

University of Greenwich

Group Coursework

Enterprise Web Software Development – COMP1640

TEAM NAME: GROUP 4

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1 Title Page

Technologies: PHP

Database: MySQL

URL of website: <http://tutoringcoursework.epizy.com/>

URL of Code: <https://github.com/ThanhMon99/Code-for-CourseWork.git>

Usernames/passwords for different roles:

Role	Account	Password
Admin	admin	123
Staff	staff	123
Tutor	tutor1	123
	tutor2	123
Student	student1	123
	student2	123
	student3	123
	student4	123
	student5	123

Sprint Backlog:

https://docs.google.com/spreadsheets/d/1sJS98h_Y0tHMRL04yHID9780HyYKeSXG4_6QttvXMZ8/edit#gid=0

URL of the screencast:

https://drive.google.com/drive/folders/11xHT_VfhxBdXB2RYuzba6EvBzIOHXTLr?usp=sharing

URL of presentation PowerPoint:

<https://drive.google.com/open?id=1Zu1RiCGsCoO74vFBYu7KZAFS3PBQT1K2>

2 Introduction

In this report, our team will talk about the entire system and the process we completed the system. All will be presented in detail and most clearly about the project.

3 Database

3.1 ERD

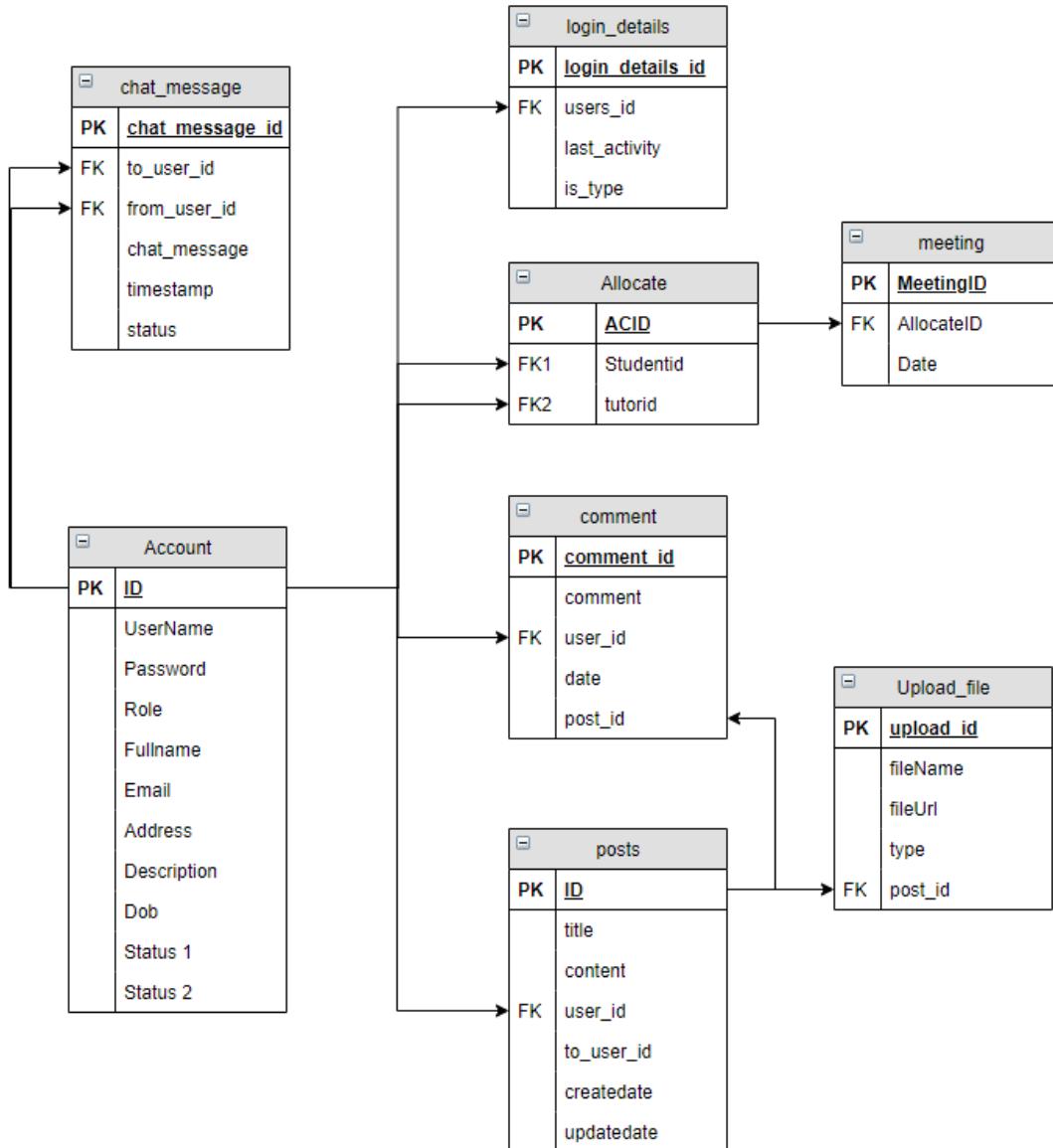


Figure 1 ERD database

3.1.1 Evaluate and clear ERD

This is the ERD drawing of the database we created, the database was built to create tables and functions in our application, including 2 roles: students and tutors, functions to Students and tutors can connect with each other as online chat, share folder and screen as well as upload files to each

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other. As we have seen, we have included 8 main tables created and will go into more detailed analysis of the effects of each of the above tables.

We created 8 different boards that aim to rotate the account board to create a link between the boards and the account boards, the purpose of connecting the boards is to connect online teaching between students and tutors. Through this application, the functions that students and tutors can learn together include the chat box to help tutors and students to chat with each other via the app using chat box, followed by allocate by meeting between teachers. tutor and student, followed by another function is by commenting directly to correct students' posts sent to tutors by uploading files as well as posting posts for tutors to see. The tutor can directly comment in to see and correct the problem.

Generated tables have a primary key because it helps to link different tables to create a tight link between tables, with extra constraints created by linking another primary key to the table. There, we link the ids from the account table to the id_user in the rest of the tables to create links and create authenticity to see who sent from whom with the id id authentication of the account tables to stay secure. messages and files sent to the person who needs to send, avoid information disturbance and leak user information on the application

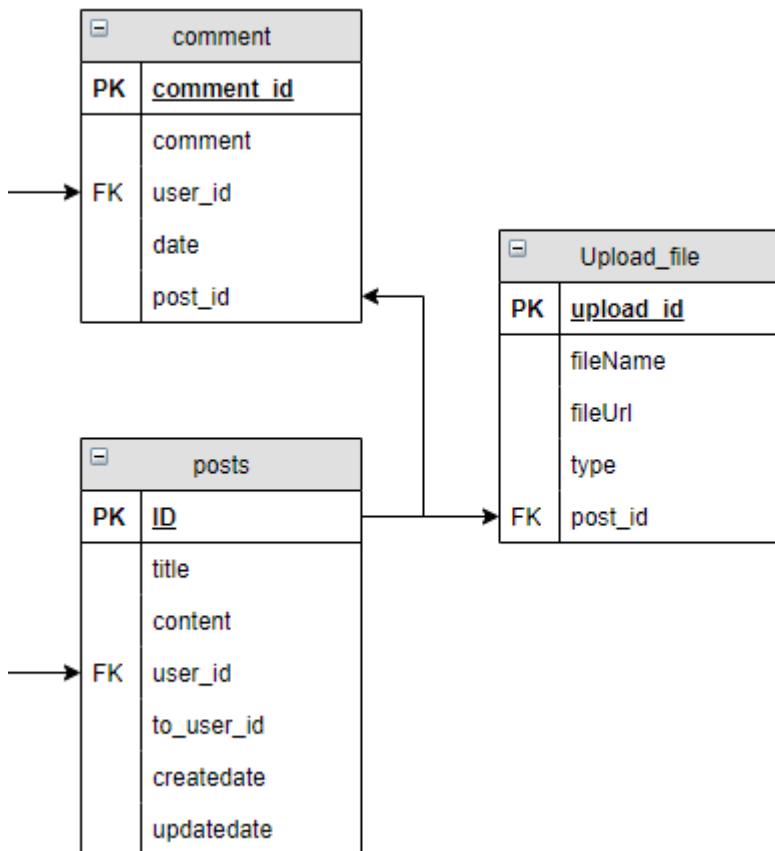


Figure 2 Post function

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Three tables (post, comment and upload_file) are necessary functions for a user to post a post on the system, they include the comment section and possibly the attachments sent from the upload_file table. so the post table will be the link board with the other 2 tables to create cohesion through post_id, post_id will help the article to be authenticated by someone who posts and posts to the system for the purpose of authentication and security to avoid posting and presenting. miscellaneous items on our system.

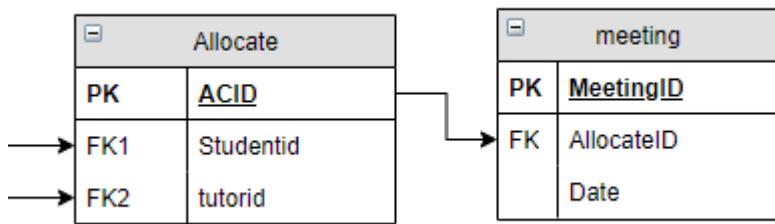


Figure 3 Meeting function

This function includes two tables allocate and meeting, to help students and tutors create a meeting together as a class so allocate helps us to connect id_student and id_tutor into one allocate with the remaining id_allocate. will be created and connected to the meeting to initiate a connection between tutors and students.

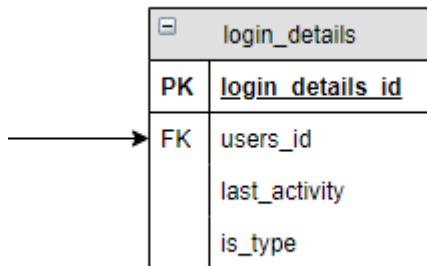


Figure 4 Login_details

This table is created to help us control and display the user's access history including the last activity of the user_id and analyze whether the user is still using the system and control the status of the users. system.

chat_message	
PK	chat message id
→	FK to_user_id
→	FK from_user_id
	chat_message
	timestamp
	status

Figure 5 Chat box

This is a chat box to allow users to connect with each other and create an online conversation with the status of each user and the time they chat, the user can delete his post if desired, we will If the status = 0, the message will still be displayed, but if status = 1, the message has been deleted by the poster.

3.1.2 Security and Validation

About security for the application, we also grasp the basics to protect the password for the user and prevent hackers from entering the user's account, we have encrypted the following passwords. when they set up to protect users from being exposed to passwords for hackers and there are things that require users to be required to fill out a request that we will do more in the future to increase security. For users such as the password must be over 16 characters, the password must be capitalized, the password must have extra digits, ...

However, there are system vulnerabilities that need to be addressed early to prevent hackers from entering and the system that we still need to solve for the project as soon as possible and will protect the system daily to avoid creating holes. System vulnerabilities for user information and data theft are encountered daily, the protection of user information has been a global concern so we always try to find the system vulnerabilities. system at the earliest and have solutions to overcome problems.

The Validation and authenticity of the system has allowed users on the system to be protected from personal data and the files are encrypted by the system from the messages, in order to protect users and due diligence by restricting everything by the generated code and encrypting them in the safest way.

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3.2 Appropriate data types:

asmtest login_details	
login_details_id	: int(11)
user_id	: int(11)
last_activity	: timestamp
is_type	: enum('no','yes')

Figure 6 Login details table

asmtest account	
id	: int(200)
username	: varchar(200)
password	: varchar(255)
role	: varchar(100)
fullname	: varchar(200)
Email	: varchar(100)
Address	: varchar(100)
Description	: text
Dob	: date
status	: varchar(50)
status1	: varchar(50)

Figure 7 Table account

As you can see in our ERD database drawing, we use a lot of data for each different function in each table to make everything secure and best suited for building this application. We use 6 types of data to make the system the most secure and appropriate in each function and we will explain them more clearly why they are suitable for each type of data.

Int: This kind of universal data is very easy to understand why use it because it only tells us to fill in the number and doesn't enter any other special characters or letters, we can see that we put these IDs of different tables like user_id, id_login_details as int are the best choice for writing ids into data.

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Varchar: The next type of data is varchar is also a typical in database construction, we use varchar a lot to force users to fill in it from name, address or email, this is a special character data type. Medium and the easiest to use data we have created for it.

Text: description is what we have chosen to use text data type, this data type is quite open for writing a long and suitable text to add characters because they are quite comfortable and have no limits so here Definitely a good alternative to varchar to write a long document to write in the description.

Date: This type of data is quite easy to understand as its name is used to fill in the date and is very suitable for entering the date of birth of students in the data.

Timestamp: This is a higher form of the date because this function stores both date and time information. This value will be converted from the current time zone to UTC during storage, and will be converted back to the current time zone when data is retrieved. So it is best suited to store dates, times, and seconds in the most specific way.

Enum('no','yes'): We need this type of data because when we use it we only need to return two data types when checking and scanning whether the user is learning on the app or not studying on this, thanks to which we will divide Out is online or offline, we will get 2 types of status, yes and no, to know the user's month status on the application.

3.3 Referential integrity implemented:

When starting to build a database and drawing ERD to figure out how to make the database steps and tables created, the reference is very important and we must understand all the functions and integrity and not error. in data is needed. In relationships, data is linked between two or more tables. This is achieved by having the foreign key (in the linked table) referencing the primary key value. Because of this, we need to ensure that data on both sides of the relationship remains intact. Therefore, referential integrity requires that, whenever a foreign key value is used, it must reference an existing, valid primary key in the parent table.

For example, if we delete a record in the primary table, we need to make sure that no foreign key in any table has a value in the deleted record. We can only delete the primary key if there are no related records.

3.4 Enables roles to be implemented:

Regarding the permission to perform the role in our data that allows both students and tutors to communicate with each other online via our system, we have connected the two roles to each other through the system. system to help in the online teaching process in the current situation, online learning solution is a trend in the market so the role deployed in the system helps the system to have an interaction in it between students and tutor together.

4 Site Design

4.1 Login and Register

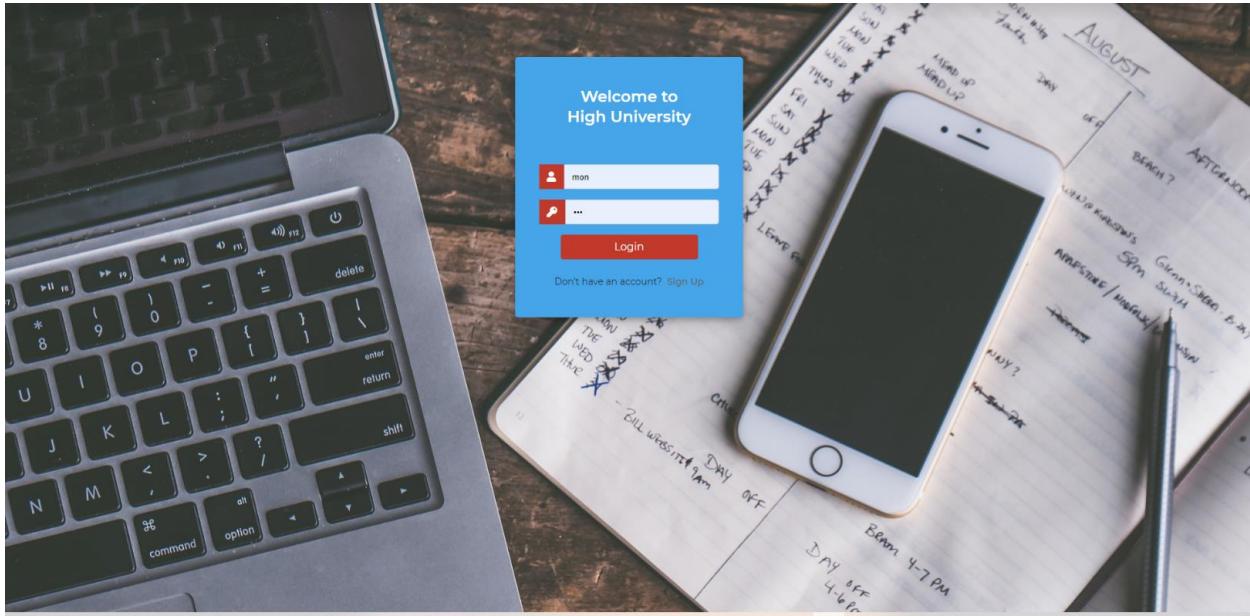


Figure 8 Login

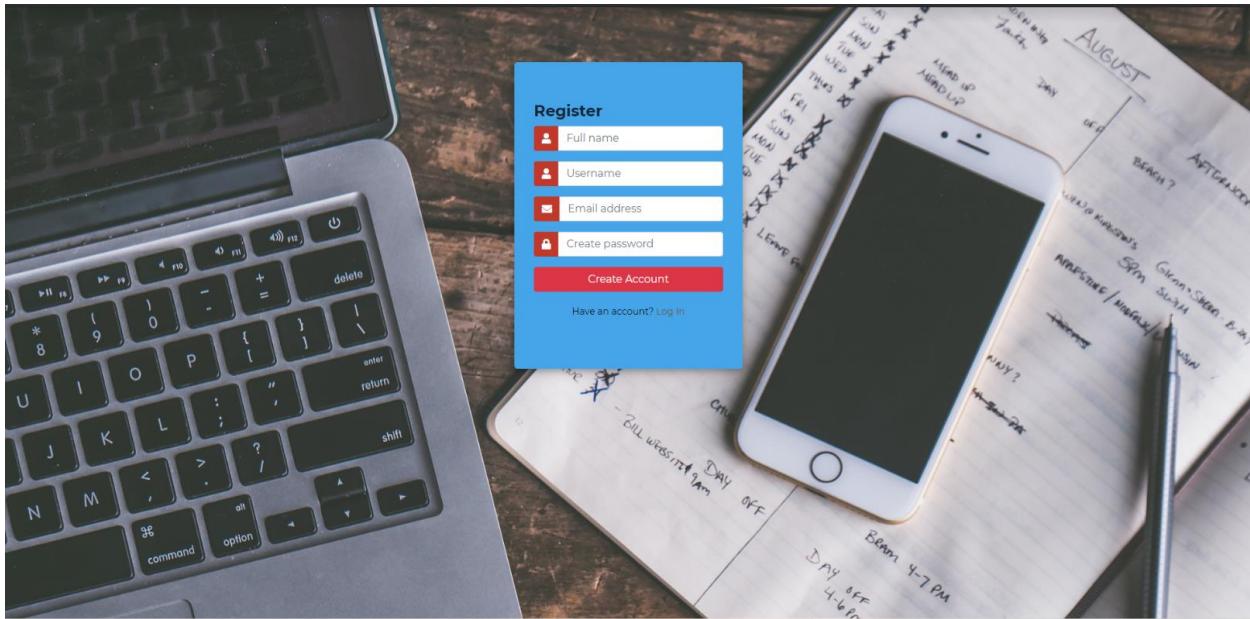


Figure 9 Register

This is the part where a new user can go to create an account and register a new account and must fill in the information to be able to register to help users avoid bad situations and can recover or regain accounts when hackers take account.

