**Dung:**

**(Enthusiasm and smile): Hello everyone. In this video segment, we would like to talk about system modeling for our project. We will show you a sample of our use cases and test cases that we used to develop our class and sequence diagram.**

EVER: Our first use case is the sign up and verification process.  The actors in this particular use case are the user who visited the website and the database that stores user information.  The basic course of events are:

1. user signs up for an account to use our system.
2. The system will then send a verification email to the email the user supplied to sign up with.
3. The user will need to log into their email to click on the confirmation link, to verify that this is a valid email.

There are a number of requirements and prerequisites placed in order be able to sign up.  We will discuss those in our test case.

Mo:

Script: Our service is available to GSU students only who have a valid GSU student email. For the sign-up form itself, we have a number of requirements and pre requisites in order to sign up. All fields must have a value and cannot be left blank. The email must be an @student.gsu.edu address. Passwords must be at least 8 characters and the email cannot previously have been registered in the database. User must log into their GSU email to confirm their account and validate their emails.

Hamza:Here is the class diagram we have built based on our use cases. As you can see, we have 9 objects: User, Database, SignUp, UserAccount, UserProfile, SearchPartner, Match, Study Chat, and Discusion Post. In each of these objects, we have the attributes and the operations performed by each of these objects.

Take for example, the SignUp object. We have username, password, email as the attributes for this object and the operations performed by this object are GSUEmailVerification(), ConfirmationEmail(), ConfirmAccountCreation(). This object is linked with the User and Database object in an aggregation association with multiplicity 1 to 1 relationships.

Park: From the class diagram, we developed the sequence diagram to model the behaviors of these objects with each other (walk away). Let’s take a look at the Signup object once again (pause 3 seconds)

As you can see, the User initiates the Signup() operation on the Signup object. The Signup object will verify the user’s GSU student email address until a valid email is entered. The Signup object will then send a confirmation email back to the User. The user will need to confirm that the email is valid. Once confirmed, the Signup object will create an account for the user in the Database and confirms with the User that an accounted has been created to allow the User to interact with other objects.

Hamza:As an integral part of our software engineering process,

We’ve drawn out the models and diagrams for our necessary to implement into a system design. We will continue use these to develop our system into one that is functional and robust, with the capabilities to be modified as needed with time.