CS610 Project-18250669

Collaborative Annotation Application

(Student Version)

Introduction:

Collaborative Annotation is a technique in which students/group of people, work on a task such as critically reading a research paper or an article or any kind of text. In the process, add annotations to the text, wherever required. This task can also be assessed and graded. As decided before, we identified typically two types of users.

1)Instructor: The teacher who assigns the tasks and controls the students, allocating groups and grading them.

2)Student: The actual student user who works on the tasks assigned and participates in the collaborative annotation. The students are then graded/assessed based on their annotation work in a group.

I selected to design the user interface for Student's perspective of the Collaborative Annotation application.

As we all know, that right after identifying the types of users, the designer should do a persona research and come up with personas of users that would be using the application.

Based on the usability research, the personas, and the different scenarios, I came up with the following set of formal specifications/requirements which the application has to have.

Formal Requirements:

1)The student shall be able to login into the application using registered email address and password. The other requirements related to login, such as forgot id or forgot password should also be implemented. However, the student shall not be able to signup for the application as an administrator will add the student users and then give them the login details to login into the application.

2)The students shall be able to see the active assignments/tasks on the home page along with their deadlines.

3)The students shall be able to chat with any other student or also an instructor.

4)The student shall be able to access and see the grades for all the previous tasks/assignments along with the feedback.

5)The student shall be able to see the other students in the group assigned for completing a task.

6)The student shall be able to collaboratively annotate a research paper or an article by selected the text with a rectangular box.

7)The student shall be able to collaboratively annotate along with the peers to complete a task assigned before.

8)The student shall be able to post queries ,add discussions which are also visible to all the other students.

9)The student shall be able to post comments on peer's annotations and also see the comments given to them as well.

10)The student shall be able to see the lecture announcements/any information posted by the instructor related to any specific task.

11)The student shall be able to update their profile data after logging into the application.

12)The students shall be able to see the annotation work of the other peers in the group. The students shall also be able to see the exact time when a group member has last annotated.

13)The student shall be able to search using the names from the annotation list.

14)The student shall be able to logout from the application as well.

15)A new student user shall be able to access the inbuilt help menu in case of any issues or to just get an idea of how the application exactly works.

16)The student shall be able to view the announcements, if any, made by the instructors.

17)The student shall be able to get the notifications regarding announcements and any messages received.

18)The student shall be able to update the profile details.

19)The student shall be able to see other student's annotation in the group and then add to that annotation as well.

In my opinion, the interface should look somewhat similar to the Moodle website design of Maynooth University.

The interface and design should be simple and basic and at the same time, it should be aesthetically pleasing.

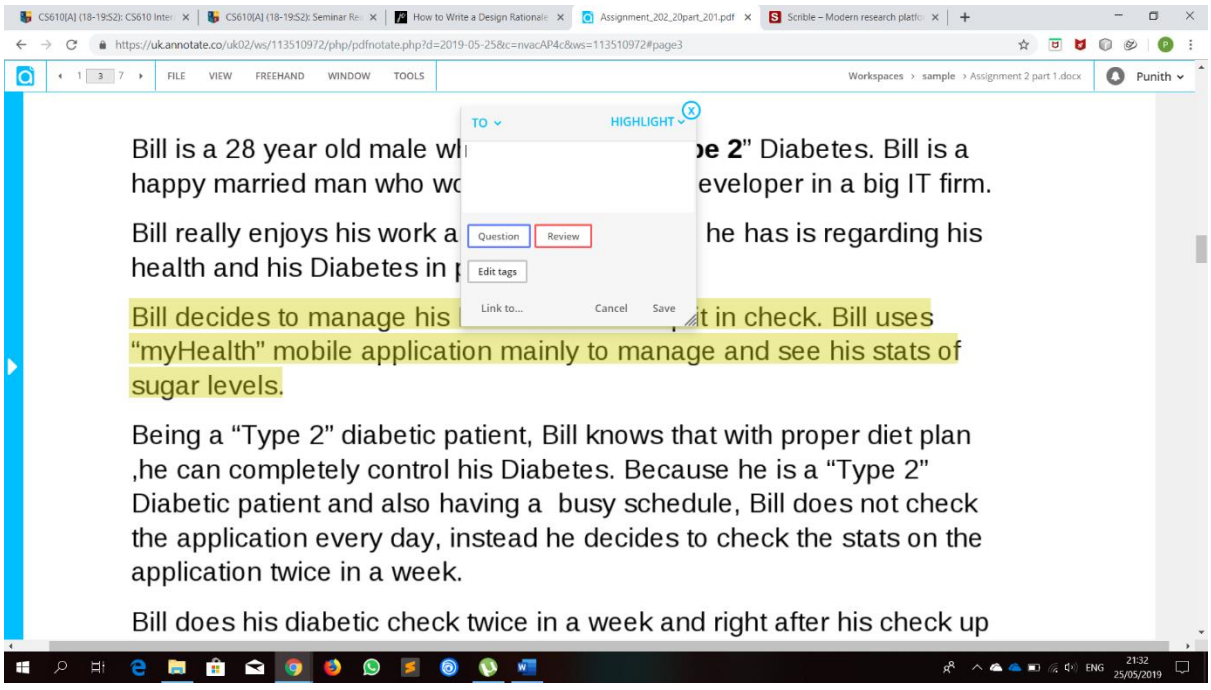
In my view, one important thing/functionality that should be present in any application, is proper user feedback. The user ,at any point of time, while using the application, should know what they are doing and how to do it and if they are stuck at some point, the interface should help them with the issue.

