

# **System Requirements Specification**

## **Homeroom Professor Web Application**

**[homeroomprofessor-autodeploy.herokuapp.com](https://homeroomprofessor-autodeploy.herokuapp.com)**

### **Development Team**

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## **Table of Contents**

<b>Overall Project Description</b>	<b>2</b>
<b>Description of Features</b>	<b>3</b>
Login and Registration Features	3
Login Page	3
Registration Pages	4
Student Features	6
Student Dashboard Page	6
Professor Lookup Page	8
Professor Features	10
Professor Dashboard Page	10
Professor Appointment Requests	11
Professor Account Information Page	13
<b>Description of Navigation</b>	<b>14</b>
<b>User Stories and Story Map</b>	<b>23</b>
<b>System Context Model</b>	<b>25</b>
<b>Wireframes</b>	<b>26</b>
<b>System Requirements</b>	<b>29</b>
Environmental Variables and API Keys	29
Login Credentials	29
ReadMe File	30
Config File	30
Project Handoff Guidelines	31

# Overall Project Description

The purpose of Homeroom Professor was to provide a volunteer service for faculty and professors in college to be able to tutor elementary, middle, and high school students in a variety of different subjects. This service was created in direct response to the COVID-19 pandemic, where many students were forced to work online and away from easy access to conventional tutors and teachers.

This service can be supplemental to student learning, assist parents and teachers, provide direct interaction between students and college professors, and allow higher education individuals to give back and serve as role models. This unique interaction between professors and K-12 students could also lay the foundation for future connections in college, as well as give more insight into college for the average student. Professors could also be a resource of encouragement to students, so that they may succeed in their subjects in school and potentially pursue a college education, should they desire.

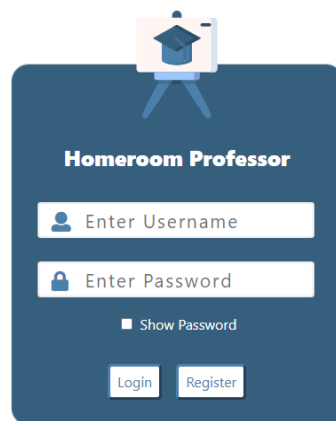
The website has been built with a variety of different features including but not limited to, unique student and professor dashboards, requesting and scheduling appointments, a professor lookup table, an integrated calendar, professor profile pages, and zoom meeting support. Additional features could be incorporated in future versions, and the dashboard layout on the site provides an easy interface to build off of.

# Description of Features

## Login and Registration Features

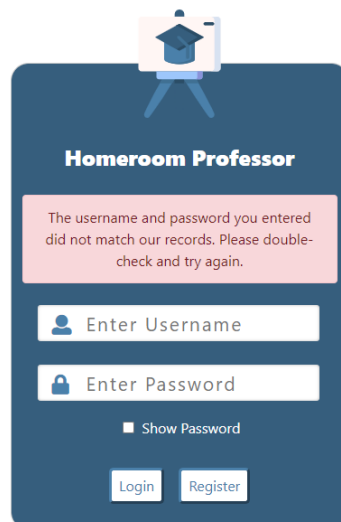
### Login Page

- When logging in, the password that the user enters will be compared to the hashed password in the database using bcrypt. JSON Web Token (JWT) is being used for user authentication, allowing for different users to use the application and have an individualized and personalized experience.



The image shows a login form for 'Homeroom Professor'. It features a dark blue background with a white header area containing the title 'Homeroom Professor' and a small icon of a graduation cap. Below the header, there are two input fields: 'Enter Username' and 'Enter Password'. The 'Enter Password' field has a 'Show Password' checkbox next to it. At the bottom, there are two buttons: 'Login' and 'Register'.

- If a user attempts to log in with invalid credentials, an error message is displayed asking them to try again.



The image shows the same login form as above, but with an error message displayed. The error message is in a pink box and reads: 'The username and password you entered did not match our records. Please double-check and try again.' Below the error message, the input fields and buttons are still visible.

## Registration Pages

- When a student selects Register from the login page, they can choose to register as either a student or professor.
- The Professor Registration page lets the professor fill in their personal information, subjects they wish to tutor in, and a desired username and password.

### Professor Registration

Please enter your information to register as a professor.

