Group: Security Dawgs

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HCI Milestone 4 Doc Part A and B

Part A

P2 - As a professor I want to be able to control who can enter my online classroom in order to only have authorized users attend meetings and prevent potentially disruptive users from joining.

With P2:
P2 - Our goal is to stop disruptions caused by zoom bombing in online classrooms. P2 is one of the most relevant user stories to this since out of all of our proposed solutions so far it has only some minor drawbacks such as needing students to log into an account, and avoids many of the problems that other solutions might have such as being time consuming, or only being reactive instead of preventative. It also creates a huge obstacle for zoom bombers by making it very difficult to get into a meeting in the first place, which is a great way to stop zoom bombing in the first place. Also by achieving this user story, we will also achieve, or at least make great progress towards, many of the other user stories that have to do with having an uninterrupted meeting.

Video demonstration for user story P2: https://youtu.be/hhbn8oXVR9U

S1. As a student, I want to be able to verify my credentials in a convenient way so that I do not have to spend unnecessary time logging into my account.

S1 - Since our goal is to minimize the disruptions in an online classroom we believe that our solution should not be disruptive as well. Making the system easy to use for students is important for this reason, and one way we can do this is by having trusted devices or some other way to easily log into your account after you have already done so once on a device.

Video demonstration for user story S1: https://youtu.be/QPBNGCaO6q0

Prototype Demo link:
https://xd.adobe.com/view/6b2d3678-26a1-4178-b375-52d43a72e29f-3e7e/
Prototype download link:
https://drive.google.com/file/d/1x93OAnEi0zoqa6ElPRgmE0_rRlqjq0W0/view?usp=sharing

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https://www.flaticon.com/free-icon/reading_234635 - icon for reading class
https://www.shareicon.net/interface-circular-button-tool-symbol-monitor-computer-black-fill-rounded-808220 - icon for computer class
https://pixy.org/5778959/ - icon for chemistry class
https://iconscout.com/icon/global-study-10 - icon for geography class

Part B

1.
An example of a IRB consent form can be found here(Template used was the Social and Behavioral form): https://researchservices.cornell.edu/forms/irb-consent-form-templates

Our overall research question would be in regards to how to most effectively stop zoom bombing or on any other video conference software like Skype getting disrupted by people for class?

An example IRB consent form would look something like this:

What the study is about

The purpose of this research is to find out if our application is not only usable for our main users of professors and students, it's also to ensure that the application if the school decides to use it then it will also test the security of the application to ensure that both professors and students are able to log in to a virtual meeting in a secure fashion for the purpose of this research.

What we will ask you to do

We will ask you to input your professor/student log in information, professors and students will be done in separate rooms to ensure log in information is kept private between the students and professors. This will help to test out the application and when you successfully log in, you will be able to join the virtual meeting.

Risks and discomforts
The only foreseeable risk in this test will be in regards to a potential loss of confidentiality in regards to your professor or student log in information.

Privacy/Confidentiality/Data Security
To ensure that everyone's information is kept private, the information will immediately be deleted once testing is over as this test is more to check the usability of the software. Also, we

will ensure that previous information (aka the next person that comes in after someone) isn't available to see as well during the testing.

Taking part is voluntary

You are completely free to decline doing this test. Your standing with your current University will not change if you decline testing this app.

Follow up survey

We may contact you again to send you a feedback form in a follow up survey. As always, your participation will be voluntary and we will ask for your explicit consent to participate in any of the follow up surveys that we do. This survey will ask if you felt that the extra layer of security added was terribly inconvenient or not.

To test whether our app would be able to succeed in this task, we could do multiple methods together to ensure that we test things properly and safely for the testers.
For example these are the tests we could do:

1. Tester is not a school student and tries to log in. -Would be blocked
2. Tester is a student but does not have the class in question - Would be blocked
3. Tester is a school student and has the class in question and logs in - Wouldn't be blocked
4. Tester is a professor and has the class they teach - Wouldn't be blocked

This approach calls for interviews with people to test the app's security measures. We can also have surveys as well to get feedback on the usability of the app and how users feel about it.

2.
To ensure Informed Consent for any tester, we could make sure that the identities of the testers are kept anonymous and inform future testers that we don't really require much information for the test since we're testing for the app's security. However, the information that we'll need is the student and instructor's uga id name and password when they're logging into the app. The instructor and student id information after the testing will be deleted so that we don't have access to that information and it doesn't get leaked.

The type of data we'll be analysing mainly will be in terms of security, can students and professors who have the right clearance to access the rooms? Can the app block those who don't have access to the rooms? We'll also be gauging usability as well, did people have a hard time accessing the app? These answers will help us in answering our research question of whether or not we can prevent zoom bombing.

To test properly in a pandemic, testers will be required to come in 1 at a time. Students and professors will be tested separately. Masks will be required and they have to be properly worn, and the cleaning of the terminals will also be done by us to prevent any germs or bacteria to ensure as sterile an environment as we can make it.

Part C

Summary Video: https://youtu.be/AcTt_OrBGC0