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This registration and login interface is also quite satisfied with the layout and arrangement of the template team we deploy daily, we can see the registration and login section is designed right in the middle to help the layout harmonious and easy. Look for users as well as easy manipulation.

4.2 Homepage

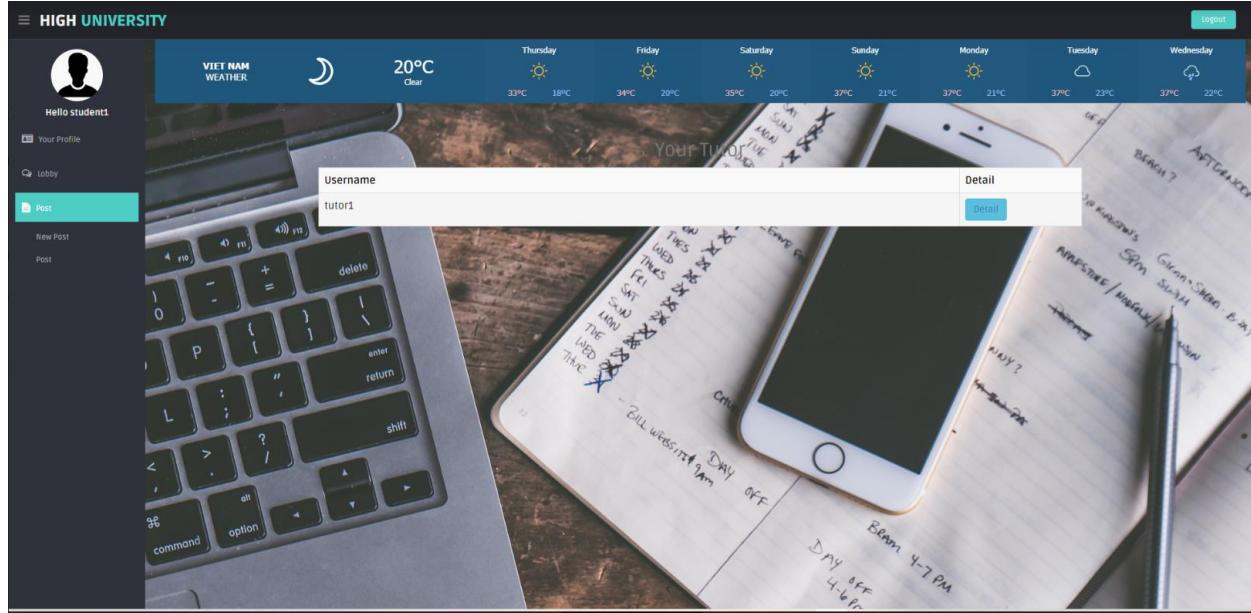


Figure 10 Student homepage

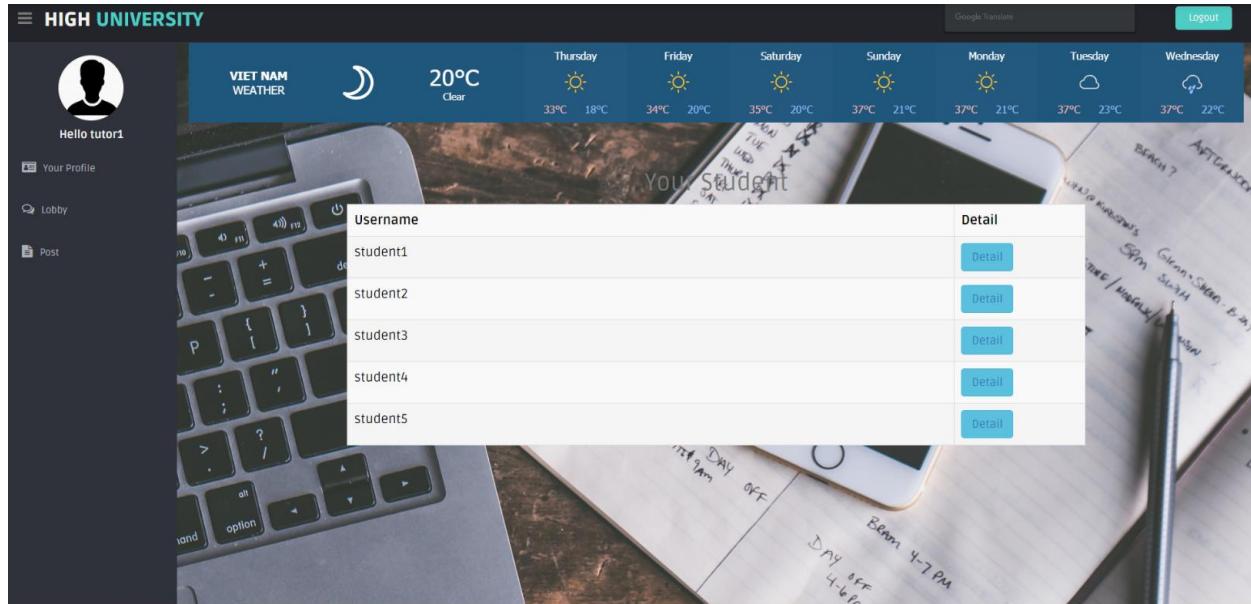


Figure 11 Tutor homepage

This is a rough interface of two different roles including students and tutors, we see that the interface between these two roles is not much different in terms of design and the template is placed the same to create the most uniformity for systematically, we see that the two roles are displayed quite

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similarly, are students for tutors and tutors for students, which is needed to connect with each other through this system.

Talking about the template of the homepage system, we follow a light and easy-to-look style for all ages and the easiest for everyone to easily use. We also love to create a homepage template that is quite satisfactory in the expectation in the past and want to complete 85% in the beginning to create a beautiful and good looking homepage interface. We chose blue tone as the most comfortable and comfortable tone to create a sense of comfort for users and systems.

4.3 Post

The screenshot shows the 'HIGH UNIVERSITY' homepage. On the left, there's a sidebar with a user profile picture, the name 'Hello tutor1', and links for 'Your Profile', 'Lobby', and 'Post'. The main area has a dark header with 'Post' and 'Logout' buttons. Below the header, it says 'Post' and 'Add new post'. Underneath, it says 'Your Post' and shows a single post titled 'Post 1 to student1' with the content 'hello'. To the right of the post are 'Options' buttons for 'Detail' and 'Delete'. At the bottom, it says 'Post to you' and 'No post'.

Figure 12 Tutor see post

The screenshot shows the 'POST DETAIL' page for the post 'hello' by 'tutor1'. The top bar includes a 'Back' button. The post content is 'hello'. Below the content, it says 'Create Date : 2020-04-30 23:06:34, by tutor1'. There's a note: 'test: "A headline-grabbing aim of conducting 100,000 daily Covid-19 tests by the end of April is unlikely to be achieved, with the government saying that only 52,429 had been carried out on Tuesday, two days before the deadline. Capacity is available for about 73,000, Downing Street says. Government sources argue, with some justification, that the target – up from about 10,000 a day at the beginning of the month – was always incredibly ambitious, and the fact that capacity has been expanded so quickly is a huge achievement."'. Below this is a file upload section with '#File Upload : sadsad.docx'. There's a comment input field with 'Enter Comment' placeholder text and a 'Submit' button. A comment history box shows 'Comment Added' by 'tutor1 on 2020-04-30 23:07:11' with the text 'fsdfsfdf'.

Figure 13 Post detail

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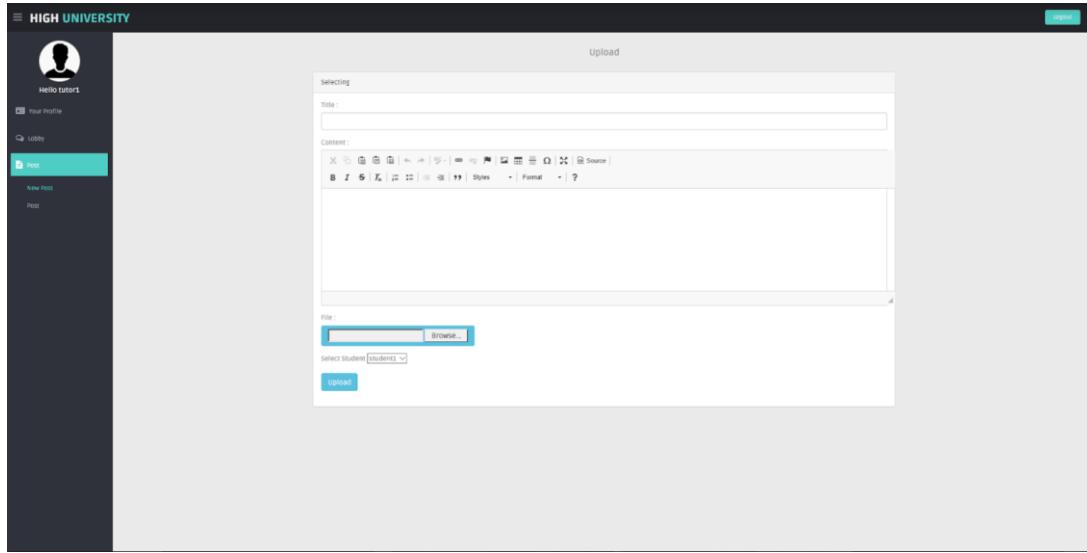


Figure 14 Tutor create post

This is the interface in the posting system, we allow the tutors to see the posts that students send to the system and the tutors can check and comments on the posts to send back. for students.

tutor can also create a post and we created for the tutor to make 3 parts of the layout, first the title, the content in the post and finally upload the file according to what the tutor needs to post on the system.

We are not very satisfied and the interface and design in this function because there is not enough time to take care of and quite difficult in such parts and layout functions to make the operation of users in the system to be easier and more accurate, we will try to improve further in the future.

4.4 Meeting

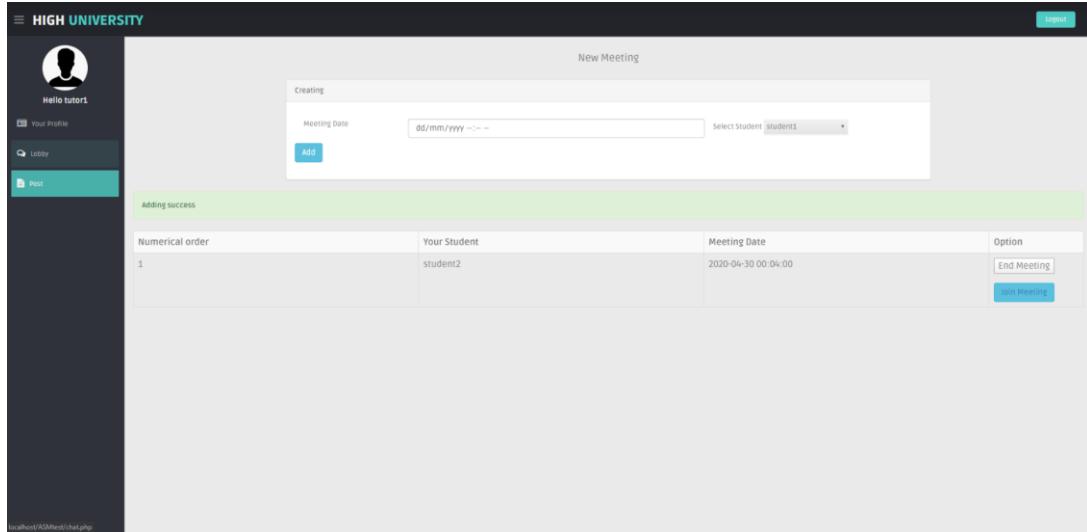
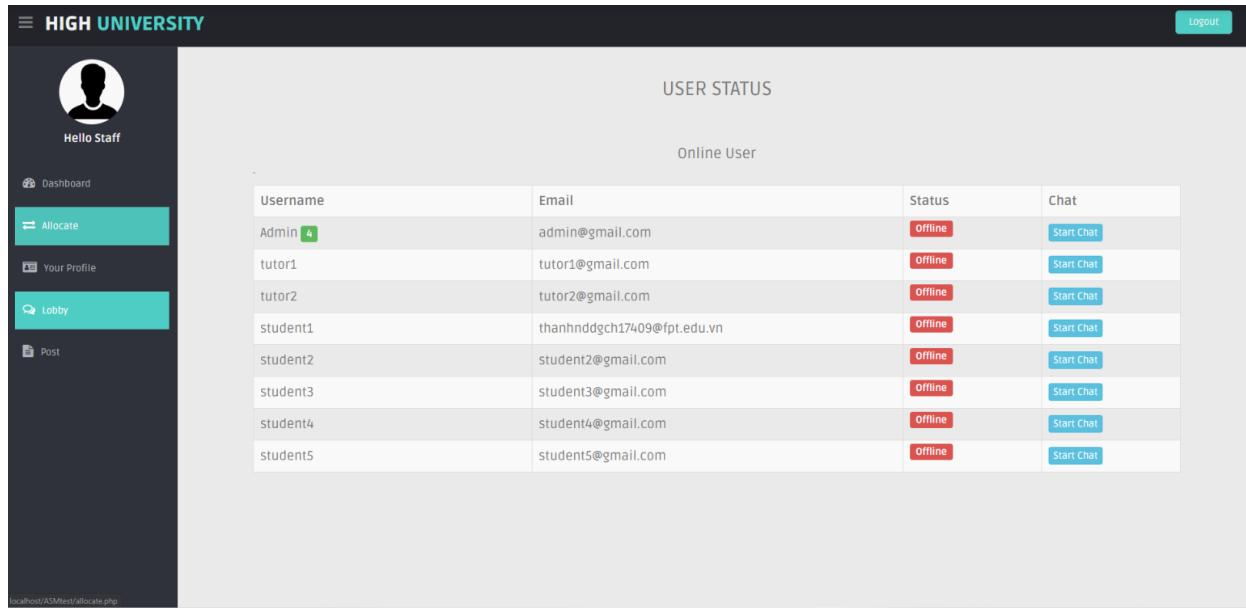


Figure 15 Tutor create meeting

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Tutor will create a meeting between the roles of students and tutors together, in creating a tutor meeting, you can add the students you need to teach on that day according to the schedule and date, this is a creation of a schedule to schedule tutor time and schedule.