First Name	Last Name	
<input type="text" value="First Name"/>	<input type="text" value="Last Name"/>	
City	State	Phone Number
<input type="text" value="City"/>	<input type="text" value="State"/>	<input type="text" value="Phone Number"/>
Email		
<input type="text" value="E-mail"/>		
University	Department	
<input type="text" value="University"/>	<input type="text" value="Department"/>	
<b>Select Subjects You Wish To Tutor In:</b>		
<input type="checkbox"/> Computer Science <input type="checkbox"/> English <input type="checkbox"/> Spanish <input type="checkbox"/> French <input type="checkbox"/> Latin <input type="checkbox"/> Algebra		
<input type="checkbox"/> Geometry <input type="checkbox"/> Precalculus <input type="checkbox"/> Statistics <input type="checkbox"/> Calculus <input type="checkbox"/> Biology <input type="checkbox"/> Chemistry		
<input type="checkbox"/> Physics <input type="checkbox"/> Health Science <input type="checkbox"/> Environmental Science <input type="checkbox"/> Earth Science		
<input type="checkbox"/> History <input type="checkbox"/> Economics <input type="checkbox"/> Psychology <input type="checkbox"/> Government <input type="checkbox"/> Geography		
Username	Password	
<input type="text" value="Desired Username"/>	<input type="text" value="Password"/>	
<input type="checkbox"/> Show Password		
<input type="button" value="Back"/>		<input type="button" value="Next"/>

- When the professor selects the Next button, they will then be asked to fill in a short questionnaire asking for a link to their profile picture, a link to their Zoom meeting room, a profile summary, and what days they are available for tutoring.

### Professor Registration

Please enter your information to register as a professor.

Profile Picture Link	Enter your personal Zoom Session link.
<input type="text" value="https://www.website.com/My_Profile_Picture.png"/>	<input type="text" value="Zoom Link"/>
Profile Summary	What days are you available?
<input type="text" value="Create a short summary about yourself for students to view when searching for tutors. You can include things like hobbies, favorite food, favorite sports teams, etc."/>	<input type="checkbox"/> Monday <input type="checkbox"/> Tuesday <input type="checkbox"/> Wednesday <input type="checkbox"/> Thursday <input type="checkbox"/> Friday
<input type="button" value="Previous"/>	<input type="button" value="Submit"/>

- The Student Registration page lets the student fill in their personal information, subjects they wish to be tutored in, and a desired username and password.

## Student Registration

Please enter your information below to register as a student.

First Name <input type="text" value="First Name"/>		Last Name <input type="text" value="Last Name"/>	
City <input type="text" value="City"/>	State <input type="text" value="State"/>	Phone Number <input type="text" value="Phone Number"/>	
Email <input type="text" value="E-mail"/>			
Grade <input type="text" value="▼"/>	Age <input type="text" value="Age"/>		
<b>Select Subjects To Be Tutored In:</b> <input type="checkbox"/> Computer Science <input type="checkbox"/> English <input type="checkbox"/> Spanish <input type="checkbox"/> French <input type="checkbox"/> Latin <input type="checkbox"/> Algebra <input type="checkbox"/> Geometry <input type="checkbox"/> Precalculus <input type="checkbox"/> Statistics <input type="checkbox"/> Calculus <input type="checkbox"/> Biology <input type="checkbox"/> Chemistry <input type="checkbox"/> Physics <input type="checkbox"/> Health Science <input type="checkbox"/> Environmental Science <input type="checkbox"/> Earth Science <input type="checkbox"/> History <input type="checkbox"/> Economics <input type="checkbox"/> Psychology <input type="checkbox"/> Government <input type="checkbox"/> Geography			
Username <input type="text" value="Desired Username"/>		Password <input type="text" value="Password"/>	
		<input type="checkbox"/> Show Password	
<input type="button" value="Back"/>		<input type="button" value="Submit"/>	

- The student and professor accounts will be stored in two separate databases on MongoDB once a registration form is submitted with all fields matching schema requirements. The passwords are hashed using bcrypt before being stored in the database to secure the user's account.

