for students.

Table 3: Delete Content Intended Scenario

|  |  |
| --- | --- |
| Persona | Professor (Dr. Greg Blesser) |
| Feature | Create content (professor) |
| Need | The "Delete Content" feature addresses the need for efficient content management, allowing professors to remove outdated or irrelevant materials and maintain the relevance of course content for students. |
| Context | Professor wanted to delete some outdated content shared with their students |

#### Update Context

Professor Dr. Greg Blesser utilizes the "Update Content" feature to make necessary revisions or additions to course materials. This ensures that students have access to the most accurate and up-to-date resources, providing them with the latest information and enhancing their learning experience. The "Update Content" feature enables seamless content maintenance and promotes continuous improvement in course delivery.

Table 4: Update content Intended Scenario

|  |  |
| --- | --- |
| Persona | Professor (Dr. Greg Blesser) |
| Feature | Update content (professor) |
| Need | The "Update Content" feature addresses the need for keeping course materials current and relevant, allowing professors to make revisions or additions to resources for an enhanced learning experience. |
| Context | The professor wanted to update some content shared with their students as they made some mistakes. |

### University Newsletter

#### Post News

The admin – Jacques wants to notify the whole university about a specific event happening in the main ground a few days before. Via this feature, he can do announcements like this to the whole university (all students and professors). Admin can also use this feature as day-to-day news about what is going on within campus and if there are any specific problems happening around any area.

Table 5: Post News Intended Scenario

|  |  |
| --- | --- |
| Persona | Admin (Anya Thompson) |
| Feature | University Newsletter |
| Need | To inform the entire university community about important events, announcements, and updates, as well as address any campus-related issues. |
| Context | Student wanted to take an upcoming quiz before deadline passes |

#### Edit News

While performing the above step, Jacques made a mistake, and he wants to modify some of the content.

Table 6: Edit News Intended Scenario

|  |  |
| --- | --- |
| Persona | Admin (Anya Thompson) |
| Feature | University Newsletter |
| Need | To edit and modify news in the newsletter |
| Context | The admin made the mistake in date/year of a specific event. The location of the event got changed at the last moment. |

#### Delete News

Admin posted a rumor which he thought was true but turned out to be wrong. So, now he wants to remove the news.

Table 7: Delete News Intended Scenario

|  |  |
| --- | --- |
| Persona | Admin (Anya Thompson) |
| Feature | University Newsletter |
| Need | To delete an unwanted news |
| Context | Admin wants to delete the news as he does not want people to see that now |

#### View Post

Professor and student want to check out all the news published by Admin’s to see what is happening around the campus (e.g., to find interesting activities or which roads to avoid while on campus).

Table 8: Delete News Intended Scenario

|  |  |
| --- | --- |
| Persona | Student (Jason Momoa), Professor (Greg Blesser) |
| Feature | University Newsletter |
| Need | To view all news published by the admin at one place in the dashboard |
| Context | Student and Professor’s wants to check latest news around campus (e.g., mask policy, exam dates, etc.) |

1. **User Management:**
   1. User Registration

In a classroom environment, Anya, Jason, or Greg want to register onto ClassMate website. They want to register themselves by giving more information about them on the website such that they identify their roles and see the features.

Table 9: User Registration

|  |  |
| --- | --- |
| Persona | Admin (Admin Anya), Student (Jason Momoa), Professor (Greg Blesser) |
| Feature | User Management |
| Need | To register a user with some information on the website. |
| Context | The user decided to sign up as a new user because they wanted to access more features. |

3.2 User Login

Anya, Jason, or Greg have already registered themselves as their intended role and created their account into database. Now they want to access the features of the website.

Table 10: User Login

|  |  |
| --- | --- |
| Persona | Admin (Admin Anya), Student (Jason Momoa), Professor (Greg Blesser) |
| Feature | User Management |
| Need | To login a user with some information on the website. |
| Context | User was logged out despite having an account already. They must check in to access all the features. |

3.3 Forgot Password

Anya, Jason, or Greg already registered on the website and successfully created their intended account. Now, they want to login into their account, but it doesn’t work as it is saying incorrectly. So, they want to reset their password.