4.5 Chat



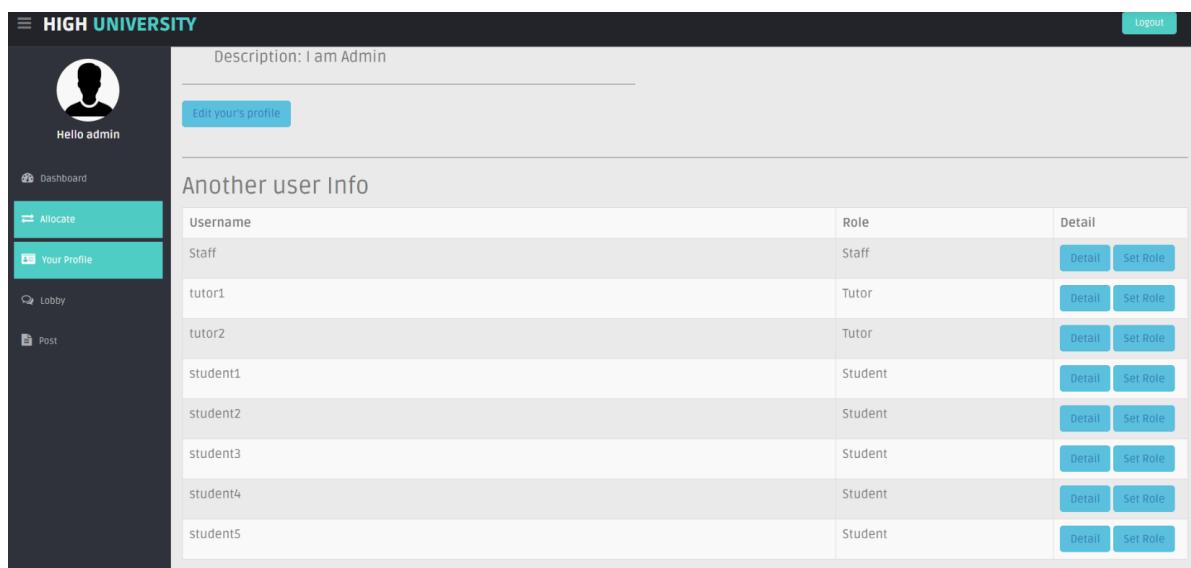
The screenshot shows a user interface titled "HIGH UNIVERSITY". On the left, there's a sidebar with a profile picture, "Hello Staff", and menu items: Dashboard, Allocate (highlighted in red), Your Profile, Lobby (highlighted in green), and Post. The main area is titled "USER STATUS" and shows a table for "Online User". The table has columns: Username, Email, Status, and Chat. The data is as follows:

Username	Email	Status	Chat
Admin	admin@gmail.com	Offline	Start Chat
tutor1	tutor1@gmail.com	Offline	Start Chat
tutor2	tutor2@gmail.com	Offline	Start Chat
student1	thanhnndgch17409@fpt.edu.vn	Offline	Start Chat
student2	student2@gmail.com	Offline	Start Chat
student3	student3@gmail.com	Offline	Start Chat
student4	student4@gmail.com	Offline	Start Chat
student5	student5@gmail.com	Offline	Start Chat

Figure 16 Chat function

The chat function in the interface will help us create a private conversation and no other users can gain access and see the information that we are talking privately between the two of you. Privacy policy for both parties and the security of the system, and can view the status of the person you need to talk to know that they are available online to start a conversation.

4.6 Admin and staff function

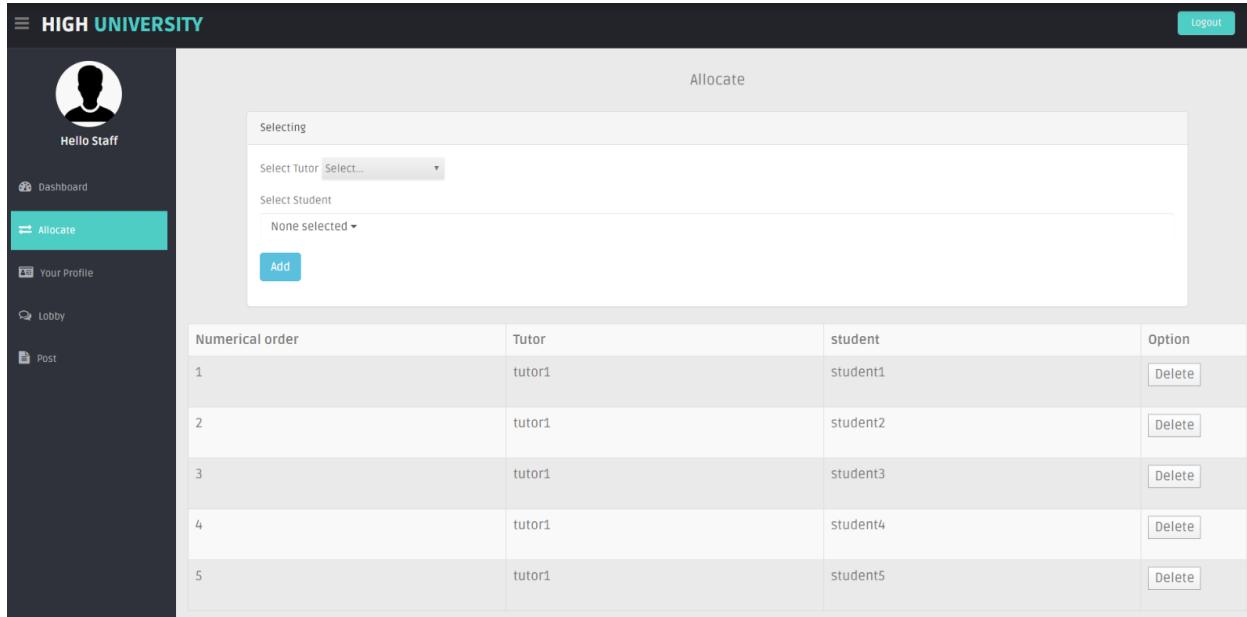


The screenshot shows a user interface titled "HIGH UNIVERSITY". On the left, there's a sidebar with a profile picture, "Hello admin", and menu items: Dashboard, Allocate (highlighted in red), Your Profile (highlighted in green), Lobby, and Post. The main area has a "Description: I am Admin" section with a "Edit your profile" button. Below it is a "Another user Info" section with a table. The table has columns: Username, Role, and Detail. The data is as follows:

Username	Role	Detail
Staff	Staff	[Detail] [Set Role]
tutor1	Tutor	[Detail] [Set Role]
tutor2	Tutor	[Detail] [Set Role]
student1	Student	[Detail] [Set Role]
student2	Student	[Detail] [Set Role]
student3	Student	[Detail] [Set Role]
student4	Student	[Detail] [Set Role]
student5	Student	[Detail] [Set Role]

Figure 17 Admin set roles

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The screenshot shows the 'Allocate' section of the HIGH UNIVERSITY staff interface. On the left, a sidebar menu includes 'Dashboard', 'Allocate' (which is highlighted in teal), 'Your Profile', 'Lobby', and 'Post'. The main area has a header 'Allocate' and a sub-header 'Selecting'. It features a dropdown 'Select Tutor' with 'Select...' and a dropdown 'Select Student' with 'None selected'. A blue 'Add' button is at the bottom left of this section. Below is a table with columns: 'Numerical order', 'Tutor', 'student', and 'Option'. The table contains five rows, each with a 'Delete' button in the 'Option' column:

Numerical order	Tutor	student	Option
1	tutor1	student1	Delete
2	tutor1	student2	Delete
3	tutor1	student3	Delete
4	tutor1	student4	Delete
5	tutor1	student5	Delete

Figure 18 Staff allocate

Next, the functions of the system interface are admin and staff are the two roles that help the system operate and control everything in the system to help the system work well in the future as well as help learning. births and tutors when they need it.

Admin can set roles for user accounts registered in our system to control all users who are using their own conditions, such as students cannot use functions. The ability of the tutor and vice versa, this helps the system to operate correctly and most security mechanism for all users and the system. As for staff, a role under the admin is also designed an interface with the function of allocating between students and tutors together to create a conversation.

With this interface of 2 functions, nothing really outstanding and really as our team wants but time does not allow so we only made this interface with 60% of the expectations set out in the section pepper at the beginning of the group.

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4.7 Dashboard

The screenshot shows the HIGH UNIVERSITY dashboard. On the left is a sidebar with a profile picture for 'Hello Staff' and links for 'Dashboard', 'Allocate', 'Your Profile', 'Lobby', and 'Post'. The main area has a title 'User Status At 04, 2020' and a table:

Username	Status
tutor1	tutor1 has some activity!
tutor2	tutor2 has no activities for this month!
student1	student1 has some activity!
student2	student2 has no activities for this month!
student3	student3 has no activities for this month!
student4	student4 has no activities for this month!
student5	student5 has no activities for this month!

Below this is another section titled 'User Activities At 04, 2020' with a chart titled 'User Visit Each Month - 2020' showing 100% for April, and a table for 'Post Total':

Username	Total
tutor1	No post for this month!
tutor2	No post for this month!
student1	No post for this month!

Figure 19 Dashboard 1

The screenshot shows the HIGH UNIVERSITY dashboard. On the left is a sidebar with a profile picture for 'Hello Staff' and links for 'Dashboard', 'Allocate', 'Your Profile', 'Lobby', and 'Post'. The main area has a title 'Login Total' and a table:

Username	Total
tutor1	22 time
tutor2	1 time
student1	9 time
student2	1 time
student3	No login activity for this month!
student4	No login activity for this month!
student5	1 time

Next to it is a title 'Post Total' with a table showing all users have no posts for the month:

Username	Total
tutor1	No post for this month!
tutor2	No post for this month!
student1	No post for this month!
student2	No post for this month!
student3	No post for this month!
student4	No post for this month!
student5	No post for this month!

Below these is a title 'Chat Total' with a table showing all users have no messages for the month:

Username	Total
tutor1	2 message
tutor2	No message for this month!
student1	1 message
student2	No message for this month!
student3	No message for this month!
student4	No message for this month!
student5	No message for this month!

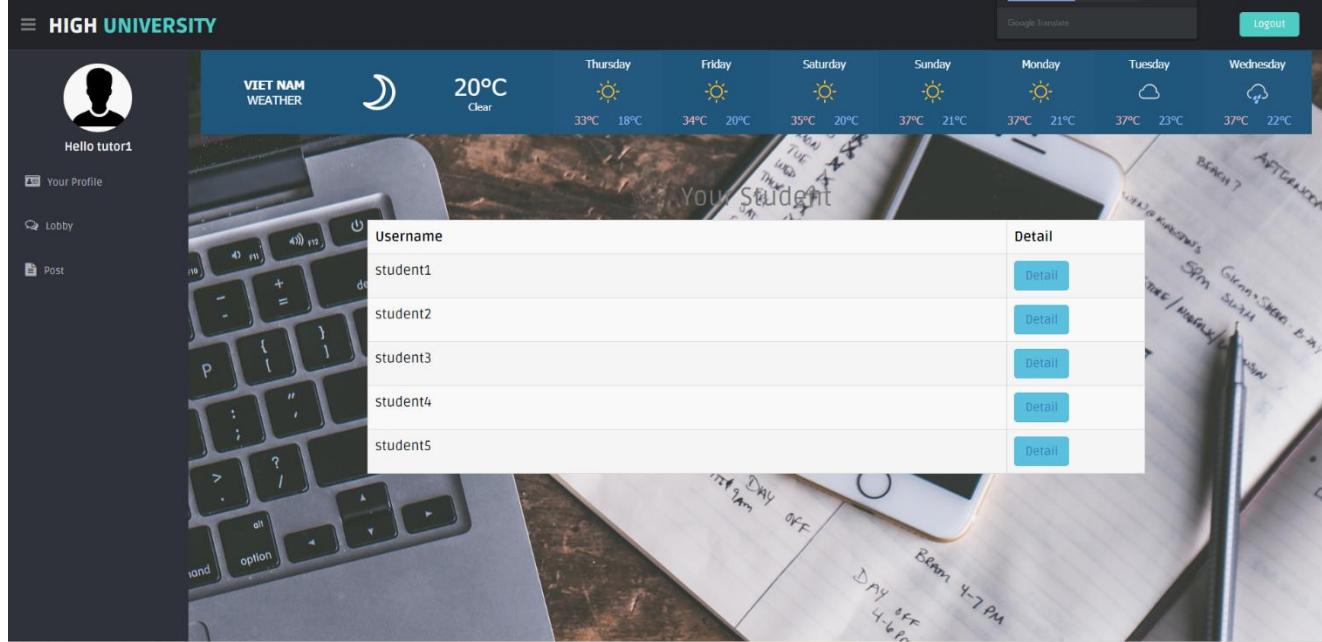
Figure 20 Dashboard 2

Next is an interface that we have tried to make the most visible and easy to understand because it involves an analytic function is dashboards, this table we will analyze each account individually about our behavior. For example, their status, number of chats, number of posts for each account, this does not affect the privacy of the data but will only be statistics from the accounts to see the activity. of each account is exciting and still working with the system or not.

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So we look forward to a much more beautiful and complete interface, as shown in this image, so that we can best analyze the behavior as well as add other statistics to help. The system is better for users and we only meet 60% of the initial expectation set in dashboards interface design.

4.8 Responsive design and aesthetically pleasing



About the interface and aesthetics, we have designed an easy-to-see and simplified interface for the system this time to meet the needs because the next age group is students and tutors, maybe have not yet approached some features so we set a goal of making the user interface friendly and easy to use for the user, the main tone of the interface you see the most is blue to show the harmony. Peace and peace, when we see this color, we can feel comfortable as well as help our eyes will not be tired when looking at the computer screen for a long time to make learning much more effective, followed by black and white to distinguish the parts on the interface that make it easy to see and use when you need to press various functions and cause a feeling of comfort to the user.

We feel that there are quite a few lacks in the interface of functions such as chat, add roles or allocate classes, these are not meticulous interfaces because there is not enough time to interface as the login or homepage of system. Temporarily we assess that the average has achieved about 70% as expected by our team and planned to implement the interface design of the system.

4.9 Clear information architecture for both mobile and desktop

This is a proposal that we have not been able to complete on the phone, but on the PC we have perfected the interface and display structure as expected of the plan given and implemented quite carefully on the PC, about for mobile, our system can still be opened on the phone interface but cannot clear the contents and functions on it are still miscellaneous and unorganized structure according to the group I propose.

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4.10 Good usability

Regarding the ability to use the operations on the functions that we have implemented on the system, we are very confident that the functions we create for users are very clear and easy to manipulate for users to manipulate quickly and accurately the work they set out, not picky and simplify the movie bruises and clearly display the content and requirements that the system makes for users.

4.11 Meets accessibility criteria and update

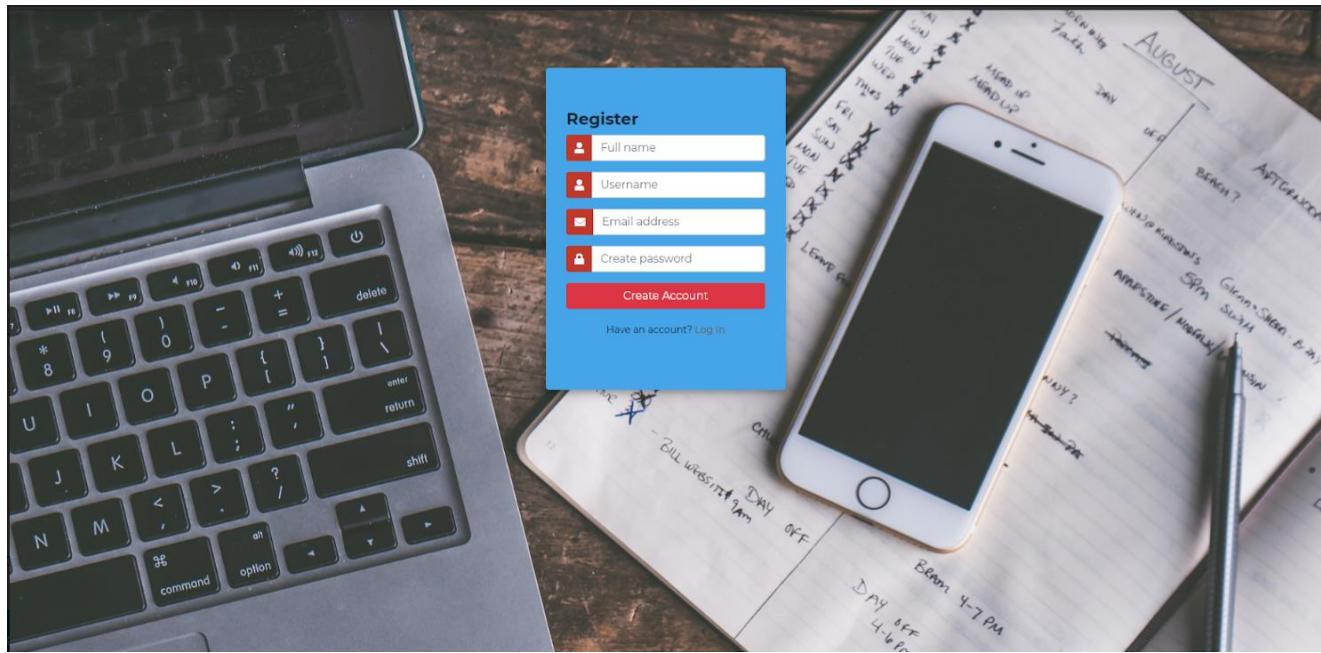
According to what we have summarized above and the experience we have had a tester to investigate user behavior as well as user habits when using a system to simplify the click journey of the user. Using the goals of we set for it, this is a difficult criterion to universalize its perfection because everyone has their own criteria and what we create is to study the criteria they use. or highly appreciated from other systems on the web like the way they register, log in, chat box and upload files must have criteria such as high security, file upload must be sharp and not modified and chat box a certain level of privacy should be avoided to prevent hackers from stealing information. So we put a lot of criteria on meeting customer requirements very well and completed 90% of the requirements set out in the scenario.

About interface errors that need to be updated in the future if we have time to make user criteria increase such as enlarging buttons, highlighting key colors and functions compared to fonts in the interface? and simplify an operation that makes the user feel all functions such as drag and drop faster, the chat is shown quickly and knows if the person they are talking to has seen the message and also the consultation of each city. team members to design the interface that best suits their users that they need more in the system to help them achieve their goals easily and quickly through the help of the system.