HomeroomProfessorDB.students	HomeroomProfessorDB.professors
<pre> {   "_id": ObjectId("5f206f345952730f0e32aba"),   "subjects": Object,   "userType": "student",   "firstName": "new",   "lastName": "student",   "username": "newstudent",   "password": "\$2a\$08\$37wTPE3d0THsEUuQYvve8AQW3nsrSHN0AeuCvc4VrvX0N1s35",   "salt": "TempSalt",   "email": "newstudent@gmail.com",   "age": 10,   "phoneNumber": "13528765309",   "grade": 5,   "city": "GAINESVILLE",   "state": "FL",   "fullName": "new student",   "_v": 0 } </pre>	<pre> {   "_id": ObjectId("5f2e5598614097208cc19025"),   "subjects": Object,   "userType": "professor",   "firstName": "new",   "lastName": "professor",   "username": "professor",   "password": "\$2a\$08\$E152HK/1K5EC32mRaLADuW5R26F7HCF7OLQJfau5P2XG1pcFegbok",   "salt": "TempSalt",   "email": "aenall@gmail.com",   "phoneNumber": "1234567890",   "university": "UP",   "department": "CS",   "city": "SOMEPLACE",   "state": "CA",   "subjectstring": "Statistics, Chemistry, Environmental Science, Earth Science, Governmen...",   "fullName": "new professor",   "_v": 0 } </pre>

## Student Features

### Student Dashboard Page

- The navbar is present at the top and provides easy access to commonly used actions such as logging out or returning back to the dashboard.




- The dashboard page provides a centralized location for all relevant information for the student. This includes upcoming meetings / events, searching for a professor, and viewing their personal calendar. The student will also be presented with a greeting of their name.

Welcome to your Dashboard, Aliya Donaldson!


Placeholder Button

Make New Tutoring Appointments


Professor Recommendations



**Joshua Fox**  
Hello I am Professor Fox and I teach COP3503!  
Please contact me for help with C++ or mathematics.



**Cheryl Resch**  
I teach COP3530 and CDA3100 and can help with many topics.



**Sanethia Thomas**  
Hello I am Dr. Thomas! I teach CEN0031 and I can help with a variety of different subjects.

Search Available Professors: [Professor Lookup](#)

Upcoming Tutoring Sessions

Appointment - Cheryl Resch	Wed Aug 12 2020 10:00:00 AM
Appointment - Joshua Fox	Fri Aug 14 2020 2:00:00 PM
Appointment - Sanethia Thomas	Sun Aug 16 2020 12:00:00 PM

August 2020

today < >

Sun	Mon	Tue	Wed	Thu	Fri	Sat
26	27	28	29	30	31	1
2	3	4	5	6	7	8
9	10	11	12 10a Cheryl Resch	13	14 2p Joshua Fox	15
16 12p Sanethia Thom	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31	1	2	3	4	5

- The student's personal calendar displays the current month, day, and scheduled tutoring sessions. The student can also view upcoming or past months for more information.

August 2020							today	<	>
Sun	Mon	Tue	Wed	Thu	Fri	Sat			
26	27	28	29	30	31	1			
2	3	4	5	6	7	8			
9	10	11	12	13	14	15			
			10a Cheryl Resch		2p Joshua Fox				
16	17	18	19	20	21	22			
12p Sanethia Thon									
23	24	25	26	27	28	29			
30	31	1	2	3	4	5			

- If the student selects one of their upcoming sessions in the calendar, they will be directed to the professor's Zoom meeting via an outside link.
- After an appointment is confirmed by the professor, it will be displayed in the upcoming tutoring sessions section with the name of the professor and the time and date of the appointment.

Upcoming Tutoring Sessions	
Appointment - Cheryl Resch	Wed Aug 12 2020 10:00:00 AM
Appointment - Joshua Fox	Fri Aug 14 2020 2:00:00 PM
Appointment - Sanethia Thomas	Sun Aug 16 2020 12:00:00 PM



## Professor Lookup Page

- The Professor Lookup page displays a recommended professor to the student when they first open the page. This recommendation is meant to assist younger students in easily finding a professor who can help them.

### Professor Lookup

One of your recommended professors is shown below. Please enter a new name, university, department, or subject to search for other professors.

Professor	University	Department	Tutoring Subjects	Request Professor
Cheryl Resch	University Of Florida	CISE	Computer Science	<a href="#">Make Appointment</a>

- Instructions at the top of the page inform the student they can delete the professor's name to search for other professors if desired. If the student deletes the current professor's name the full professor database will be displayed. The student can then search by name, university, department, or tutoring subjects.

### Professor Lookup


One of your recommended professors is shown below. Please enter a new name, university, department, or subject to search for other professors.

Professor	University	Department	Tutoring Subjects	Request Professor
Cheryl Resch	University Of Florida	CISE	Computer Science	<a href="#">Make Appointment</a>
Joshua Fox	University Of Florida	CISE	Computer Science	<a href="#">Make Appointment</a>
Sanethia Thomas	University Of Florida	CISE	Computer Science	<a href="#">Make Appointment</a>

- When a student selects the Make Appointment button, a pop up will be displayed showing the selected professor's profile information and the option to submit a request for a new tutoring appointment.