Table 11: Forgot Password

|  |  |
| --- | --- |
| Persona | Admin (Admin Anya), Student (Jason Momoa), Professor (Greg Blesser) |
| Feature | User Management |
| Need | To offer users the ability to reset their passwords if they forget theirs |
| Context | User wants to generate a new password after forgetting their current one. |

3.4 View User Profile

Anya, Jason, or Greg already registered on the website and successfully logged onto their intended account. Now, they want to see their profile how it looks like.

Table 12: User Profile

|  |  |
| --- | --- |
| Persona | Admin (Admin Anya), Student (Jason Momoa), Professor (Greg Blesser) |
| Feature | User Management |
| Need | To see personal basic details accordingly |
| Context | Users can see their profile |

3.5 Delete Accounts

Anya has found some bad professors or students who have been created somehow and she wants to delete them from the website, so she wants to revoke their accesses.

Table 13: Delete accounts

|  |  |
| --- | --- |
| Persona | Admin (Admin Anya) |
| Feature | User Management |
| Need | To delete the account for professors and students from the courses |
| Context | User felt like something bad happened or intentionally done something to students or other colleagues – then Admin will remove such bad users. |

1. **Assignment Management:**  
   1. Assignment Creation:

Professor Greg wants to give some assignments to the students in a particular course. So, the professor will upload a either .pdf or .doc file into file upload window page and the registered students will get that assignment with basic details:

|  |  |
| --- | --- |
| Persona | Professor (Greg Blesser) |
| Feature | User Management |
| Need | To create the assignment and assign it to the students. |
| Context | The professor can give some tasks to their students so that they can grade them. |

4.2 Assignment View:

A student Jason wants to view the given assignment with the details like an attachment, description, and the final submission deadline.

|  |  |
| --- | --- |
| Persona | Student (Jason Momoa) |
| Feature | User Management |
| Need | Instructions to be followed as per description and progress purpose. |
| Context | A student can see the assignment which was created by professor and he or she is intended to do that within the given timeline. |

4.3 Visible Date

Professor Greg wants to set up a page where once assignments are created, students can only be able to see the attachment on a particular date otherwise till date students can see only viewable assignment list.

|  |  |
| --- | --- |
| Persona | Student (Jason Momoa) |
| Feature | User Management |
| Need | To manage proper submission deadline and progress window of students over a period. |
| Context | Jason will see that once the visible date is enabled – that assignment will be published on that date only. |

4.3 Submission and Status

Student Jason Momoa wants to submit an assignment. He wants to submit a file using the submission window.

|  |  |
| --- | --- |
| Persona | Student (Jason Momoa) |
| Feature | User Management |
| Need | To submit an assignment within a proper deadline. |
| Context | To upload a file, Jason will simply put .pdf or .doc file and once you click on submit, the status of the submission will be reflected as **Completed.** |

1. Quiz Management:
   1. Create Quiz

Professor Greg, utilizing the quiz feature in ClassMate, creates a quiz for the students in a specific course. He customizes the quiz by setting time limits, randomizing question order, allowing multiple attempts, and specifying feedback options. The quiz serves as a formative assessment to evaluate student understanding, provide feedback, and track progress. The facilitates the distribution of the quiz to registered students and provides a platform for them to complete and submit their quiz responses.

|  |  |
| --- | --- |
| Persona | Professor (Greg Blesser) |
| Feature | Quiz Management |
| Need | To create a quiz and assign it to students |
| Context | Professors use quizzes to evaluate student comprehension, provide feedback, and track progress. |

* 1. Question Bank

Using the Question Bank feature, Professor Greg creates a repository of questions categorized by topic or difficulty level. When making quiz, he may quickly access these questions, ensuring a well-rounded and organized evaluation.

|  |  |
| --- | --- |
| Persona | Professor (Greg Blesser) |
| Feature | Quiz Management |
| Need | Centralized repository for managing and reusing questions |
| Context | Professor utilize the question bank feature to efficiently create customized assessments and maintain consistency in evaluations. |

1. Calendar
   1. Course Integration

Jason wants to see what the coming deadline is and for which course. If there is something pressing, he wants to check which course’s deadline is earliest, description of the goal to achieve.