Design Approach:

I used the user personas described ,as the primary source of deciding the design approach. This is a native web application that runs on any browser and at the same time it is also accessible on other kinds of devices as well with the views changing accordingly i.e responsive web application.

From the base requirements specified and user research ,I looked for similar applications that provide this functionality of collaborative annotation. I found the native web applications such as Annotate and Scribble which provided this functionality. I went through both the applications.

However these applications does not differentiate a teacher and a student user and the design is the same for both the type of users. The user can start an annotation task or also complete a task already assigned by another person. Apart from this, both the web applications had excellent design that had really good colour usage and consistency which made the application really attractive to the eye. Regarding the usability, users can find it difficult to completely know how to use the application initially as there is a lot of menu options provided, but there is also enough documentation/video assistance to help the user get on with the application.



Therefore I took the methodology of how the annotation is working in these application. From a student's perspective , the user can simply select the text on the paper/article assigned which is accessible and then annotation window will popup giving different options to the user where the user can add the text for annotation and then save the annotation. However, as mentioned before ,those applications had a bit complex user interface and I decided to make it much more simple.

I based the application's design on the Maynooth University Moodle Website as it is pretty much similar to the kind of requirements that are to be implemented for this collaborative annotation application.

From the description before, the goal is to provide a nice and simple user interface for students to collaboratively annotate on tasks being assigned to them. The design is to be kept as minimalist as possible along with the aesthetic please.

I kept in mind the Nielsen's 10 design heuristics while designing the wireframe. One important design principle that I followed is keeping the design simple and stupid.

I also made the web application completely navigational and at any point of time, the user can navigate to any page in the application by using the navigational menu bar provided which is an important feature to have in any kind of web application these days.

The user also gets proper feedback after almost every action performed in the application which is also one more important functionality that is to be present in every web application for it to have good extent of usability.

Design Rationale:

I will explain how each requirement/functionality described before, is implemented and the rationale/reasoning behind it.

1)The user shall land on the welcome page that has a brief description of what the website is and then the user can find a button that navigates to signup/login page, where there is also a video about the website which the user can see.

Often, providing some kind of description about the website is helpful for the user as the user might not completely understand what the web application is designed for.

In case the user is having trouble logging into the application or if the user forgot the password, then there is also password recovery functionality provided for the user to resolve the problem. Even in case of not remembering the username, the user can send query for help from the IT department. This error recovery is an important functionality that is to be present in any application, through which user can recover from any unwanted error.

2)The application is made fully navigational, where the user can navigate to any page in the application by clicking on the menu bar on the left hand side of the screen. Also ,the user can directly navigate to the main home page of the application, by just clicking on the logo visible at the top of the screen and available on all the pages along with horizontal menu bar.