### Appointment Request

---



Cheryl Resch

University Of Florida

CISE

Professor Availability: Tuesday, Wednesday, Thursday

Professor Profile Summary

I teach COP3530 and CDA3100 and can help with many topics.

---

Are you sure you'd like to make an appointment with this professor?

---

Submit RequestClose

- If the student chooses to submit the request, the pop up will tell the student that the appointment has been requested and the professor will get back to them as soon as possible.

### Your appointment has been requested.

---

The professor will get back to you with their availability as soon as possible.

---

Close

## Professor Features

### Professor Dashboard Page

- The navbar is present at the top, and provides easy access to commonly used actions, such as viewing account information, returning back to the dashboard, or logging out.



- The dashboard page provides a centralized location for all relevant information for the professor. This includes student requests for meetings, currently scheduled meetings, and viewing their personal calendar. The professor will also be presented with a greeting of their name.

Welcome to your Dashboard, Sanethia Thomas!

Placeholder Button

New Requests

Student Request - Aliya Donaldson	Schedule
Student Request - Jonathan Eastwood	Schedule

Upcoming Tutoring Sessions

Appointment - Aliya Donaldson	Sun Aug 16 2020 12:00:00 PM
Appointment - Katelin Cooper	Wed Aug 12 2020 3:00:00 PM
Appointment - Teddy Smith	Fri Aug 14 2020 4:00:00 PM

August 2020

today < >

Sun	Mon	Tue	Wed	Thu	Fri	Sat
26	27	28	29	30	31	1
2	3	4	5	6	7	8
9	10	11	12 3p Katelin Cooper	13	14 4p Teddy Smith	15
16 12p Aliya Donaldson	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31	1	2	3	4	5

- The professor's personal calendar displays the current month, day, and scheduled tutoring sessions. The professor can also view upcoming or past months for more information.

August 2020							today	<	>
Sun	Mon	Tue	Wed	Thu	Fri	Sat			
26	27	28	29	30	31	1			
2	3	4	5	6	7	8			
9	10	11	12	13	14	15			
			3p Katelin Cooper		4p Teddy Smith				
16	17	18	19	20	21	22			
12p Aliya Donaldson									
23	24	25	26	27	28	29			
30	31	1	2	3	4	5			

### Professor Appointment Requests

- On the professor dashboard, the professor can view all current appointment requests from students. They are given the option to schedule appointments with a schedule button on the right side of the window.

New Requests	
Student Request - Katelin Cooper	Schedule
Student Request - Aliya Donaldson	Schedule
Student Request - Teddy Smith	Schedule

- When the professor selects the schedule button, a new window is displayed on the dashboard. The professor is provided with options to schedule the appointment, contact the student, or deny the request.

Student Appointment Request

What would you like to do?

Schedule Appointment

Contact Student

Deny Request

Close

- If the professor selects the Schedule Appointment button, they will be shown a calendar with available time slots to choose from. When the professor selects a time slot, the time will be displayed at the bottom and they will be given the option to confirm the appointment.

Schedule Appointment

What date would you like the appointment on?

Aug 12 – 18, 2020

today < >

	Wed 8/12	Thu 8/13	Fri 8/14	Sat 8/15	Sun 8/16	Mon 8/17	Tue 8/18
7am							
8am							
9am							
10am							
11am							
12pm							
1pm							
2pm							
3pm							
4pm							
5pm							

You have selected: **Fri Aug 14 2020 12:00:00 PM**

Confirm Appointment


Close

- After the appointment is made, upcoming tutoring sessions will be displayed with the student's name and the time and date of the appointment.