On the other hand, Greg has something urgent came up. He wants to move all the deadlines to another day. He can check all the deadlines on that day and notify student by emailing, posting in discussion channel or announcing it on course channel.

Table 14: Intended Scenario - Student

|  |  |
| --- | --- |
| Persona | Student (Jason Momoa) |
| Feature | Calendar |
| Need | Jason needs the calendar feature to prioritize his tasks by checking upcoming deadlines and associated courses |
| Context | Jason uses the calendar to efficiently manage his academic responsibilities. |

Table 15: Intended Scenario - Calendar - Professor

|  |  |
| --- | --- |
| Persona | Professor (Greg Blesser) |
| Feature | Calendar |
| Need | Greg wants to mark his unavailability to answer student questions on specific days. |
| Context | Greg utilizes it to communicate his availability and ensure students are informed about his unavailability. |

* 1. Easy traversal

Jason wants to gather all the deadlines and traverse to a specific assignment quickly. It also shows categorized compact view and divide the deadlines between upcoming or past deadlines.

Meanwhile Greg wants to check all deadlines he set for any course.

Table 16: Intended Scenario - traversal - Professor.

|  |  |
| --- | --- |
| Persona | Professor (Greg Blesser) |
| Feature | Calendar |
| Need | The calendar feature to gather and navigate deadlines efficiently |
| Context | Greg forgot to check the holiday before adding the assignments. He wants to send an email notifying all students that has the assignment on that specific deadline. |

Table 17: Intended Scenario - traversal - Student.

|  |  |
| --- | --- |
| Persona | Student (Jason Momoa) |
| Feature | Calendar |
| Need | Jason wants to know the deadlines on a specific date. |
| Context | Jason, as a student, uses the Calendar feature to view and track the deadlines specifically on a particular date. |

1. **Discussion Management:**  
   1. Create Discussion:

Professor Greg wants to create a topic under which he wants to communicate with the students. So, Greg will create a discussion channel for that topic.

|  |  |
| --- | --- |
| Persona | Professor (Greg Blesser) |
| Feature | User Management |
| Need | For communicating important details or requirements regarding classroom. |
| Context | Greg will provide important updates and communicate with students in two ways so that Greg can clear the doubts of the students. |

6.2 View Discussion:

Student Jason Momoa wants to discuss with the professor using the discussion channel which was created by Professor Greg. Now, Jason will send the message to the professor and Greg will respond to the message respectively.

|  |  |
| --- | --- |
| Persona | Student (Jason Momoa) |
| Feature | User Management |
| Need | To share important details – like doubts and insights from assignments, quiz or any topic related to the course. |
| Context | Jason will response to that created discussion topic and describe his views to the professor Greg. |

1. **Notification:**  
   1. Assignment & quiz are visible:

Student Jason Momoa receives notifications when new assignments and quizzes become visible on the platform. This allows him to promptly access and review the assignment details, ensuring he stays informed about upcoming tasks and can effectively plan his study schedule. The Assignment Visibility sub-feature enables Jason to stay organized and prepared for his academic responsibilities.

|  |  |
| --- | --- |
| Persona | Student (Jason Momoa) |
| Feature | Notification |
| Need | The Assignment Visibility sub-feature addresses the need for students like Jason Momoa to receive notifications and access information about newly visible assignments and quizzes, promoting timely awareness and effective task management. |
| Context | Jason will view the notifications about assignment and quizzes. |

8.2 Due dates:

Student Jason Momoa receives notifications about assignment due dates, allowing him to stay organized and submit his work on time. This ensures that he can effectively manage his workload and meet the academic requirements within the given timeframe.

|  |  |
| --- | --- |
| Persona | Student (Jason Momoa) |
| Feature | Notification |
| Need | The Due Dates sub-feature addresses the need for students like Jason Momoa to receive timely notifications about assignment due dates, promoting effective time management and successful task completion. |
| Context | Jason will view notifications about upcoming due dates. |

8.3 Grades and Feedback:

Student Jason Momoa receives notifications about his grades and feedback provided by his professors. This allows him to track his progress, identify areas for improvement, and leverage valuable feedback to enhance his learning and academic performance.