5 Functionality

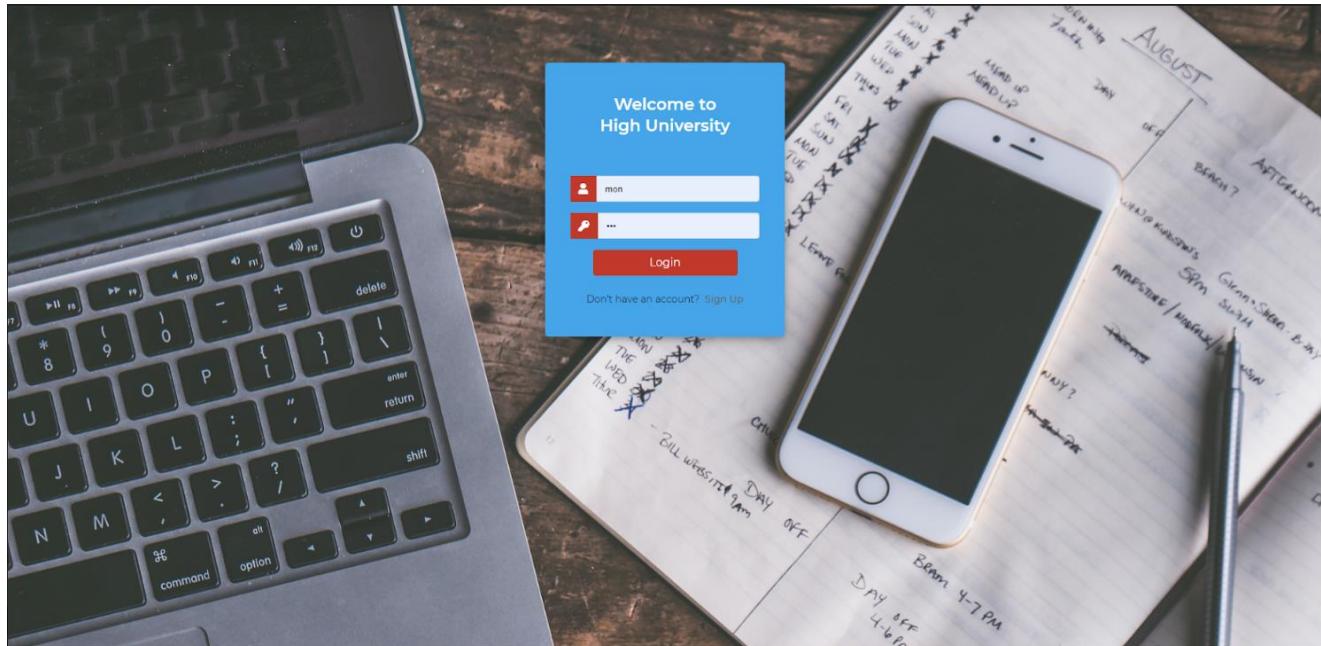
This is a web-based secure role-based system for eTutoring in a large university. This is a system used to connect tutors, students and staff. So all the basic requirements of the system we have built and I would like to present the basic functions of the following system:

5.1 Register



This is a large university system, so each person in the school needs to register for an account for added security and help administrators know the role of each account. When registering you need to enter full information such as full name, username when logging in, email and especially the indispensable password. Here our system password requires users to have capital letters and special characters to help increase the security of each individual account. When an individual account is available, the user can continue to use the system. If the user has successfully registered or has an account, then the user does not need to register again, but can login too.

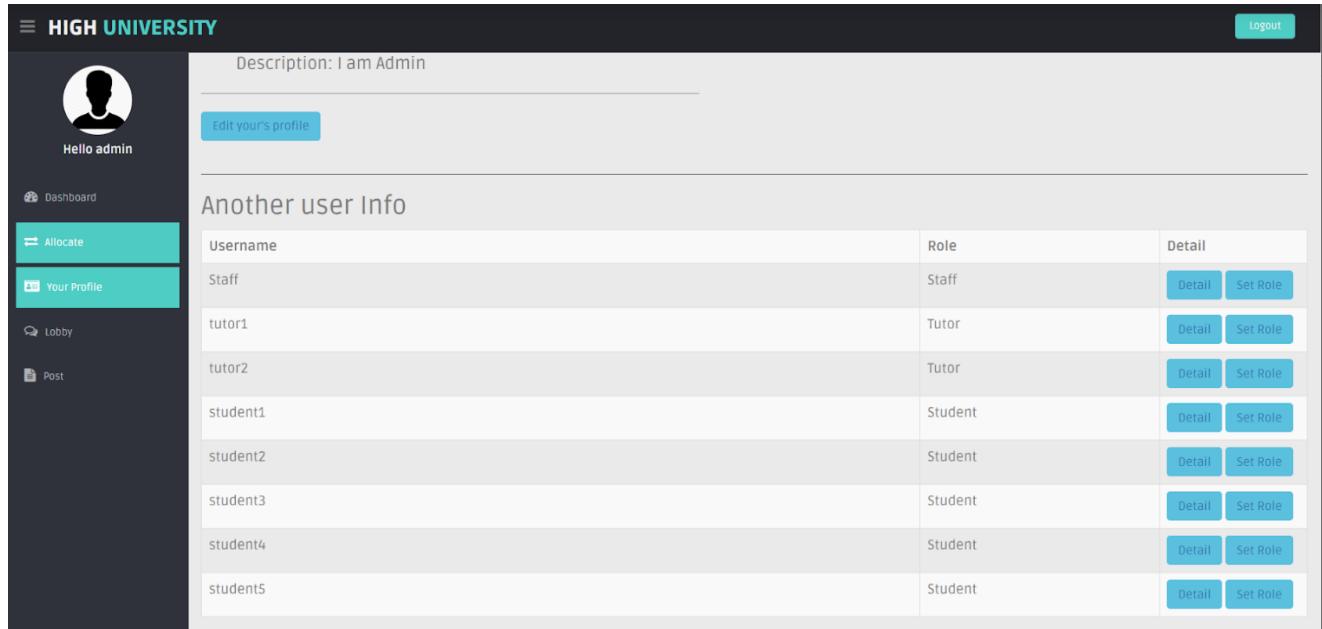
5.2 Log in



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This is the function to log into the system. Any user needs to log in to the system, the administrator can determine the role of that account and limit the rights of each account. The user will only be able to log in to the account if he / she has registered an account on the system, the system has stored the user's account so the next login times, the user only needs to log in without registering. new account. If in case the user does not have an account, it is necessary to register before logging in.

5.3 Admin set up role



The screenshot shows the 'HIGH UNIVERSITY' admin dashboard. On the left, there's a sidebar with a user profile picture, the name 'Hello admin', and navigation links: 'Dashboard' (highlighted in teal), 'Allocate', 'Your Profile' (highlighted in teal), 'Lobby', and 'Post'. The main content area has a header 'Description: I am Admin' with a 'Logout' button. Below it is a section titled 'Another user Info' containing a table of users and their roles:

Username	Role	Detail	Set Role
Staff	Staff	<button>Detail</button>	<button>Set Role</button>
tutor1	Tutor	<button>Detail</button>	<button>Set Role</button>
tutor2	Tutor	<button>Detail</button>	<button>Set Role</button>
student1	Student	<button>Detail</button>	<button>Set Role</button>
student2	Student	<button>Detail</button>	<button>Set Role</button>
student3	Student	<button>Detail</button>	<button>Set Role</button>
student4	Student	<button>Detail</button>	<button>Set Role</button>
student5	Student	<button>Detail</button>	<button>Set Role</button>

Administrators have a very important function in the system that is managing the system and setting roles for each account. This decentralization makes it easy for administrators to manage and each role will have certain rights. Although there may be a lot of students and tutors in the system, an administrator can install multiple roles at the same time so it does not take too much time. This is the function that only the administrator can have, so the other person cannot edit his or her role. Setting roles for accounts shows that permissions like students can post and delete posts, and staff can set up classes for students.

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5.4 Staff - Allocate

Numerical order	Tutor	student	Option
1	tutor1	student1	Delete
2	tutor1	student2	Delete
3	tutor1	student3	Delete
4	tutor1	student4	Delete
5	tutor1	student5	Delete

This is an employee function and an important function of the system. The function of assigning students and tutors because the number of students is much larger than the number of tutors, so the staff has the role of assigning students to tutors appropriately. With this function, staff can allocate a large number of students at the same time, up to hundreds of people, which saves valuable time. When there is any problem related to students and tutors, the staff can use this function to change the positions of students and tutors accordingly or when there is more new student and tutor.

5.5 Staff- Dashboard

Username	Status
tutor1	tutor1 has some activity!
tutor2	tutor2 has no activities for this month!
student1	student1 has some activity!
student2	student2 has no activities for this month!
student3	student3 has no activities for this month!
student4	student4 has no activities for this month!
student5	student5 has no activities for this month!

User Activities At 04, 2020	
User Visit Each Month - 2020	Apr
100%	

Post Total	
Username	Total
tutor1	No post for this month!
tutor2	No post for this month!
student1	No post for this month!

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This is a function for staff and a function to manage the activities of tutors and students in the system. This function allows staff to know the status of tutors and students, such as whether or not the tutor teaches or whether the tutor has posted documents and whether the student submits documents. Post on time. All activities of tutors and students will be updated on the system continuously and from there the staff will evaluate and send to the administrator. Administrators who know the status of students and tutors will make quick decisions. In the function also displays analytical chart to help employees can synthesize and analyze faster.

5.6 Tutor create meeting

The screenshot shows a user interface for creating a new meeting. On the left, a sidebar menu includes 'Your Profile', 'Lobby', and a highlighted 'Post' option. The main area is titled 'New Meeting' and contains a 'Creating' section with fields for 'Meeting Date' (dd/mm/yyyy) and 'Select Student' (student1). A blue 'Add' button is present. Below this, a green banner displays the message 'Adding success'. A table lists the meeting details:

Numerical order	Your Student	Meeting Date	Option
1	student2	2020-04-30 00:04:00	<button>End Meeting</button> <button>Join Meeting</button>

The URL 'localhost/ASMrtest/chat.php' is visible at the bottom of the page.

This function creates meetings between students and tutors. This function helps tutors meet their students through this meeting. The meeting will be created and will be notified to the students so that the student will know of the meeting schedule as soon as possible. This function helps tutors can gather their students without having to text each person will cause time consuming.

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5.7 Tutor create post

The screenshot shows a user interface for creating a post. On the left, a sidebar menu includes 'Your Profile', 'Lobby', and a 'Post' button which is highlighted in green. The main area has a title 'Upload' at the top. Below it is a 'Selecting' section with a 'Title:' input field containing 'test'. Underneath is a rich text editor toolbar with various styling options like bold, italic, and underline. A large text area is available for content entry. Below the editor is a 'File:' input field with a 'Browse...' button. A dropdown menu labeled 'Select Student' contains 'Student1'. At the bottom is a blue 'Upload' button.

This is a tutor's post function. The inclusion of materials for students is usually the day so this function helps the tutor post quickly that all students can see with a single post. The document can be a word or a URL path, which is handy for tutor saves time.

5.8 Tutor post detail

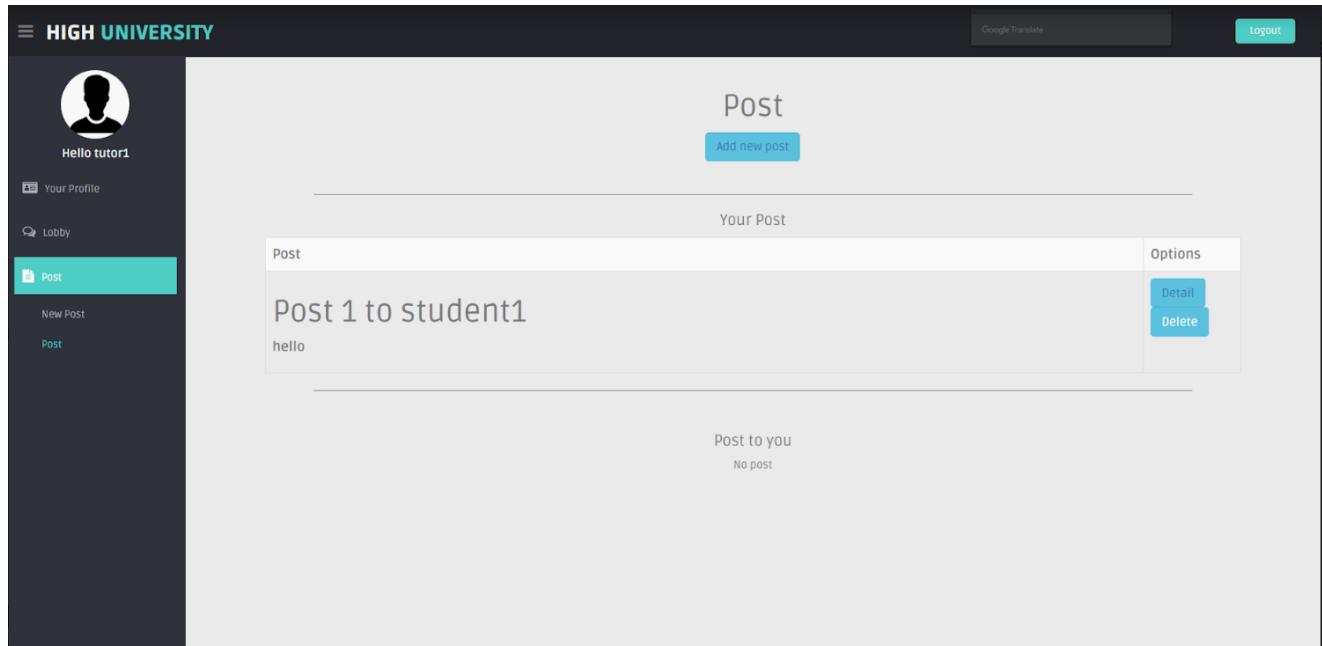
The screenshot shows a 'POST DETAIL' page. The sidebar on the left is identical to the previous screenshot. The main content area has a title 'hello' and a timestamp 'Create Date : 2020-04-30 23:06:34, by tutor1'. Below the title is a paragraph of text: 'test: "A headline-grabbing aim of conducting 100,000 daily Covid-19 tests by the end of April is unlikely to be achieved, with the government saying that only 52,429 had been carried out on Tuesday, two days before the deadline. Capacity is available for about 73,000, Downing Street says. Government sources argue, with some justification, that the target – up from about 10,000 a day at the beginning of the month – was always incredibly ambitious, and the fact that capacity has been expanded so quickly is a huge achievement."'. Underneath the text is a 'File Upload' section showing 'saasal.docx'. There is a text input field for 'Enter Comment' with a small 'G' icon in the top right corner. A blue 'Submit' button is located below the comment input. At the bottom, there is a 'Comment Added' section showing 'By tutor1 on 2020-04-30 23:07:11' and a reply input field containing 'fsdfsdf'.

After the posting function, the tutor can also post in detail. This function helps students better understand the material posted by the tutor. For example, the tutor posts a url, the tutor can detail

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what this is a link about, important parts of the article and many other things. From there, students can easily know what this material is about.

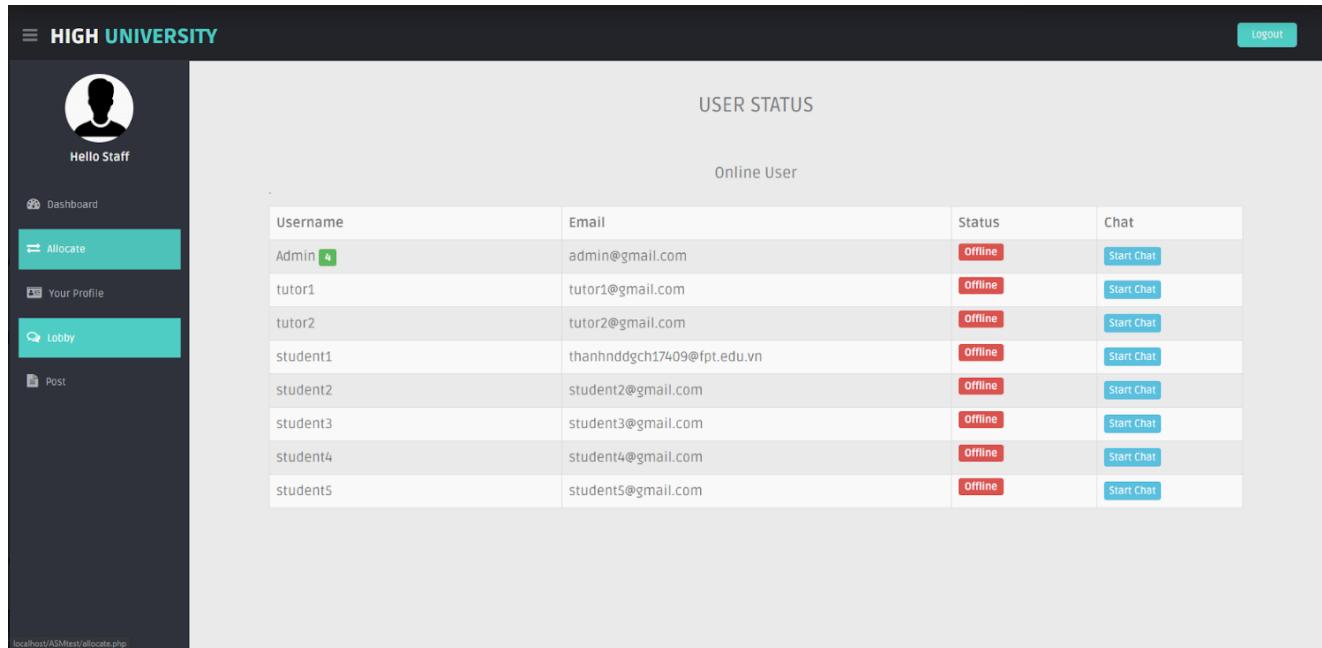
5.9 Tutor see post



The screenshot shows the HIGH UNIVERSITY platform interface. On the left, a sidebar for 'Hello tutor1' includes links for 'Your Profile', 'Lobby', 'Post' (which is highlighted in teal), 'New Post', and 'Post'. The main area is titled 'Post' with a 'Add new post' button. It displays a post from 'Post 1 to student1' with the content 'hello'. To the right of the post is an 'Options' menu with 'Detail' and 'Delete' buttons. Below this, under 'Post to you', it says 'No post'.