Upcoming Tutoring Sessions	
Appointment - Aliya Donaldson	Sun Aug 16 2020 12:00:00 PM
Appointment - Katelin Cooper	Wed Aug 12 2020 3:00:00 PM
Appointment - Teddy Smith	Fri Aug 14 2020 4:00:00 PM

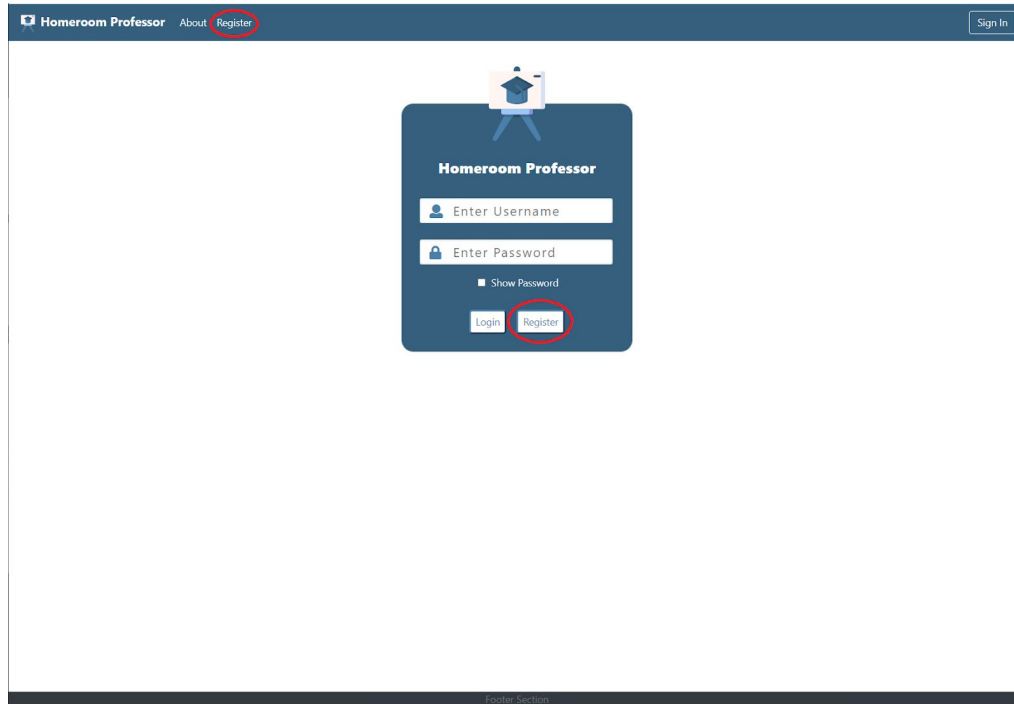
### Professor Account Information Page

- On the professor account information page, the professor can view their current account information and profile picture.

Account Information			
	Name: Sanethia Thomas		
	Personal Summary: Hello I am Dr. Thomas! I teach CEN3031 and I can help with a variety of different subjects.		
University: University Of Florida	Department: CISE	Email: sanethiathomas@ufl.edu	Phone Number: 352-555-5555
Tutoring Availability: Tuesday, Thursday, Friday			
Tutoring Subjects: Computer Science			