|  |  |
| --- | --- |
| Persona | Student (Jason Momoa) |
| Feature | Notification |
| Need | The Grades & Feedback sub-feature addresses the need for students like Jason Momoa to receive notifications about their grades and feedback, facilitating continuous learning and improvement. |
| Context | Jason will view notifications about feedback and grades received for assignments and quizes. |

8.4 Content created:

Student Jason Momoa receives notifications when new course content is created by his professors. This ensures that he stays updated on relevant materials, can access additional resources, and engage in a comprehensive learning experience.

|  |  |
| --- | --- |
| Persona | Student (Jason Momoa) |
| Feature | Notification |
| Need | The Content Created sub-feature addresses the need for students like Jason Momoa to receive notifications about newly created course content, ensuring they have access to the latest materials for an enriched learning journey. |
| Context | Jason will view notifications about newly created content. |

8.5 View notifications:

Student Jason Momoa can easily navigate to the notification page, where he can access all his notifications in one centralized location. This allows him to conveniently review updates, announcements, and important from his professors, ensuring he stays well-informed and engaged in his academic journey.

|  |  |
| --- | --- |
| Persona | Student (Jason Momoa) |
| Feature | Notification |
| Need | The View Notification Page sub-feature addresses the need for students like Jason Momoa to have a centralized location to access and review all their notifications, promoting efficient information management and facilitating effective communication with professors. |
| Context | Jason will view notifications in the notifications page. |

1. **Admin Dashboard:**  
   1. Course creation:

Admin Anya utilizes the "Course Creation" sub-feature to create new courses in the system. This allows her to add essential details, such as course name, description, and enrollment requirements, ensuring accurate course information for students and efficient course management.

|  |  |
| --- | --- |
| Persona | Admin (Admin Anya) |
| Feature | Admin dashboard |
| Need | The Course Creation sub-feature addresses the need for Admin Anya to create new courses, enabling her to provide accurate information and efficiently manage course offerings. |
| Context | Anya will use create course feature to add new course to the system. |

* 1. Course viewing:

Admin Anya utilizes the "Course Viewing" sub-feature to access and review existing courses in the system. This allows her to view course details, enrollment statistics, and other pertinent information, facilitating effective course administration and decision-making.

|  |  |
| --- | --- |
| Persona | Admin (Admin Anya) |
| Feature | Admin dashboard |
| Need | The Course Viewing sub-feature addresses the need for Admin Anya to access and review course details, enabling her to make informed decisions and efficiently manage courses. |
| Context | Anya will use view course feature to view course information in the system. |

* 1. Course update:

Admin Anya utilizes the "Course Updating" sub-feature to make modifications and updates to existing courses in the system. This allows her to edit course details, adjust enrollment requirements, or update course materials, ensuring that courses remain current and relevant.

|  |  |
| --- | --- |
| Persona | Admin (Admin Anya) |
| Feature | Admin dashboard |
| Need | The Course Updating sub-feature addresses the need for Admin Anya to make modifications and updates to existing courses, enabling her to keep courses relevant and up to date. |
| Context | Anya will use update course feature to update course information in the system. |

* 1. Course deletion:

Admin Anya utilizes the "Course Deletion" sub-feature to remove courses from the system. This allows her to delete outdated or discontinued courses, ensuring a streamlined course catalog and preventing confusion among students.

|  |  |
| --- | --- |
| Persona | Admin (Admin Anya) |
| Feature | Admin dashboard |
| Need | The Course Deletion sub-feature addresses the need for Admin Anya to remove courses from the system, maintaining an up-to-date and well-organized course catalog. |
| Context | Anya will use delete course feature to delete a course from the system. |

* 1. Course mapping:

Admin Anya utilizes the "Professor to Course Mapping" sub-feature to assign professors to specific courses. This ensures that each course is allocated to the appropriate professor, facilitating efficient teaching assignments and optimizing the academic experience for students.

|  |  |
| --- | --- |
| Persona | Admin (Admin Anya) |
| Feature | Admin dashboard |
| Need | The Professor to Course Mapping sub-feature addresses the need for Admin Anya to allocate professors to courses, ensuring effective teaching assignments and a streamlined educational environment. |
| Context | Anya will map certain professor to a course(s). |