Tutor can see his post. This makes it possible for a tutor to know what materials you have sent to students, and to check if your post is experiencing any problems. The function helps the tutor manage his post.

5.10 Chat Function



The screenshot shows the HIGH UNIVERSITY platform interface. On the left, a sidebar for 'Hello Staff' includes links for 'Dashboard' (highlighted in teal), 'Allocate' (highlighted in teal), 'Your Profile', 'Lobby' (highlighted in teal), and 'Post'. The main area is titled 'USER STATUS' and shows 'Online User'. A table lists users with their status and a 'Start Chat' button:

Username	Email	Status	Chat
Admin 4	admin@gmail.com	Offline	Start Chat
tutor1	tutor1@gmail.com	Offline	Start Chat
tutor2	tutor2@gmail.com	Offline	Start Chat
student1	thanhndd@ch17409@fpt.edu.vn	Offline	Start Chat
Student2	student2@gmail.com	Offline	Start Chat
student3	student3@gmail.com	Offline	Start Chat
student4	student4@gmail.com	Offline	Start Chat
student5	student5@gmail.com	Offline	Start Chat

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This is the messaging function between students, staff, and tutor. Students and professors can message when they are linked. A student or tutor can also message an employee to propose a desire or need help. This function is necessary in the system it helps people to bond with each other.

6 Testing

6.1 Test coverage

The tester is going to test every functions and requirements of the program, although the main focus is on functions and requirements on the product backlog to make sure the product can satisfy customer's needs. The tester will not test for speed and security since the team do not have an actual online domain for the program.

6.2 Test methods

When developing this program, the tester decided to use black box testing to test the program and its functions. The reason for this choice is because black box testing method is easy to execute, easy to understand and this program is simple enough for the tester to detect any problems if something is not working as expected.

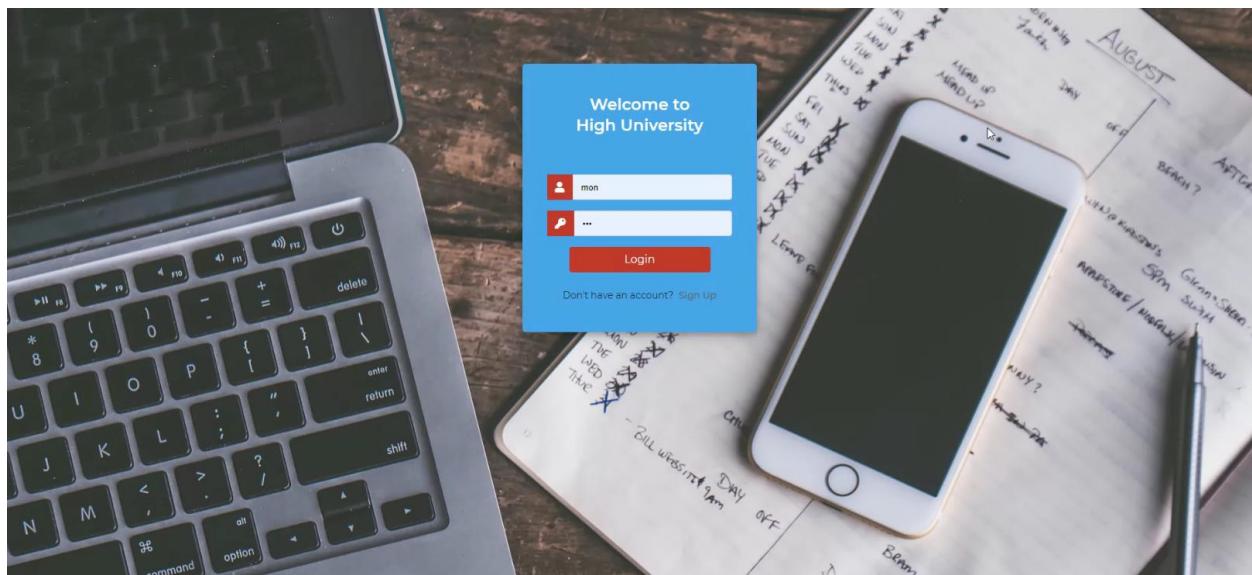
6.3 Test responsibilities

The tester is responsible for planning the test, developing test case and test log, executing the test and writing test report afterwards.

7 Test log

7.1 Login test

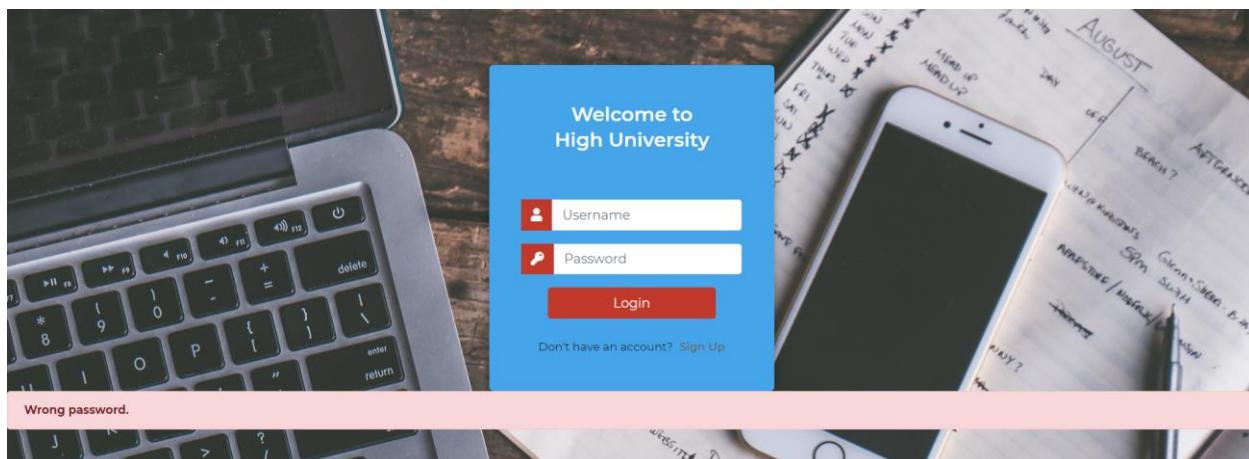
This function allows users to have different roles when using the program.



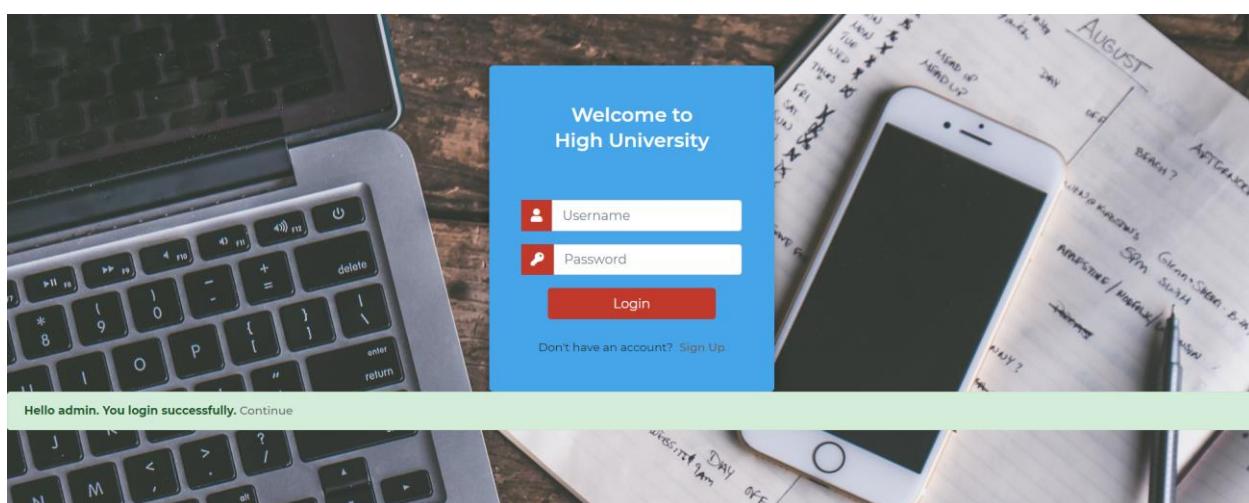
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Id	Test case	Expected result	Actual result	Test result
1	Users input wrong username and password	Wrong password	Wrong password	Passed
2	Users input right username and wrong password	Wrong password	Wrong password	Passed
3	Users input admin username and right password	Login successfully to admin page	Login successfully to admin page	Passed
4	Users input staff username and password	Login successfully to staff page	Login successfully to staff page	Passed
5	Users input tutor username and password	Login successfully to tutor page	Login successfully to tutor page	Passed
6	Users input student username and password	Login successfully to student page	Login successfully to student page	Passed

Failed example:



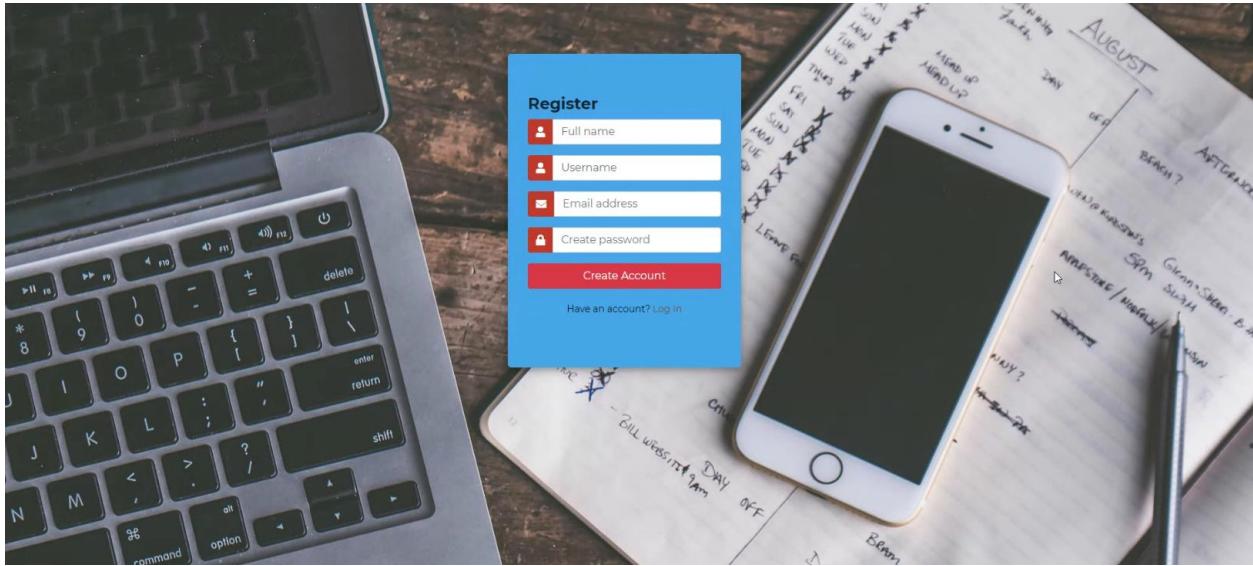
Passed example:



7.2 Register test

This function allows users to be able to use the program.

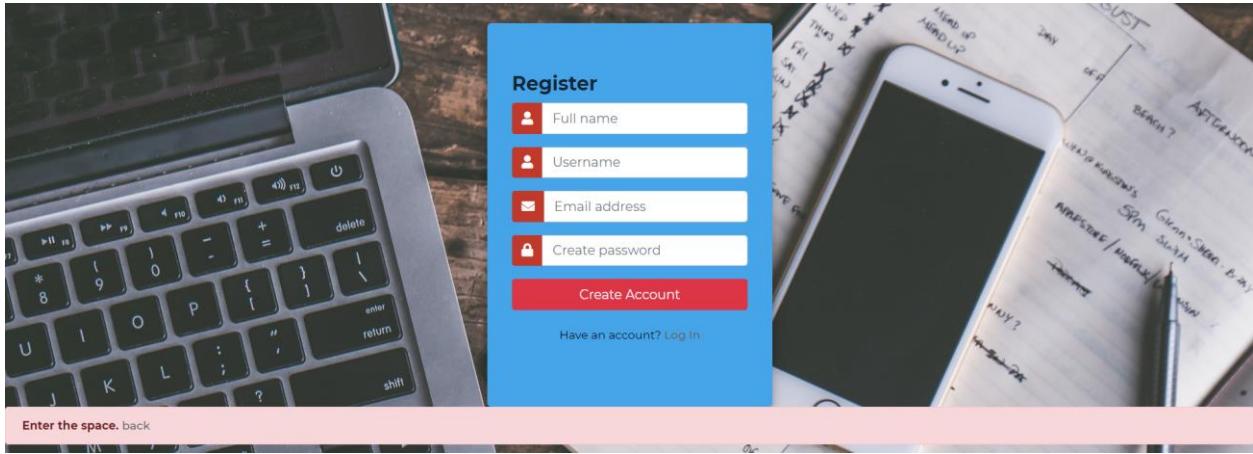
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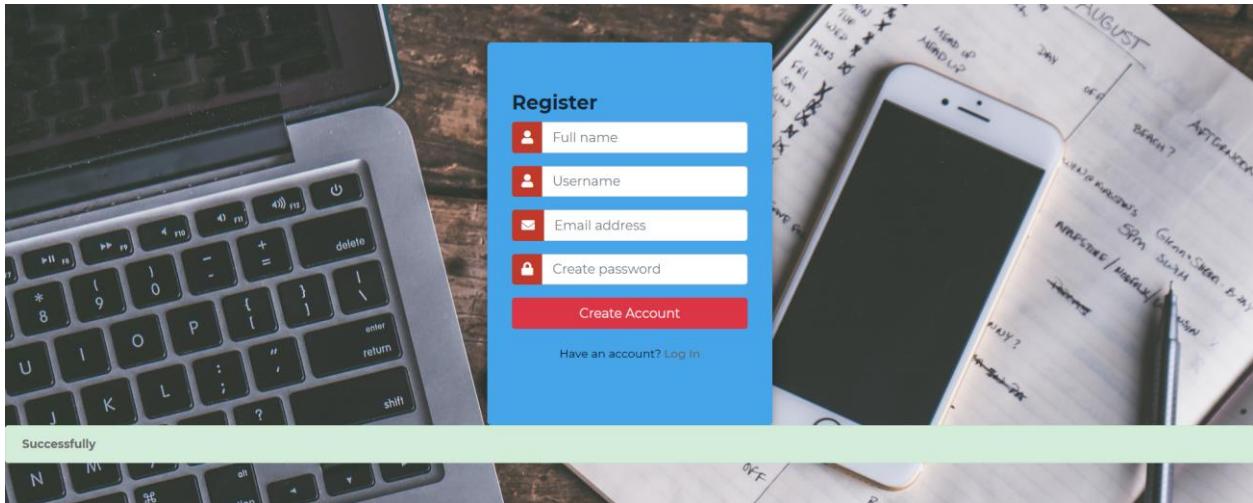
Id	Test case	Expected result	Actual result	Test result
1	Users input nothing	Enter the space	Enter the space	Passed
2	Users input username has space	Username cannot have space	Register Successful	Failed
3	Users input email that does not have @	Wrong email format	Wrong email format	Failed
4	Users input duplicate username	Existed username	Existed username	Passed
5	Users input username that has symbols	Username cannot have symbols	Register successful	Failed
6	Users input name, username, email but not password	Enter the space	Enter the space	Passed
7	Users input name, email, password but not username	Enter the space	Enter the space	Passed
8	Users input username, password, email but not name	Enter the space	Register successful	Failed
9	Users input username, password, name and but not email	Enter the space	Register successful	Failed

Users input nothing:

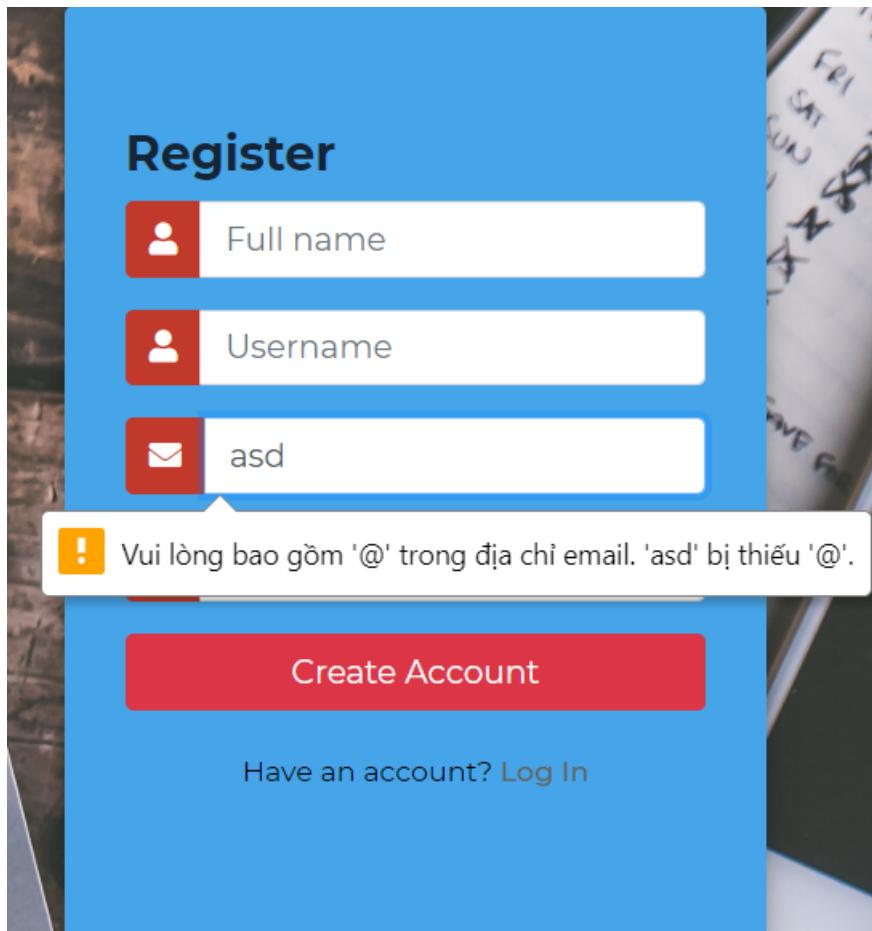
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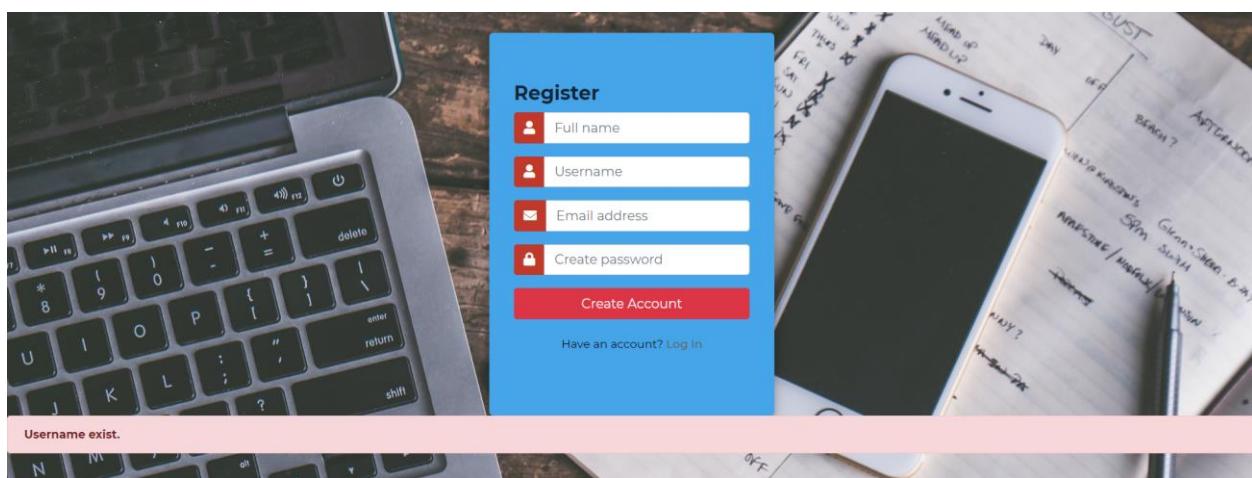
User register successful:



Email alert:



Username existed:



7.3 Chat test

This function allows users to send messages to others and this linked to user story: “as a user, I want to be able to send messages”.

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The screenshot shows the HIGH UNIVERSITY application. On the left, there is a sidebar with a user profile icon and the greeting "Hello admin". Below the profile are several menu items: Dashboard, Allocate, Your Profile, Lobby (which is highlighted in teal), and Post. The main content area is titled "USER STATUS" and displays a table of users categorized as "Online User". The table has columns for Username, Email, Status, and Chat. The data is as follows:

Username	Email	Status	Chat
Staff	Staff@gmail.com	Online	Start Chat
tutor1	tutor1@gmail.com	Offline	Start Chat
tutor2	tutor2@gmail.com	Offline	Start Chat
student1	student1@gmail.com	Offline	Start Chat
student2	student2@gmail.com	Offline	Start Chat
student3	student3@gmail.com	Offline	Start Chat
student4	student4@gmail.com	Offline	Start Chat
student5	student5@gmail.com	Offline	Start Chat

Id	Test case	Expected result	Actual result	Test result
1	User's status	Show that an user is online	Show that an user is online	Passed
2	Users send messages to others	User can send chat to others	User can send chat to others	Passed
3	Users delete messages	This message has been removed	This message has been removed	Passed
4	Users got messages from others	Notify unread messages	Notify unread messages	Passed

Delete messages:

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The screenshot shows a user interface for a university system. On the left, there's a sidebar with a profile picture and the text "Hello admin". Below it are navigation links: Dashboard, Your Profile, Lobby (which is highlighted in teal), and Post. The main content area has a title "HIGH UNIVERSITY". A sidebar on the right lists user names: Staff, tutor1, tutor2, student1, student2, student3, student4, student5, asdasdasd, 123, and qweqwe. In the center, a modal window titled "You have chat with Staff" shows a conversation history. The messages are as follows:

- You - hello - 2020-04-21 17:22:46
- You - hello - 2020-04-21 17:22:30
- You - This message has been removed - 2020-04-21 17:17:50
- You - This message has been removed - 2020-04-09 16:56:32
- You - This message has been removed - 2020-04-06 21:34:18

A "Send" button is at the bottom of the modal. To the right of the modal is a table with columns "Status" and "Chat". All entries in the table show "Offline" in the status column and a "Start Chat" button in the Chat column.

Unread messages notification:

This screenshot shows a user status page. The sidebar on the left is identical to the previous one, showing "Hello staff". The main content area has a title "USER STATUS" and a subtitle "Online User". Below this is a table titled "USER STATUS" with columns "Username", "Email", "Status", and "Chat". The data in the table is as follows:

Username	Email	Status	Chat
Admin [5]	admin@gmail.com	offline	Start Chat
tutor1	tutor1@gmail.com	offline	Start Chat
tutor2	tutor2@gmail.com	offline	Start Chat
student1	thanhnndgch17409@fpt.edu.vn	offline	Start Chat
student2	student2@gmail.com	offline	Start Chat
student3	student3@gmail.com	offline	Start Chat
student4	student4@gmail.com	offline	Start Chat
student5	student5@gmail.com	offline	Start Chat

7.4 Update information test

This function allows users to update their information and is linked to user story: “As a student, I want to view my tutor’s detail so I can learn from them”.

This screenshot shows a profile edit form. The sidebar on the left is identical to the previous ones. The main content area has a title "Edit your profile". The form fields are:

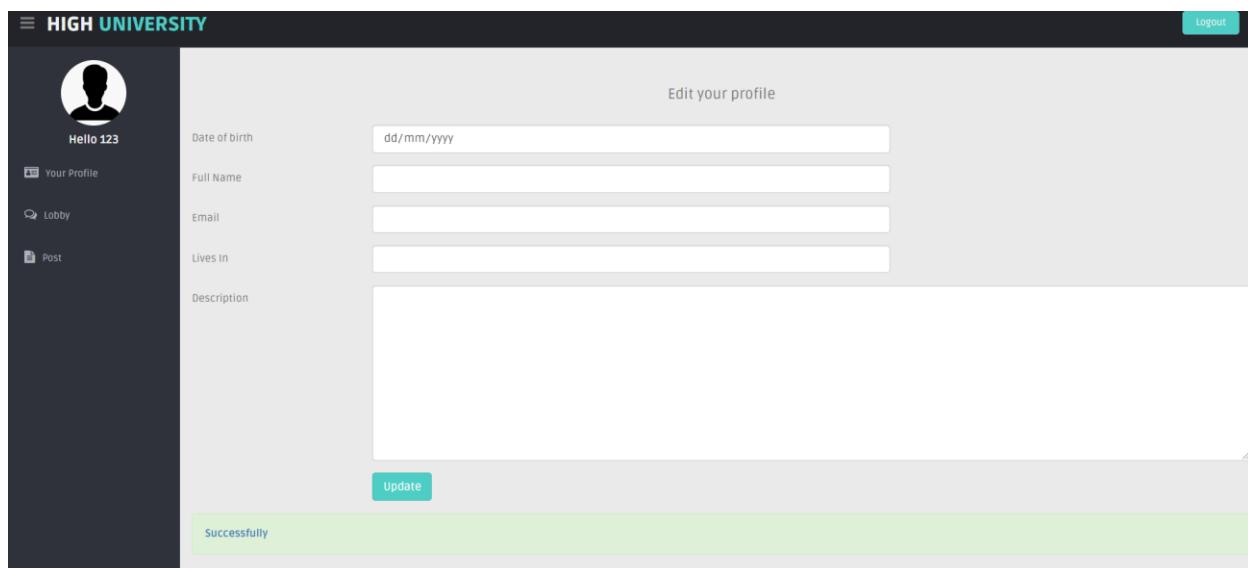
- Date of birth: 10/08/1999
- Full Name: Admin
- Email: Admin@gmail.com
- Lives In: Ha Noi
- Description: I am Admin

A "Update" button is at the bottom of the form.

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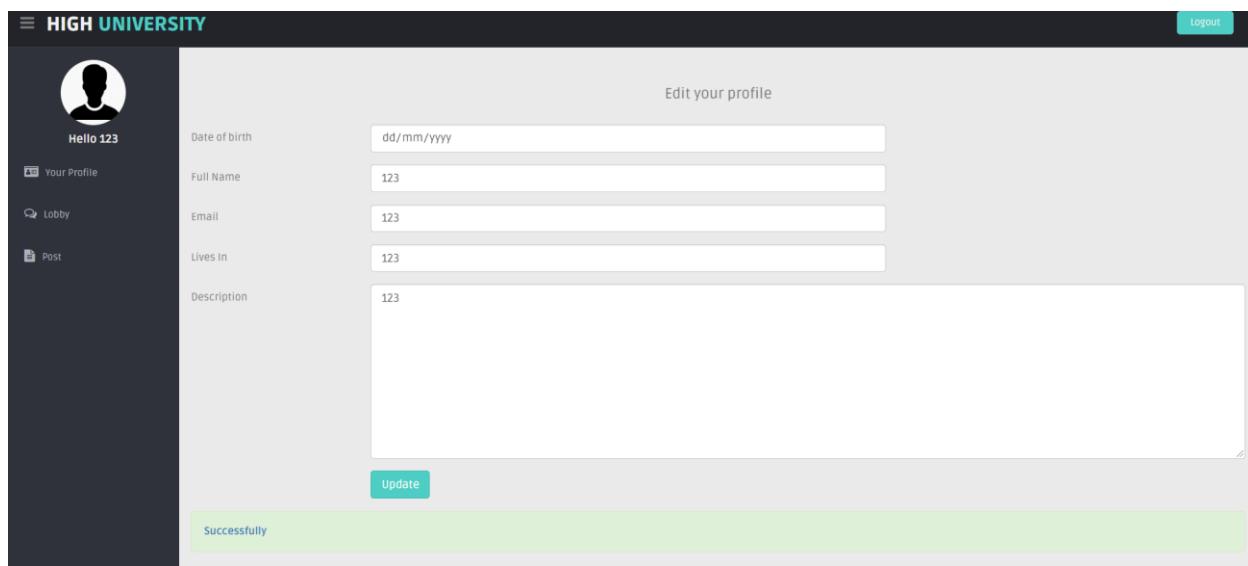
Id	Test case	Expected result	Actual result	Test result
1	Users clear all information	Please type in your information	Success	Failed
2	Users input date 32 and/or month 13	The system automatically change to the nearest date or month	The system automatically change to the nearest date or month	Passed
3	Users input email that does not have @	Wrong email format	Success	Failed

Clear all information:



The screenshot shows the 'Edit your profile' page of the HIGH UNIVERSITY application. On the left is a sidebar with user navigation links: 'Your Profile', 'Lobby', and 'Post'. The main area has fields for 'Date of birth' (dd/mm/yyyy), 'Full Name', 'Email', 'Lives In', and 'Description'. A success message 'Successfully' is displayed at the bottom of the page.

Users input wrong email format:

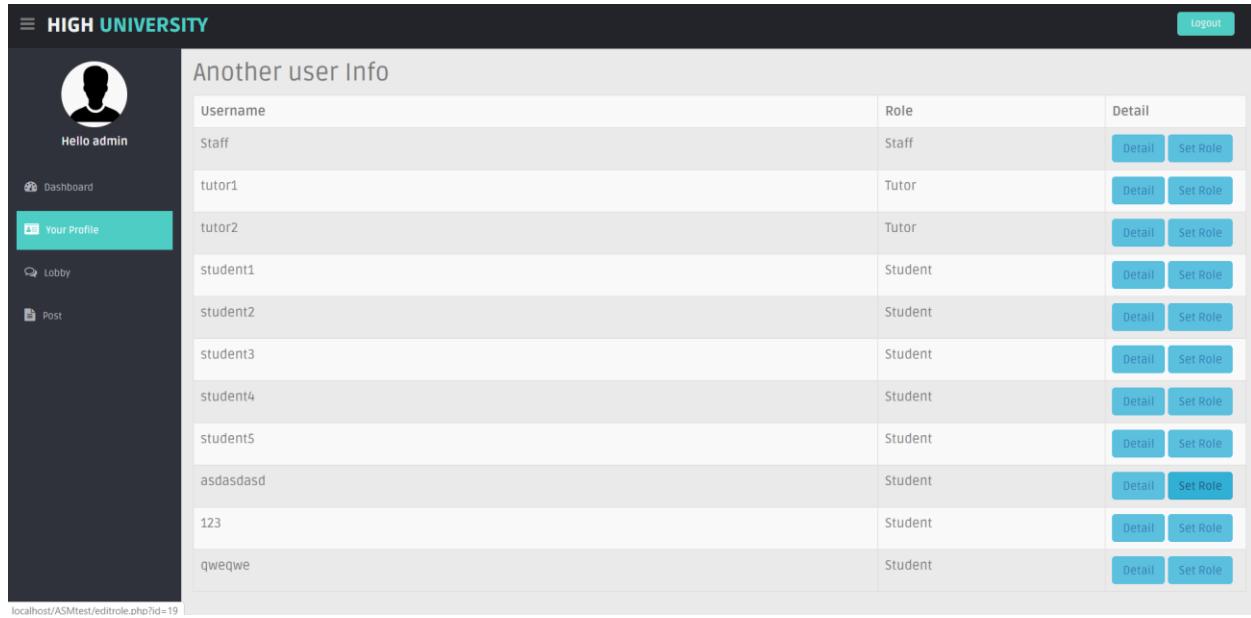


The screenshot shows the same profile edit page as above, but with invalid input in the 'Email' field ('123'). An error message 'Email must contain an @ symbol' is visible below the field. The 'Update' button is present but likely disabled or inactive.

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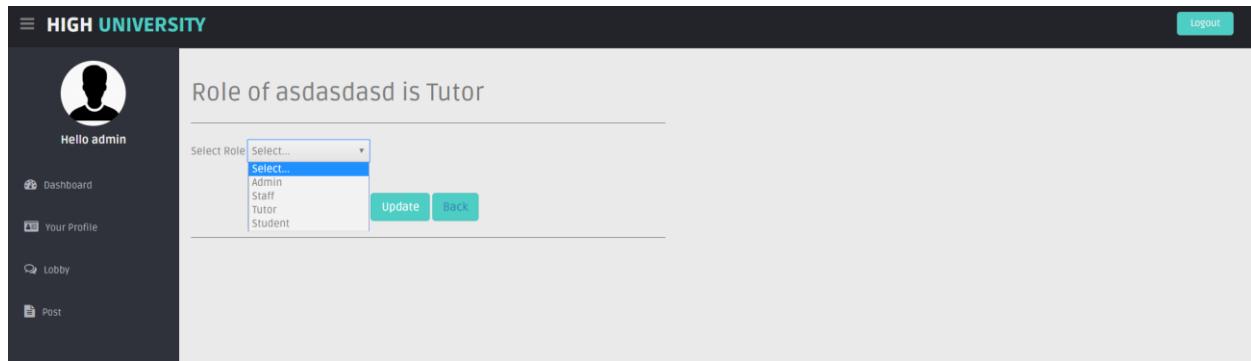
7.5 Admins give people roles

This function allows admin to give people roles so that they can use the program the way they wanted.



The screenshot shows a user interface titled "HIGH UNIVERSITY". On the left, there's a sidebar with a profile picture of "Hello admin" and links for "Dashboard", "Your Profile" (which is highlighted in teal), "Lobby", and "Post". The main content area is titled "Another user Info" and displays a table of users:

Username	Role	Detail
Staff	Staff	[Detail] [Set Role]
tutor1	Tutor	[Detail] [Set Role]
tutor2	Tutor	[Detail] [Set Role]
student1	Student	[Detail] [Set Role]
student2	Student	[Detail] [Set Role]
student3	Student	[Detail] [Set Role]
student4	Student	[Detail] [Set Role]
student5	Student	[Detail] [Set Role]
asdadasd	Student	[Detail] [Set Role]
123	Student	[Detail] [Set Role]
qweqwe	Student	[Detail] [Set Role]



The screenshot shows a user interface titled "HIGH UNIVERSITY". On the left, there's a sidebar with a profile picture of "Hello admin" and links for "Dashboard", "Your Profile" (highlighted in teal), "Lobby", and "Post". The main content area shows the role of a user named "asdadasd" is set to "Tutor". A dropdown menu titled "Select Role" is open, showing options: "Select...", "Admin", "Staff", "Tutor", and "Student". The "Tutor" option is highlighted. There are "Update" and "Back" buttons at the bottom.