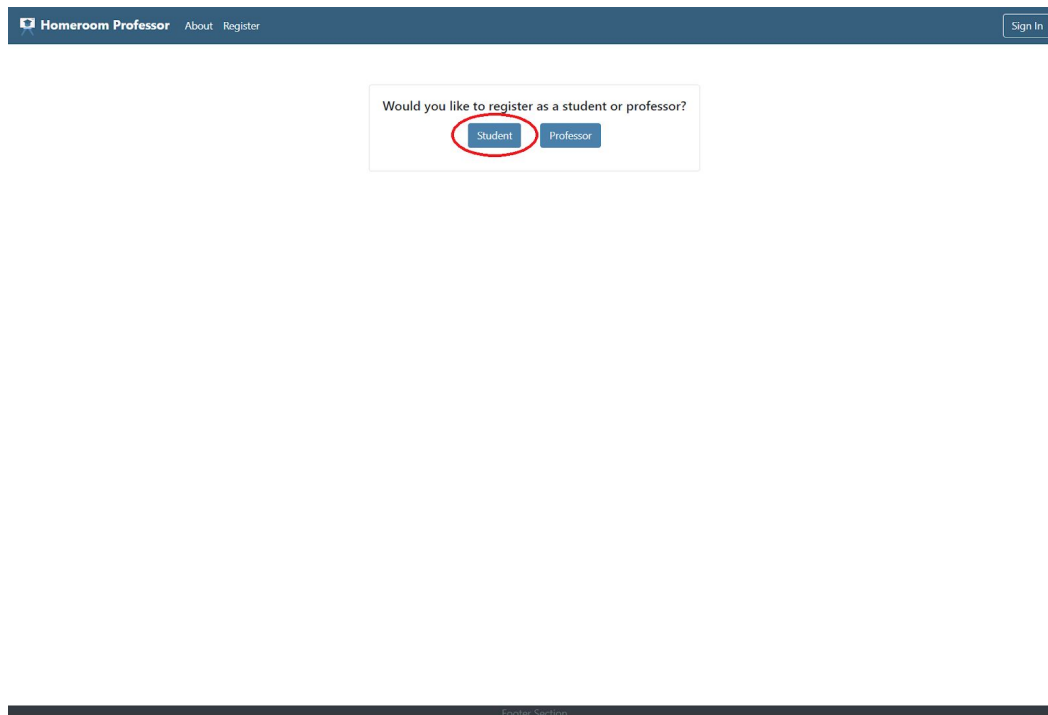
## Description of Navigation

On entry to the web application, you will arrive at a Login page, click on the ‘Register’ button for new professor or student account registration.



The screenshot shows the 'Homeroom Professor' login page. The header is dark blue with the text 'Homeroom Professor' and links for 'About' and 'Register' (circled in red). A 'Sign In' button is in the top right. The main content area features a dark blue login box with a graduation cap icon. Inside the box, there are input fields for 'Enter Username' and 'Enter Password', a 'Show Password' checkbox, and 'Login' and 'Register' buttons (the 'Register' button is circled in red). The footer is dark blue with the text 'Footer Section'.

Click on the ‘Student’ button for creating a new student account.



The screenshot shows the registration selection page. The header is dark blue with the text 'Homeroom Professor' and links for 'About' and 'Register'. A 'Sign In' button is in the top right. The main content area features a white box with the text 'Would you like to register as a student or professor?' and two buttons: 'Student' (circled in red) and 'Professor'. The footer is dark blue with the text 'Footer Section'.

For the Student Registration form, all fields need to be filled out. Highlighted in red are three items that are not text fields. Click the ‘Grade’ dropdown button to select the grade the user is in. Check the checkboxes under ‘Select Subjects To Be Tutored In:’ for the subjects the user needs help in. Use checkbox ‘Show Password’ to temporarily show the password’s text. Once all fields are filled, click ‘Submit’ to create the account.

The screenshot shows the 'Student Registration' form on the 'Homeroom Professor' website. The form includes fields for First Name, Last Name, City, State, Phone Number, Email, Grade, Age, Username, and Password. A section titled 'Select Subjects To Be Tutored In:' contains a list of subjects with checkboxes. The 'Grade' dropdown is highlighted in red. The 'Select Subjects To Be Tutored In:' section is also highlighted in red. The 'Show Password' checkbox is highlighted in red. The 'Submit' button is highlighted in red. The form is titled 'Student Registration' and includes a 'Sign In' button in the top right corner.

Click on the ‘Professor’ button for creating a new professor account.

The screenshot shows a registration selection screen on the 'Homeroom Professor' website. It asks the user 'Would you like to register as a student or professor?'. There are two buttons: 'Student' and 'Professor'. The 'Professor' button is highlighted in red. The screen includes a 'Sign In' button in the top right corner.



The professor registration form requires all fields to be filled out. Check the checkboxes under ‘Select Subjects To Be Tutored In:’ for the subjects the user needs help in. Use checkbox ‘Show Password’ to temporarily show the password’s text. Once all fields are filled, click ‘Next’ to continue.

Homeroom Professor About Register Sign In

### Professor Registration

Please enter your information to register as a professor.

First Name:  Last Name:

City:  State:  Phone Number:

Email:

University:  Department:

**Select Subjects You Wish To Tutor In:**

☐ Computer Science ☐ English ☐ Spanish ☐ French ☐ Latin ☐ Algebra

☐ Geometry ☐ Precalculus ☐ Statistics ☐ Calculus ☐ Biology ☐ Chemistry

☐ Physics ☐ Health Science ☐ Environmental Science ☐ Earth Science

☐ History ☐ Economics ☐ Psychology ☐ Government ☐ Geography

Username:  Password:

☐ Show Password

Back Next

Footer Section

The second page allows for additional information of a profile picture, personal zoom link session, personal summary and availability to be included. Click ‘Submit’ to create the account.

Homeroom Professor About Register Sign In

### Professor Registration

Please enter your information to register as a professor.

Profile Picture:  My\_Profile\_Picture.png

Profile Summary:

Create a short summary about yourself for students to view when searching for tutors. You can include things like hobbies, favorite food, favorite sports teams, etc.

Enter your personal Zoom Session link:

Zoom Link

What days are you available?