* 1. Course mapping:

Admin Anya utilizes the "Professor to Course Mapping" sub-feature to assign professors to specific courses. This ensures that each course is allocated to the appropriate professor, facilitating efficient teaching assignments and optimizing the academic experience for students.

|  |  |
| --- | --- |
| Persona | Admin (Admin Anya) |
| Feature | Admin dashboard |
| Need | The Professor to Course Mapping sub-feature addresses the need for Admin Anya to allocate professors to courses, ensuring effective teaching assignments and a streamlined educational environment. |
| Context | Anya will map certain professor to a course(s). |

A1.3 Site mapping

Figure 4: Site map of the web application.

# A1.4 Use cases

## User Management

Unified page for Professor Student registration (Accessible only to admins), login or deleting a specific account (Accessible only to admins). It also provides an option to reset a password through forgot password option.

**Use Case: Student and professor registration.**

1. Admin wants to create a user for professor.
2. Admin clicks on register user.
3. Admin chooses professor.
4. Fills up all the details required for professor profile.
5. Submits the new professor creation request.
6. Admin then wants to create student profile.
7. Admin clicks on register student.
8. Fills up all the profile details for student and clicks on submit.

**Use Case: User Authentication**

1. User comes on login page.
2. User enters the id and password.
   1. If the logged in user is student, he is redirected to student dashboard.
   2. If the logged in user is professor, he is redirected to professor dashboard.
   3. If the logged in user is admin, he is redirected to admin dashboard.

**Use Case: User account deletion.**

1. Admin wants to delete professor or students account as they are no longer affiliated with university.
2. Admin click on delete user button.
3. Enters email address of the user.
4. User gets deleted.

## Discussion

The logged in professor will create a topic for a discussion based on the course content and learning objectives. The discussion creation will be on the Discussion Web page which will be visible on professor dashboard only. Here we will Permit people to participate in discussions by replying to already-existing messages.

OR

**Use Case: Discussion Creation**

1. Professor can create a discussion channel for a particular topic by clicking on a button.

## Quiz

### Use case: Quiz

The logged in (authenticated and authorized) student chooses a specific course from the student dashboard and comes to take a quiz for a specific course.

Or

Students come directly via the notification tab to take the quiz.

1. Student first see a list of all quizzes and grades of that course. (Finished and ongoing)
2. Student clicks on finished quiz.
3. Students see grades of the quiz, responses given and the right answers.
4. Student comes back from the previous quiz and click on the currently ongoing quiz.
5. In current quiz student has a timer to complete the quiz.
6. Quiz questions listed and student has option to select one of them.
7. After all questions are completed, student submits the quiz.
8. Students then see the grade updated for that quiz immediately.

## Assignment

### Use case: Assignments

The logged in (authenticated and authorized) student chooses specific course from student dashboard and click on assignments. Then at the assignment page, students can see multiple assignments like tutorial or project or lab challenges – which contains four basic fields like a link to the assignment, completion status, submission deadline and what scores he has been graded as of now or he has been awarded.

Or

Students come directly via the notification tab to submit the assignment.

1. Students first see a list of all assignments and grades of that course. (Completed and In Complete)
2. Students click on finished assignments.
3. Students see grades of the assignment and feedback from professor.
4. Students click on currently ongoing assignments to submit the attachments.
5. Students see an upload box eligible for drag and drop or select files.
6. Students choose the select a file.
   1. The file manager opens, and the user selects all the files to upload.
   2. Files are uploaded and a success message is given to the student.
7. Students drag and drop all files into a specific section.
   1. All files got uploaded and a successful message popped up.
8. Student presses submit button, it goes to professor for review.