Navigation is something which became highly influencing factor for the overall user experience, and the user likes the navigation from one page to another easy and streamlined with buttons easily accessible and also in a way that is completely familiar to the users who usually use web applications.

3)Other than the menu bar, the user can access the other menu options such as notifications, messaging, help and profile page using the buttons available on every page of the web application at the top. Again this is a part of implementing good navigation wherein the user will be able to access all the functionalities through a very familiar way that is similar to every other web application.

4)The user also receives notifications in case of any updates/messages received and the user can simply view the updates by clicking on the notifications pop up. This is a part of good usability as the user should not keep checking the web application to find if any updates are made and instead the user should receive a notification saying that an update is made. This is a functionality which is also pretty standard and available in almost every web application that has personalization included with user signup/login. The user should always be provided with the ease of access making it as simple as possible for the user to completely use the web application.

5)There is also a functionality available for the user through which the user can view the profile and update the details at any point of time. The user can also add/change the profile picture as well. This is an important functionality as the user should be given that personalization and also the freedom and control. Although there is not much user freedom and control possible to give in an application like this, adding this small functionality of personalization(profile updating) will increase the usability to a good extent.

6)In a teacher's perspective, the instructor can upload a task and assign groups to the task. The student can then view the task ,it's description and also the assigned group along with the deadline of the task by just clicking on the task button accessible on the home page. In case of any queries ,the student can also start a discussion thread to the discussion forum, which is also visible to all the other students as well. And also, as soon as uploading a task or in case of any announcement is to be made for the students, the teacher can simply add the thread/post to the announcements section which is again accessible to the students and they also get a notification popup each time an announcement is made. The student can also reply to any announcement/discussion made. This is a part of implementing the main functionality for which the web application is made.

7)There is also in application messaging functionality provided where the user can message to any other user by navigating to the messaging page of the application by clicking on the messaging button available at the top on every page. On the messaging page, there will be a window with the messaging thread(all older messages if available) and a text box through which the user can send the message. The user can also search for any user through the search bar available on the left side ,along with the list of users to whom the user has a messaging history. This is again a part of providing the personalization to the user where the user can communicate to any other user at any point of time and again the functionality is implemented in a way that is similar to any other messaging service provided in other web applications. The user can also directly message to the instructor in case of any query. This is also the functionality that increases the usability of the application.

8)At any point of time, the user can also access the help page of the application, by just clicking on the help button available on top of every page. On the help page, the user is provided with a help window that has text input box for subject and query/issue. The user can just add the details and send the query for any kind of issue. The user can also access the faq section with some common questions answered. This is an important functionality that is to be present for a good design, where in the user is provided with help and also proper documentation about the application and the user can get help for any kind of issue that occurs.

9)After viewing the task and description, the user can start the task by clicking on the start task button and then the application navigates to the task page, where the user can view the document uploaded for the task on which annotation is to be done. Then to add the annotation ,the user can simply select the text to be annotated and then an annotation window comes up with options and a text box where the user can add annotation. The user can also see already annotated text of another user in the group in a different coloured text and the user can also add to this already annotated text. After adding the annotation to the selected text and clicking on add button, the user is a given a pop up that the annotation is added successfully and this is given as a feedback so that the user can know that the annotation is saved properly. This is part of the main functionality i.e annotating the selected text, and also the user gets proper feedback after the annotation is saved. This is again an important functionality to be present in a good design wherein the user is provided with feedback after every action performed.

10)The user can also see the other users in the group who are online and also can search for the users using the search bar below the list of users on the left hand side of the page. The user, after seeing the annotation work of other users ,can add comments to their annotation work by simply clicking button beside the user's name and then a comment window comes up with a text box where the user can add the comments and then click on add button to save the comment. After clicking the add button, the user is provided with a popup message that the comment is added successfully. In the same way, the user can also access the comments given to them by clicking on the button beside the current user's name. This again is a functionality that increases the usability wherein the user can give and receive constructive feedback.

For the low fidelity wireframe, Balsamiq mockups is used to design the wireframe and for high fidelity wireframe , I used UX pin to design the wireframe. As a part of designing the high fidelity wireframe, I came across another application similar to UX pin , called Web flow but compared to UX pin it was a bit complex to add the different icons and complete design.