☐ Monday ☐ Tuesday ☐ Wednesday ☐ Thursday ☐ Friday

Previous Submit


Footer Section

Once an account is created, the user will be redirected back to the Login page to enter the new account information and click ‘Login’ to log into the account dashboard. Check the ‘Show Password’ box to temporarily show the password’s text.


Student accounts will be redirected to the Student Dashboard. Here the student can view/interact with events on their calendar on the right side. The left side will display recommendations of professors based on the students selected subjects. Click ‘Professor Lookup’ to search for professors to set up new tutoring sessions.

Scrolling down on the dashboard will show the upcoming sessions for the student to be reminded of, indicated by the red arrow.


### Professor Recommendations



**Joshua Fox**  
Hello I am Professor Fox and I teach COP3503! Please contact me for help with C++ or mathematics.



**Cheryl Resch**  
I teach COP3530 and CDA3100 and can help with many topics.



**Sanethia Thomas**  
Hello I am Dr. Thomas! I teach CEN3031 and I can help with a variety of different subjects.

Search Available Professors:

Professor Lookup

### August 2020

Sun	Mon	Tue	Wed	Thu	Fri	Sat
26	27	28	29	30	31	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
		10a Cheryl 10a Joshua	10a Cheryl			
16	17	18	19	20	21	22
12p Saneth						
23	24	25	26	27	28	29
30	31	1	2	3	4	5

### Upcoming Tutoring Sessions

Appointment - Cheryl Resch	Tue Aug 11 2020 10:00:00 AM
Appointment - Cheryl Resch	Wed Aug 12 2020 10:00:00 AM
Appointment - Joshua Fox	Tue Aug 11 2020 10:00:00 AM
Appointment - Sanethia Thomas	Sun Aug 16 2020 12:00:00 PM

In Professor Lookup, the search bar will automatically filter one of users recommended professors or the user can filter the database themselves. Click 'Make Appointment' to open a small window for requesting the professor for a possible tutoring session. Click 'Dashboard' to return to the Student Dashboard.