# A1.5 User Experience and Task Flow

## User Management [Harshil Shah]

A picture containing post-it note, diagram, yellow, line

Description automatically generated

Figure 5: Task flow for login

A picture containing text, screenshot, diagram, font

Description automatically generated

Figure 6: Task Flow for registration

## Quiz [Raj Soni]

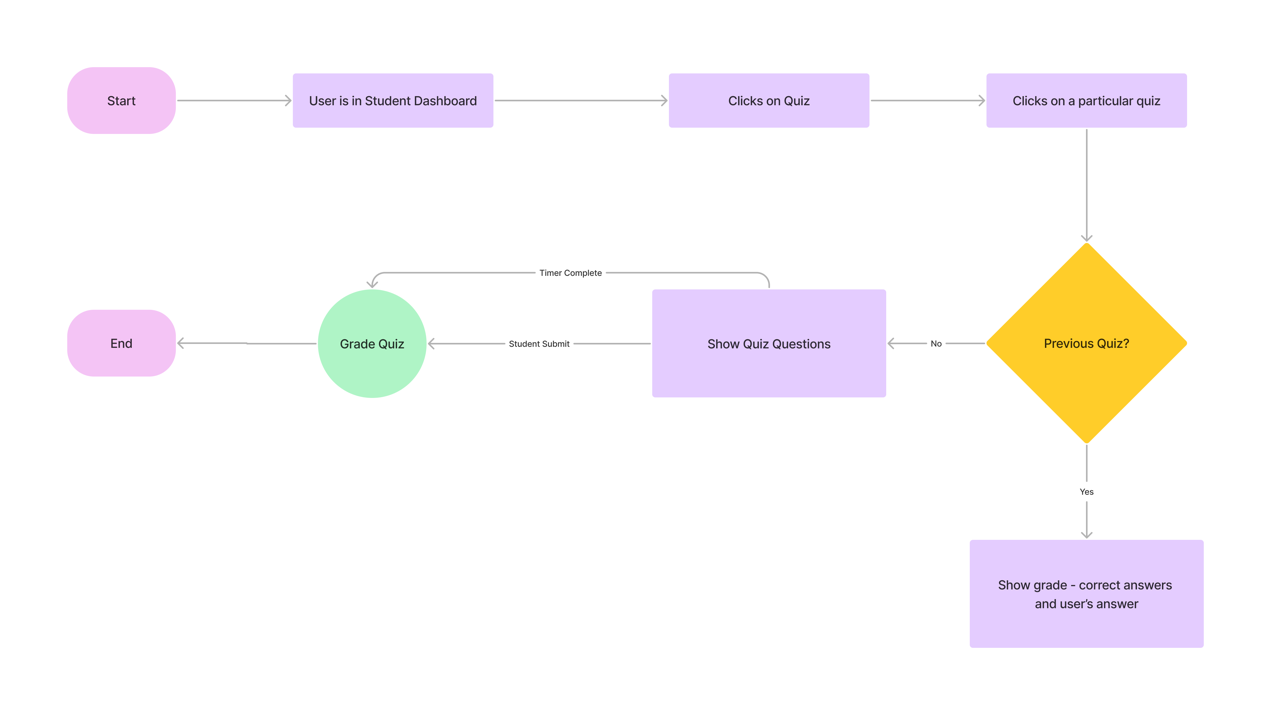


Figure : Task flow for Take Quiz

## Student & Professor Dashboard []

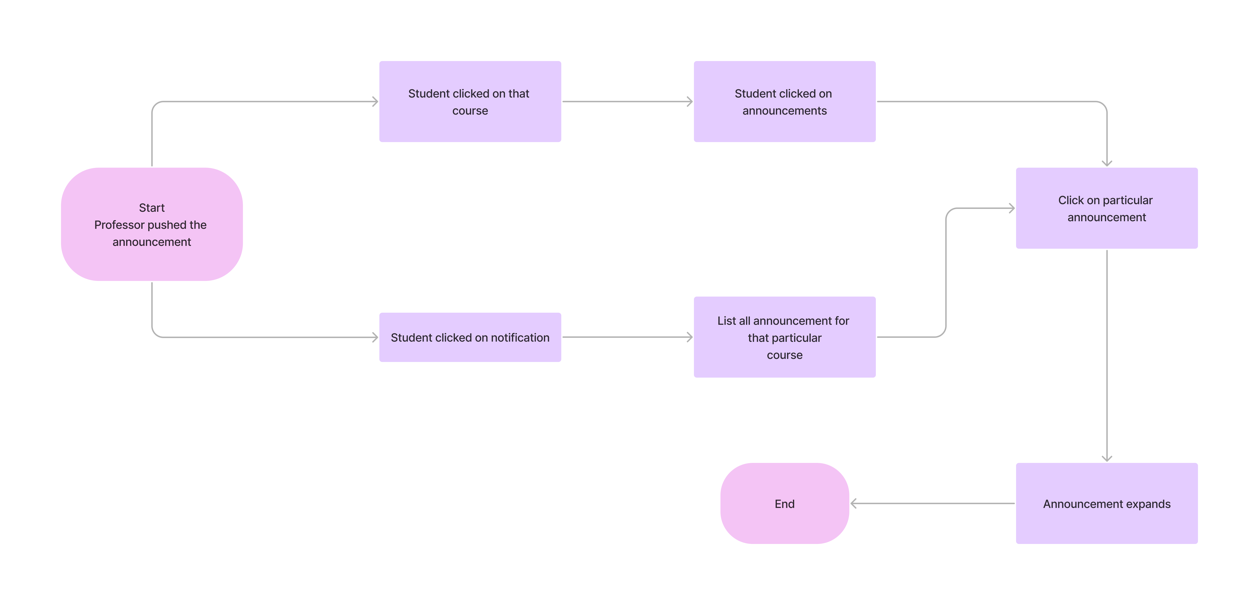