ID	Test case	Expected result	Actual result	Test result
1	Change student role into tutor role	Success	Success	Passed

7.6 Admins and staffs can check user's status and activities

This function allows users to see students and tutors statuses and activities to make adjustment if needed.

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The screenshot shows a user interface for 'HIGH UNIVERSITY'. On the left, there's a sidebar with a profile picture, 'Hello admin', and navigation links: 'Dashboard' (selected), 'Your Profile', 'Lobby', and 'Post'. The main content area has two sections: 'User Status At 05, 2020' and 'User Activities At 05, 2020'. The status section contains a table with columns 'Username' and 'Status', listing users like 'tutor1', 'tutor2', etc., with their activity status. The activities section shows a chart titled 'User Visit Each Month - 2020' with a single data point for May.

Username	Status
tutor1	tutor1 has some activity!
tutor2	tutor2 has no activities for this month!
student1	student1 has some activity!
student2	student2 has no activities for this month!
student3	student3 has no activities for this month!
student4	student4 has no activities for this month!
student5	student5 has no activities for this month!
asdasdasd	asdasdasd has no activities for this month!
123	123 has no activities for this month!
qweqwew	qweqwew has no activities for this month!

Id	Test case	Expected result	Actual result	Test result
1	Admins and staffs can check user's status and activities	Success	Success	Passed

7.7 Staffs allocate students and tutors

This function allows staffs to allocate students with tutors and is linked to user stories: "As an authorized member of staff, I want to be able to allocate personal tutors or students so they can interact with each other" and "As a staff, I want to be able to allocate students in bulk so it saves more time".

The screenshot shows the 'Allocate' feature in the 'HIGH UNIVERSITY' application. The sidebar includes 'Allocate' (selected), 'Dashboard', 'Your Profile', 'Lobby', and 'Post'. The main area has a 'Selecting' panel with dropdowns for 'Select Tutor' and 'Select Student', and an 'Add' button. Below is a table for 'Numerical order' with columns for 'Tutor' and 'student', and an 'Option' column with a 'Delete' button. Two rows are shown: one for tutor1 and student1, and another for tutor1 and student2.

Numerical order	Tutor	student	Option
1	tutor1	student1	Delete
2	tutor1	student2	Delete

Id	Test case	Expected result	Actual result	Test result
1	Staffs allocate 1 tutor with 1 student	Success	Success	Passed
2	Staffs allocate 1 tutor with many students	Success	Success	Passed
3	Staffs allocate 1 tutor with student that already has a tutor	It cannot be done because students who already have	It cannot be done because students who already have	Passed

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		tutor cannot be pick	tutor cannot be pick	
4	Staffs delete allocated student-tutor links	Successful	Successful	Passed

Select tutor:

Numerical order	Tutor	student	Option
1	tutor1	student1	<button>Delete</button>
2	tutor1	student2	<button>Delete</button>
3	tutor1	student3	<button>Delete</button>

Select student:

Numerical order	Tutor	student	Option
1	tutor1	Student1	<button>Delete</button>
2	tutor1	student2	<button>Delete</button>
3	tutor1	student3	<button>Delete</button>

Adding success:

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7.8 Tutor and student post

This function allows tutors and students to send files and notes to each other and is linked to user stories: “As a student or tutor, I want to upload files to my student or tutor”, “as a student, I want a personal dashboard summarizing my actions with my tutor so that I can check when I did and will meet them” and “as a student or tutor, I want to post and comment on document.”

Id	Test case	Expected result	Actual result	Test result
1	Users input no title	Untitled	Untitled	Passed
2	Users input no body	Nothing happen	Nothing happen	Passed
3	Users input no file	Nothing happen	Error handling	Failed

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4	Users don't select receiver	Notify that user hasn't select receiver	Still posted	Failed
5	Users delete posts	Post deleted	Post deleted	Passed
6	Users view posts	Success	Success	Passed
7	Users download file	Success	Success	Passed
8	Users delete his/her posts	Receiver can't see the post anymore	Receiver can't see the post anymore	Passed
9	Users enter comment	Success	Success	Passed

Existing posts:

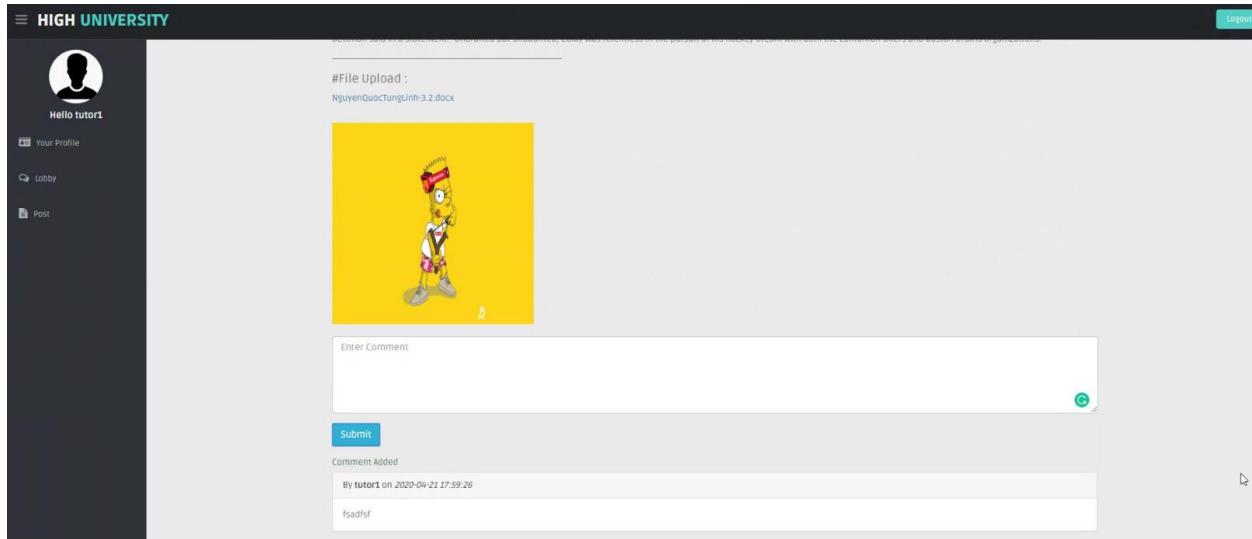
The screenshot shows the 'HIGH UNIVERSITY' application interface. The left sidebar has a dark theme with a user profile picture, 'Hello tutor1', and navigation links: 'Your Profile', 'Lobby', 'Post' (which is highlighted in teal), 'New Post', and 'Post'. The main content area is titled 'Post' with a 'Add new post' button. It displays two posts under 'Your Post': 'Post 1 to student1' (News example) and 'Post 2 to student2' (New post). Each post has a 'Detail' and a 'Delete' button in a dropdown menu. Below the posts, there is a section titled 'Post to you' with the message 'No post'.

Post without receiver or file:

The screenshot shows the 'HIGH UNIVERSITY' application interface. The left sidebar has a dark theme with a user profile picture, 'Hello student1', and navigation links: 'Your Profile', 'Lobby', 'Post' (which is highlighted in teal), 'New Post', and 'Post'. The main content area is titled 'Post' with a 'Add new post' button. It displays one post under 'Your Post': 'Post 1 to'. The post content is: 'Notice: Trying to access array offset on value of type bool in D:\xampp\htdocs\ASMTtest\showPost.php on line 74'. The post has a 'Detail' and a 'Delete' button in a dropdown menu. Below the post, there is a section titled 'Post to you' with the message 'No post'.

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Comment on post:



8 Agile methods followed

Agile method is a flexible software development method that helps bring products to users as quickly as possible. Agile has characteristics that identify repetition in sprints and is usually done in a short time. In addition, Agile's adaptability is also highly appreciated, because sprints only last a short time and the planning is constantly changing, so changes in the development process can be followed appropriately.

One of the effective software development processes in the Agile approach is Scrum. To work with Scrum efficiency, we need to understand the core values and roles in Scrum. In particular Scrum has very simple tools that help to increase the efficiency of work and I would like to present this:

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8.1 Product Backlog

User story	Hours	Priority	Status
As a student, I want to view detail of my personal tutor so that I can learn from them.	20	Must	Done
As an authorized member of staff, I want to allocate personal tutors or students so that they can interact each others	30	Must	Done
As student and tutor, we want to upload files to each other	30	Must	Done
As a user, I want to get notification when an authorized staff set me up with my students or tutors so that I know who are my students or tutors.	50	should	not done
As a staff, I want to be able to allocate students in bulk to their tutor so that it saves more time.	30	should	Done
As a student and tutor, I want my email is only being use for notification of events recorded in the backend database so that my personal information is safe and I don't get notification of anything I don't want.	60	could	not done
As a user, I want to be able to send memessage	50	Must	Done
As a student, I want a personal dashboard summarizing my action with my personal tutor so that I can check and see when I did and will meet them.	60	Could	not done
As an authorized staff, I want to have access to dashboard of other tutor and student's individual dashboard so that I can make adjustment for them quickly if needed.	30	Should	Done
As an staff, I want to have access to the individual tutor and student dashboard.	30	Should	not done
As a staff, I want to have student and tutor on my dashboard sorted nicely.	30	Should	not done
As a user, I want the system interface to be suitable for all devices so that it is more convenient for me.	50	Should	not done
As an admin, I want the data of student and staff to be accessed from the university MIS system.	30	Could	not done
As a student, I want to post and comment on documents.	30	Must	Done
As a tutor, I want to create a meeting	30	Should Have	

This is a list of priority features or can be understood as a project request list. In this list we have listed the user stories, the Product Owner will be responsible for prioritizing each item. In addition, the product owner must anticipate the time to complete each functional item and evaluate whether this function is really necessary for the project.

All the user stories in the Product Backlog whose priority is to do, we are all finished. For example, a user's story is a student who wants to look at the information of the tutor or the user's story as an employee who wishes to allocate students and tutor. We also complete user stories with a priority that should be done, such as the story of the user as the employee can allocate large numbers of students and staff. In addition to this we can't finish the story of the user who has the priority of being able to do, for example the user's story is that the administrator wants the data of all users to be accessed from the MIS system. The reason we were unable to complete this user story was because we did not have enough time for the priority we could do.

8.2 Sprint backlog

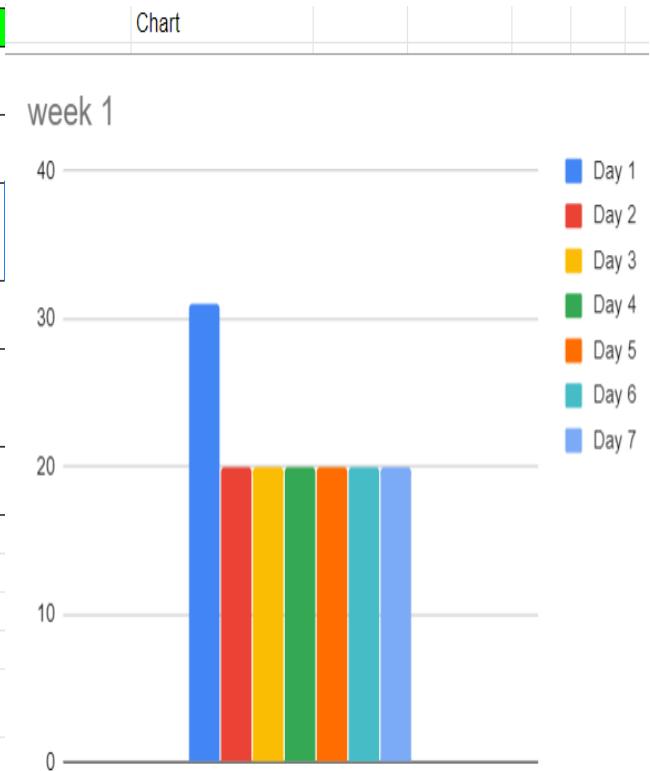
Here are the plans for a sprint and the results of the planning meeting. The product owner will work with the development team to analyze the priorities from high to low to perform items in the Product Backlog as a to-do list. Below will be a sprint retrospective meeting, with the assistance of the Scrum Master, a comprehensive team that reviews the recently completed sprint and seeks to improve the working process and situation of the system. We do the Sprint Backlog and the Sprint Retrospective Meeting once a week.

Group Coursework

8.2.1 Sprint 1

User Stories	Details	Answer	Tasks	Person Volunteer	Estimation	status	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	
As a staff, I want to allocate personal tutors or students so that they can interact each others	1. Is the attribution process based on any rule?	The staff will have the final word on allocation of tutors or students	database	Duc Anh, Duy Thanh	3	done	3	0	0	0	0	0	0	
	2. Can I allowcate bulk students at a time?	Yes. By check the box next to the student, staff can add bulk students to their tutor	Deploy core platform	Quang, Duy Thanh	5	In progress	5	3	0	0	0	0	0	
	3. How many students can a tutor have?	This will be decided by the school administration	Authentication	Quang, Duy Thanh	20	In progress	20	20	20	20	20	20	20	
	4. Can a student assigned to many tutor for in the same semester?	Yes. The student can be as many tutor as they can if the tutor schedule is not interfered	Allocation	Quang, Duy Thanh	20	In progress	20	20	20	20	20	20	20	
	5. Can I relocate students to another tutor?	Yes. There will be an edit student function when the staff view the class	font-end	Đặng Thành	20	In progress	20	20	20	20	20	20	20	
	6. Can I remove students from tutor		test	Linh	16	not started								Not done
As a student, I want to view detail of my personal tutor so that I can learn from them.	1.What information can students see?	The student can see the description of the tutor.	database	Duc Anh, Duy Thanh	3	done	3	0	0	0	0	0	0	
	2. Can the student make the report of a tutor to the staff?	Yes. The students can submit a report to a staff and notify if something is wrong.	view function	Quang, Duy Thanh	30	not started	30	30	30	30	30	30	30	
	3. Can students unassign themselves from their tutor?	No. The student must contact with the staff to resolve their problem with the class	font-end	Đặng Thành	10	not started	10	10	10	10	10	10	10	
	4. Can students choose their tutor?	The student need to contact with the staff in order for them to assign to the tutor that suit their liking	test	Linh	20	not started	20	20	20	20	20	20	20	
	5. How can I keep contact with my tutor?	Student can contact their tutor email that shown in the tutor description												Not done
							total	31	20	20	20	20	20	

What problem we face?	Solution
ASP .Net cannot to create individual parts at the same time	Ask the teacher immidately
Time management between members are different	Make him or her create a plan before actually do the task to make sure that the task will be complete
Front-end designer have a backlog, prevent him from developing	Ask the teacher immidately
Not understand the target needed to complete	Ask the teacher immidately
Member need to explain all of their work before other members can continue their work	Keep note of how the process being made and transfer the note when deliver the part to the next member
Members need to import the entire project each time they develop	Ask the teacher immidately
What have gone well	
Members agree on the same idea	
Quick and effective discussion	
Members dedicated to their roles	
Scrum master resolve issues quickly	
Tools are easy to work with	



The first week was really a difficult week for our team, we had a lot of problems and didn't seem to be able to start work. We have problems like our Framework is having problems, we don't understand the system goals and a few other issues. But we had immediate solutions and, with the help of our

Group Coursework

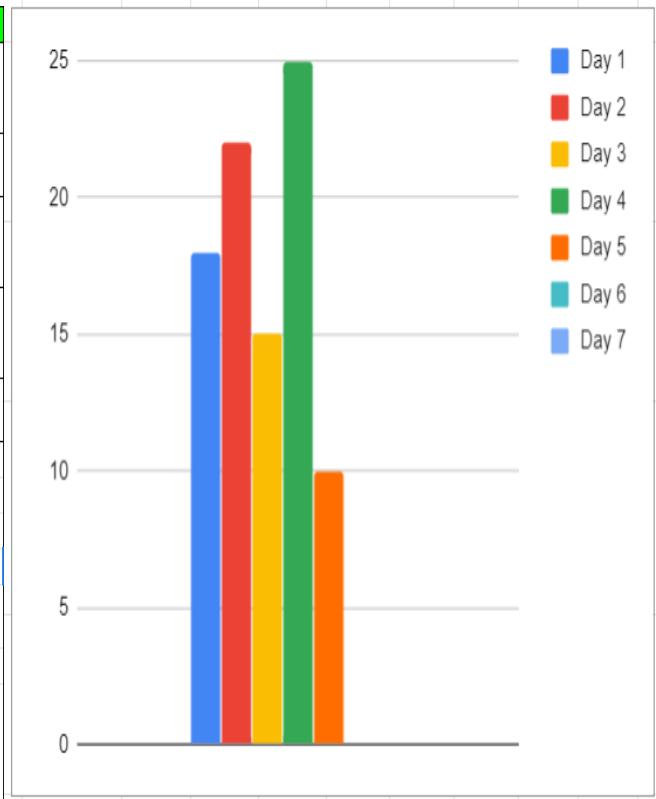
instructors, solved most of the problems. Despite the first week we had a hard time, there were still positive aspects like everyone in the group was very united when the discussions were fun, everyone was aware of their role.