Figure : Task flow for Announcement

## Assignment [Viral Siddhapara]

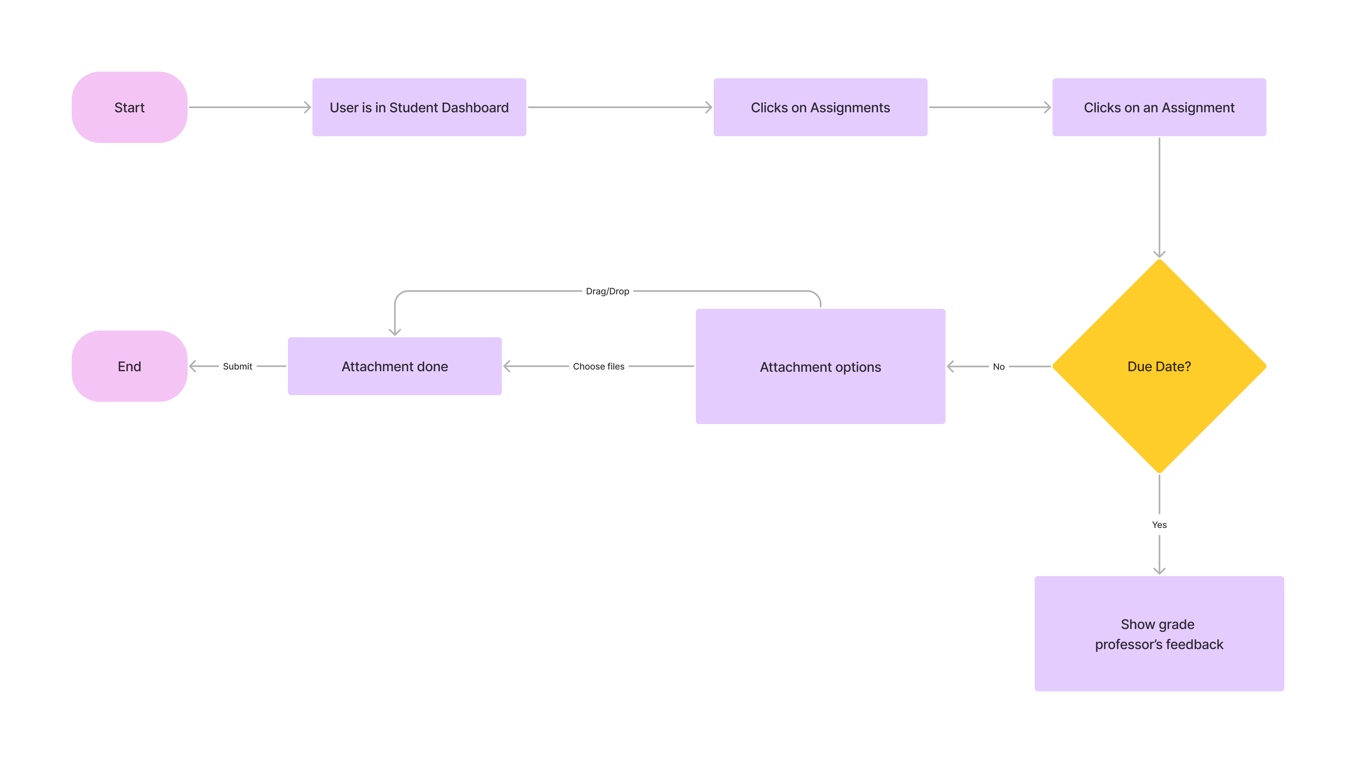


Figure : Task flow for Assignments

## Notifications [ ]

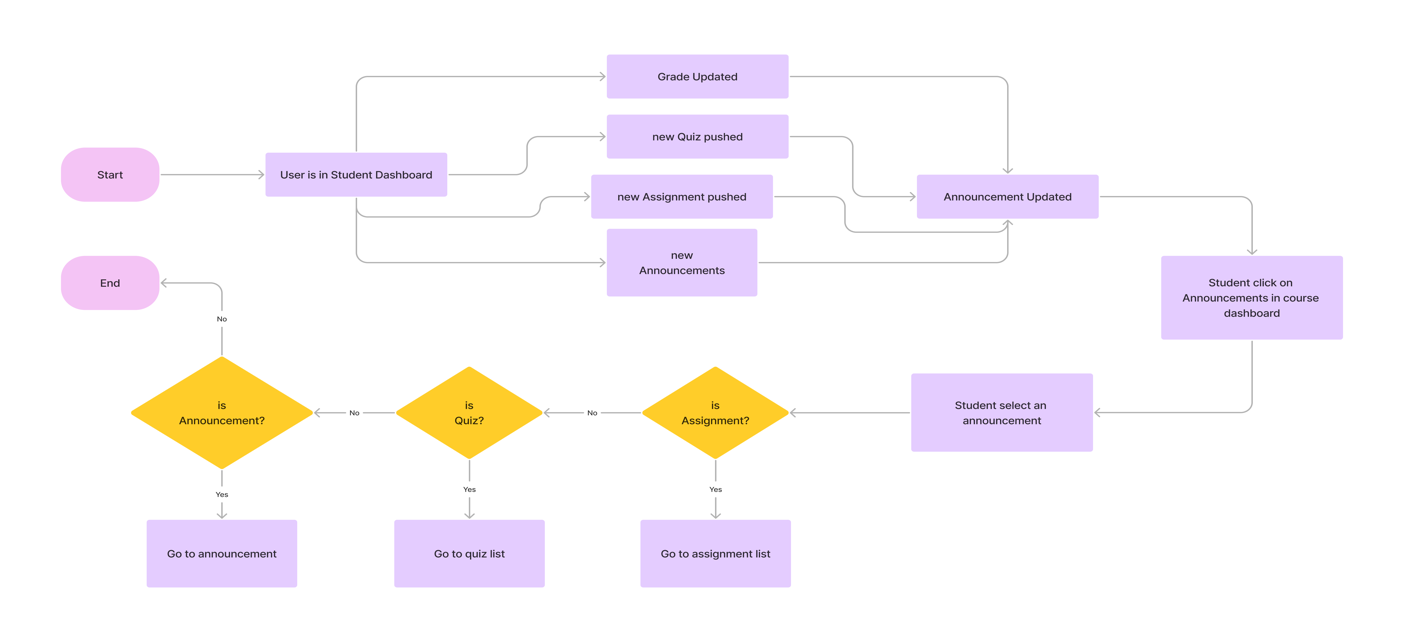


Figure : Task flow to Notifications

# A1.6 Lo-Fidelity Prototype

## Student Dashboard [Harshil Shah]:

Figure : Student Dashboard

A screenshot of a web page

Description automatically generated with medium confidence

Figure : Quiz Window

A screenshot of a web page

Description automatically generated with medium confidence

Figure : Assignment Page

A screenshot of a web page

Description automatically generated with medium confidence

Figure : Course Announcements

**References:**

[1] “Flowchart maker & online diagram software,” Diagrams.net. [Online]. Available: https://app.diagrams.net/. [Accessed: 07-Feb-2023].

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