8.2.2 Sprint 2

User Stories	Details	Answer	Tasks	Person Volunteer	Estimation	status	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	
As a staff, I want to allocate personal tutors or students so that they can interact each others	1. Is the attribution process based on any rule?	The staff will have the final word on allocation of tutors or	database	Duc Anh, Duy Thanh	3	done	3	0	0	0	0	0	0	
	2. Can I allowcate bulk students at a time?	Yes. By check the box next to the student, staff can add bulk students to their tutor	Deploy core platform	Quang, Duy Thanh	5	done	0	5	0	0	0	0	0	
	3. How many students can a tutor have?	This will be decided by the school administration	Authentication	Duy Thành	20	done	20	15	10	5	0	0	0	
	4. Can a student assigned to many tutor for in the same semester?	Yes. The student can be as many tutor as they can if the tutor schedule is not interfered	Allocation	Duy Thành	20	done	20	20	15	10	5	0	0	
	5. Can I relocate students to another tutor?	Yes. There will be an edit student function when the staff view the class	font-end	Đăng Thành	10	80%	10	10	10	10	5	5	5	
	6. Can I remove students from tutor		test	Linh	16	done	16	16	16	16	6	0	0	Not done
As a user, I want to be able to send message	1.Do users need to declare information before sending messages?	Yes. Users need to create an account before sending a message	database	Duc Anh, Duy Thanh	2	done	2	0	0	0	0	0	0	
	2 Who can the user send a mess	Staff and tutor	chat function	Duy Thành	30	done	25	20	15	5	5	0	0	
	3.Can users delete sent message	No. There is no function for this	font-end	Đăng Thành	10	done	10	10	10	10	10	5	5	
	4.Can users send voice messages or documents?	No. There is no function for this	test	Linh	5	80%	5	5	5	5	5	5	0	
	5 Is there a notification that the user has sent a successful message?	Yes. Users may receive a notification of completion when sending the message successfully												Not done
As a student, I want to view detail of my personal tutor so that I can learn from them.	1.What information can students see?	The student can see the description of the tutor.	database	Duc Anh, Duy Thanh	5	done	5	2	0	0	0	0	0	
	2. Can the student make the report of a tutor to the staff?	Yes. The students can submit a report to a staff and notify if something is wrong.	view function	Quang, Duy Thanh	30	not star	30	30	30	30	30	30	30	
	3. Can students unassign themselves from their tutor?	No. The student must contact with the staff to resolve their problem with the class	font-end	Đăng Thành	20	not star	20	20	20	20	20	20	20	
	4. Can students choose their tutor?	The student need to contact with the staff in order for them to assign to the tutor that suit their liking	test	Linh	20	not star	20	20	20	20	20	20	20	
	5. How can I keep contact with my tutor?	Student can contact their tutor email that shown in the tutor description												Not done

Group Coursework

What problem we face?	Solution
We have changed the language as well as the framework	We changed the main coder to suit the new language.
Time management between members are different	Make him or her create a plan before actually do the task to make sure that the task will be complete
Front-end designer have a backlog, prevent him from developing	Ask the teacher immediately
Member need to explain all of their work before other members can continue their work	Keep note of how the process being made and transfer the note when deliver the part to the next member
Members need to import the entire project each time they develop	Ask the teacher immediately
What have gone well	
Members agree on the same idea	
Quick and effective discussion	
Members dedicated to their roles	
Scrum master resolve issues quickly	
Tools are easy to work with	
Product owners are always motivating members to help complete the Sprint on time.	



In the second week, it was still a difficult week when we changed the framework for the system and also changed the main coder so it took a lot of time. We still have some issues of the first week unsolved so we continue to look for solutions. Although we haven't completed the first week's sprint, we were able to start building the system. Especially the product owner and Scrum owner have worked together to always boost the morale of every member.

8.2.3 Sprint 3

User Stories	Details	Answer	Tasks	Person Volunteer	Estimation	status	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	
As a staff, I want to allocate personal tutors or students so that they can interact each others	1. Is the attribution process based on any rule?	The staff will have the final word on allocation of database	Duc Anh, Duy Thanh	3	done		3	0	0	0	0	0	0	
	2. Can I allocate bulk students at a time?	Yes. By check the box next to the student, staff can add bulk students to their tutor	Deploy core platform	Quang, Duy Thanh	5	done		5	0	0	0	0	0	
	3. How many students can a tutor have?	This will be decided by the school administration	Authentication	Duy Thành	20	done		20	15	10	5	0	0	
	4. Can a student assigned to many tutor in the same semester?	Yes. The student can be as many tutor as they can if the tutor schedule is not interfered	Allocation	Duy Thành	20	done		20	20	15	10	5	0	
	5. Can I relocate students to another tutor?	Yes. There will be an edit student function when the staff view the class	font-end	Đặng Thành	10	80%		10	10	10	10	5	5	5
	6. Can I remove students from tutor		test	Linh	16	done		16	16	16	16	6	0	0
														Not done

Group Coursework

As a user, I want to be able to send message	1.Do users need to declare information before sending messages?	Yes. Users need to create an account before sending a message	database	Duc Anh, Duy Thanh	2 done	0	0	0	0	0	0	0	0	Not done
	2.Who can the user send a message to?	Staff and tutor	chat function	Duy Thành	30 done	0	0	0	0	0	0	0	0	
	3.Can users delete sent messages?	No. There is no function for this.	font-end	Đặng Thành	10 done	0	0	0	0	0	0	0	0	
	4.Can users send voice messages or documents?	No. There is no function for this	test	Linh	5 done	5	4	3	2	1	0	0	0	
	5.Is there a notification that the user has sent a successful message?	Yes. Users may receive a notification of completion when sending the message												

As a student, I want to view detail of my personal tutor so that I can learn from them.	1.What information can students see?	The student can see the description of the tutor.	database	Duc Anh, Duy Thanh	5 done	5	2	0	0	0	0	0	0	Not done
	2. Can the student make the report of a tutor to the staff?	Yes. The students can submit a report to a staff and notify if something is wrong.	view function	Quang, Duy Thanh	30 80%	30	30	30	30	25	20	15		
	3. Can students unassign themselves from their tutor?	No. The student must contact with the staff to resolve their problem with the class	font-end	Đặng Thành	20 80%	20	20	20	20	15	10	5		
	4. Can students choose their tutor?	The student need to contact with the staff in order for them to assign to the tutor that suit their liking	test	Linh	20 70%	20	20	20	20	15	10	10	10	
	5. How can I keep contact with my tutor?	Student can contact their tutor email that shown in the tutor description												

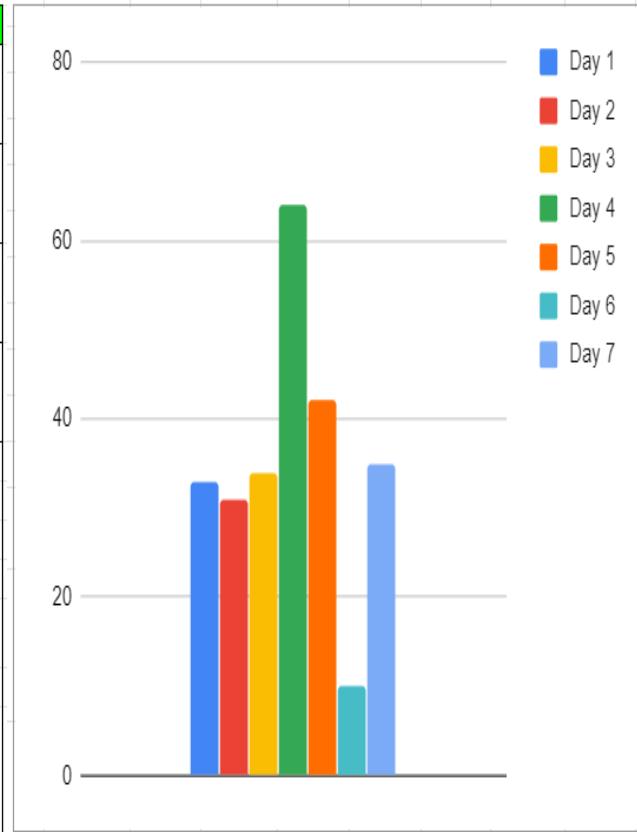
As student and tutor, we want to upload files to each other	1.What documents can I post?	You can only post as text	database	Duc Anh, Duy Thanh	3 done	3	0	0	0	0	0	0	0	Not done
	2.Can I delete the document I have posted?	Yes, you can	view post function	Duy Thành	15 done	15	10	5	0	0	0	0	0	
	3.Is there a notification when I post successfully?	Yes. Student may receive a notification of completion when post successfully	add post function	Duy Thành	20 done	20	15	11	8	5	0	0	0	
	4.Is there a notification when someone comments on my post?	Yes. Student may receive a notification of completion when someone comments on your post	font-end	Đặng Thành	20 80%	20	20	20	15	10	10	10	10	
	5.Can I post multiple files at the same time?	No, we don't have this function	test	Linh	10 done	10	10	10	10	5	0	0	0	Not done

As a student, I want to post and comment on documents.	1.Can I delete the document I have posted?	Yes, you can	database	Duc Anh, Duy Thanh	3 done	3	0	0	0	0	0	0	0	Not done
	2.Can I delete the comment I have posted?	Yes, you can	view comment function	Duy Thành	15 done	15	10	5	0	0	0	0	0	
	3.Is there a notification when I post successfully?	Yes. Student may receive a notification of completion when post successfully	add comment function	Duy Thành	20 done	20	15	11	8	5	0	0	0	
	4.Can I post multiple documents at the same time?	No, we don't have this function	font-end	Đặng Thành	20 done	20	20	20	15	10	10	10	10	
	5.Can I edit the comment?	Yes, you can	test	Linh	10 done	10	10	10	10	5	0	0	0	Done

total 33 31 34 64 42 10 35

Group Coursework

What problem we face?	Solution
The members lost focus on the work.	The team leader needs to ask everyone to gather immediately.
Time management between members are different	Make him or her create a plan before actually do the task to make sure that the task will be complete
Code writers are difficult to find documents.	Ask the teacher immediatly
Member need to explain all of their work before other members can continue their work	Keep note of how the process being made and transfer the note when deliver the part to the next member
What have gone well	
Members agree on the same idea	
Quick and effective discussion	
Members dedicated to their roles	
Scrum master resolve issues quickly	
Tools are easy to work with	
Product owners are always motivating members to help complete the Sprint on time.	



In the third week we were very happy because the team was very efficient when we completed the sprint in the second week and were highly appreciated by the instructor. The team members worked well with the team until the work was completed. Besides, sometimes there are a few distracted members that lead to the deadline but still not done. But it is only a small problem of the group that we have solved.

8.2.4 Sprint 4

User Stories	Details	Answer	Tasks	Person Volunteer	Estimation	status	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	
As a staff, I want to allocate personal tutors or students so that they can interact each others	1. Is the attribution process based on any	The staff will have the final word on allocation of tutors	database	Duc Anh, Duy Thành	3	done	0	0	0	0	0	0	0	
	2. Can I allocate bulk students at a time?	Yes. By check the box next to the student, staff can add bulk students to their tutor	Deploy core platform	Duy Thành	5	done	0	0	0	0	0	0	0	
	3. How many students can a tutor have?	This will be decided by the school administration	Authentication	Duy Thành	20	done	0	0	0	0	0	0	0	
	4. Can a student assigned to many tutor for in the same semester?	Yes. The student can be as many tutor as they can if the tutor schedule is not interfered	Allocation	Duy Thành	20	done	0	0	0	0	0	0	0	
	5. Can I relocate students to another	Yes. There will be an edit student function when the staff view the class	font-end	Đặng Thành	10	done	5	0	0	0	0	0	0	
	6. Can I remove students from tutor		test	Linh	16	done	16	16	16	16	6	0	0	Done

Group Coursework

As a student, I want to view detail of my personal tutor so that I can learn from them	1.What information can students see?	The student can see the description of the tutor.	database	Duc Anh, Duy Thanh	5 done	5	2	0	0	0	0	0	Done
	2. Can the student make the report of a tutor to the staff?	Yes. The students can submit a report to a staff and notify if something is wrong.	view function	Quang, Duy Thanh	30 done	15	5	0	0	0	0	0	
	3. Can students unassign themselves from their tutor?	No. The student must contact with the staff to resolve their problem with the class	font-end	Đặng Thành	20 done	5	5	5	0	0	0	0	
	4. Can students choose their tutor?	The student need to contact with the staff in order for them to assign to the tutor that suit their liking	test	Linh	20 done	10	5	5	0	0	0	0	
	5. How can I keep contact with my tutor?	Student can contact their tutor email that shown in the tutor description											

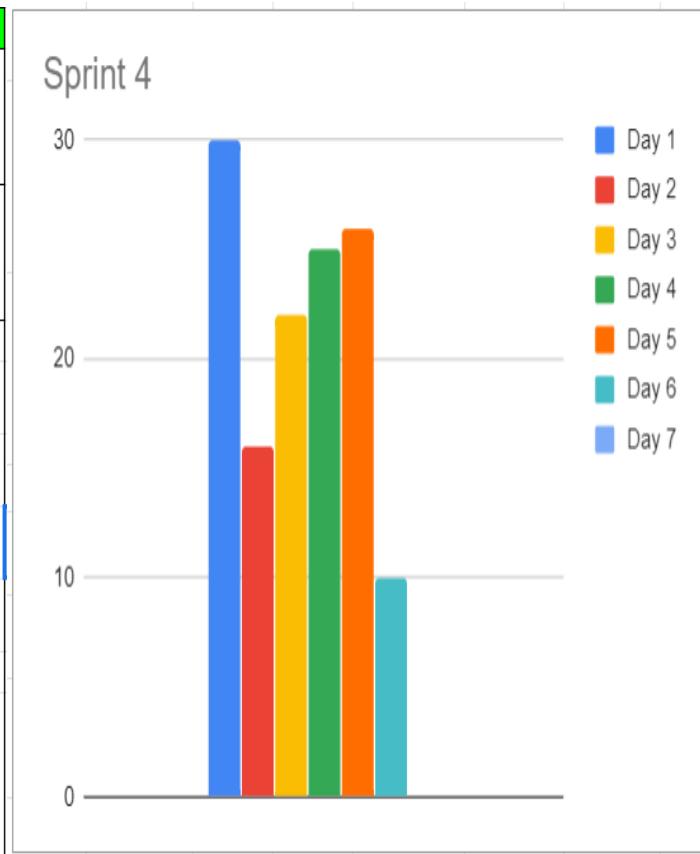
As student and tutor, we want to upload files to each other	1.What documents can I post?	You can only post as text	database	Duc Anh, Duy Thanh	3 done	3	0	0	0	0	0	0	Done
	2.Can I delete the document I have posted?	Yes, you can	view post function	Duy Thành	15 done	0	0	0	0	0	0	0	
	3.Is there a notification when I post successfully?	Yes. Student may receive a notification of completion when post successfully	add post function	Duy Thành	20 done	5	5	5	5	5	0	0	
	4.Is there a notification when someone comments on my post?	Yes. Student may receive a notification of completion when someone comments on your post	font-end	Đặng Thành	20 done	10	5	0	0	0	0	0	
	5.Can I post multiple posts at the same time?	No, we don't have this function	test	Linh	10 done	0	0	0	0	0	0	0	Done

As a staff, I want to be able to allocate students in bulk to their tutor so that it saves more time.	1. How many students can a tutor have?	This will be decided by the school administration	back-end	Duy Thành	5 done	3	2	0	0	0	0	0	Done
	2. Is the attribution process based on any rule?	The staff will have the final word on allocation of tutors or students	font-end	Đặng Thành	5 done	5	5	0	0	0	0	0	
	3. Can I remove students from the class?	Yes. There will be an edit student function when the staff view the class	test	Linh	2 done	2	2	2	0	0	0	0	
	4.Can a student select another teacher if the teacher is not available?	Yes. This will be decided by the staff.											

Group Coursework

As an authorized staff, I want to have access to dashboard of other tutor and student's individual dashboard so that I can make adjustment for them quickly if needed.	1. What can I change?	Student and tutor	database	Duc Anh, Duy Thanh	5	done	5	2	0	0	0	0	0	
	2. When do I need to access the dashboard ?	When there is a problem between the student and tutor	view function	Duy Thành	30	70%	30	30	30	30	25	20	10	
	3. Does my change depend on the administrator or the tutor	The tutor and the student	font-end	Đặng Thành	20	60%	20	20	20	20	15	10	10	
	4. Is anyone supervising me when I access the dashboard ?	School administration	test	Linh	20	50%	20	20	20	20	15	10	10	
	5. Can I adjust the dashboard of students and tutors multiple times	Yes, you can												Done

What problem we face?	Solution
The remaining time is too little to complete the sprint.	The team leader needs to ask everyone to gather immediately.
Time management between members are different	Make him or her create a plan before actually do the task to make sure that the task will be complete
What have gone well	
Members agree on the same idea	
Quick and effective discussion	
Members dedicated to their roles	
Scrum master resolve issues quickly	
Tools are easy to work with	
Product owners are always motivating members to help complete the Sprint on time.	



In the fourth week we almost had no trouble because the team members were working so hard, we only had the problem of time when there was too little time leading to every member. In the group, you have to focus really hard. Our team worked really well when the members understood each other and worked really hard, so we completed the third week sprint and were highly appreciated by the instructor for the results.

9 Conclusion

The above is our entire project, all of which are reviewed, analyzed in detail. Overall, we finished the project an excellent one though in the process of implementing we encountered problems but we have overcome it.