Homeroom Professor

Dashboard

Logout

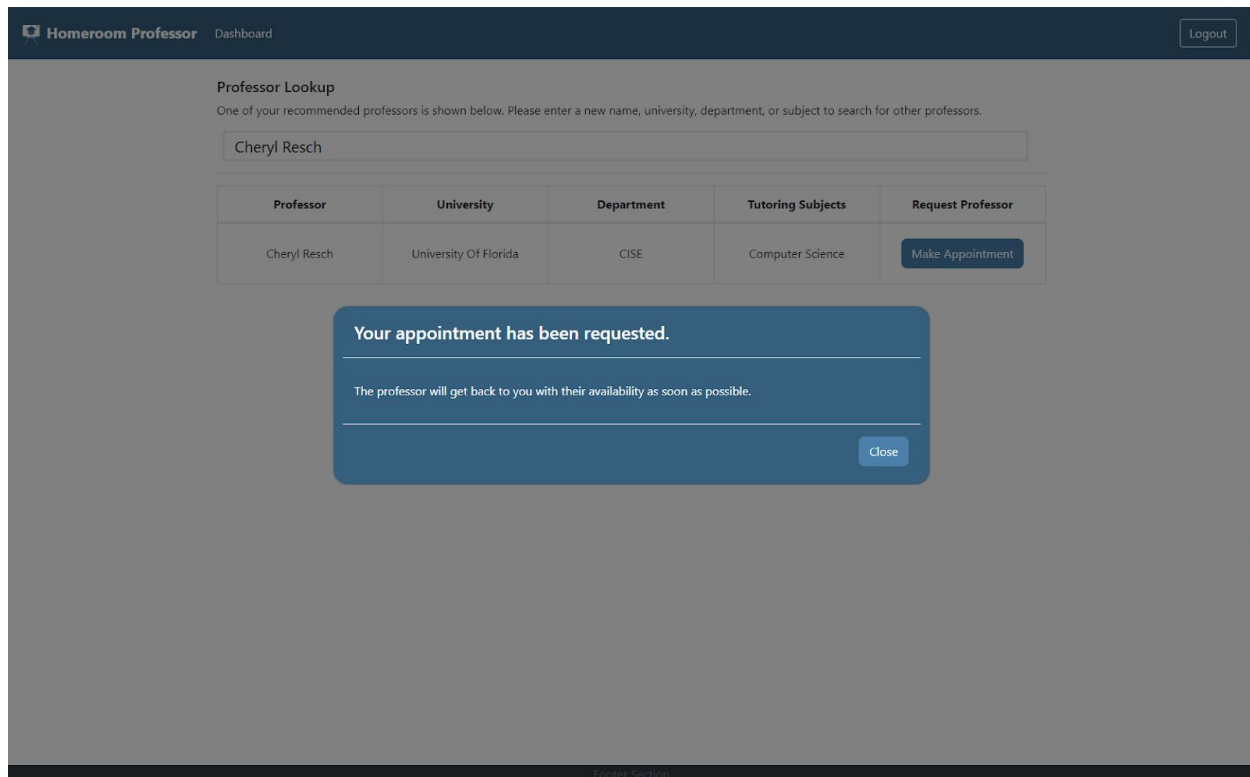
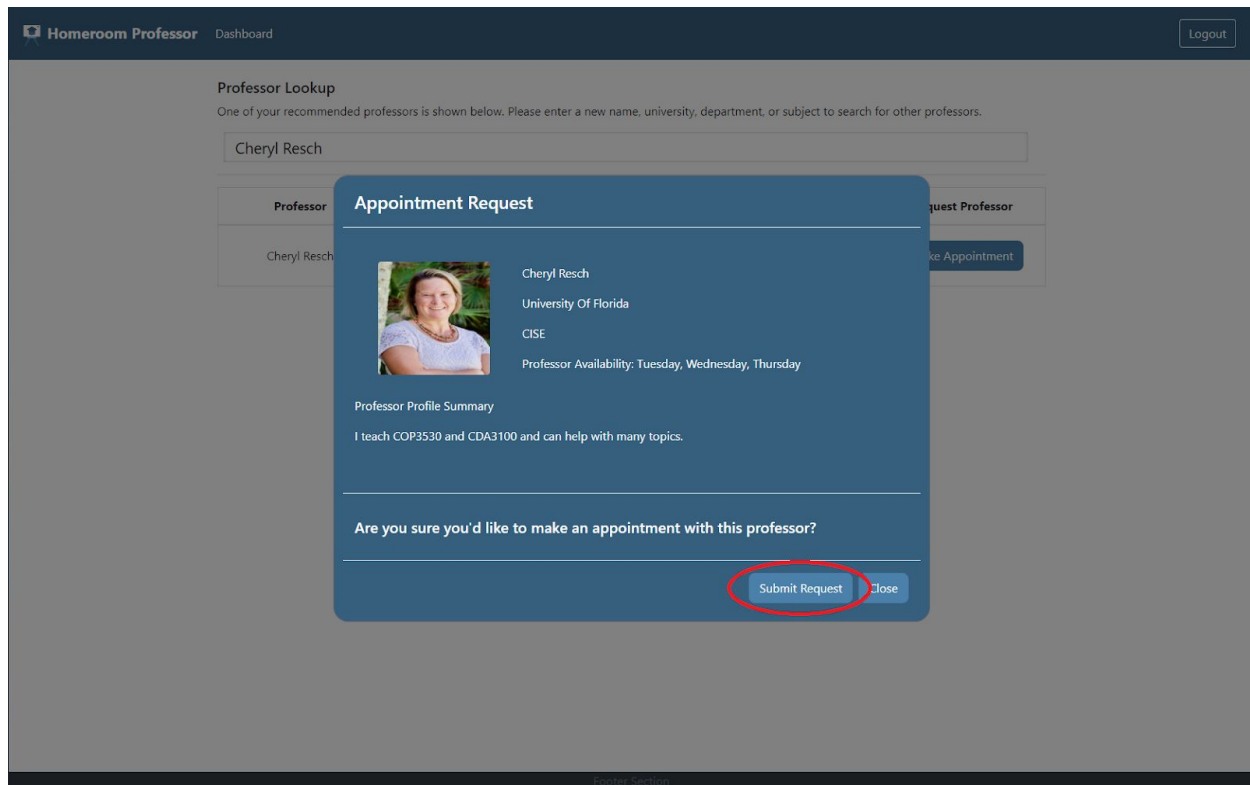
### Professor Lookup

One of your recommended professors is shown below. Please enter a new name, university, department, or subject to search for other professors.

Cheryl Resch

Professor	University	Department	Tutoring Subjects	Request Professor
Cheryl Resch	University Of Florida	CISE	Computer Science	Make Appointment

Click 'Submit Request' to request an appointment or 'Close' to cancel this request. If submitted, a confirmation window will appear to inform the user that the request went through.



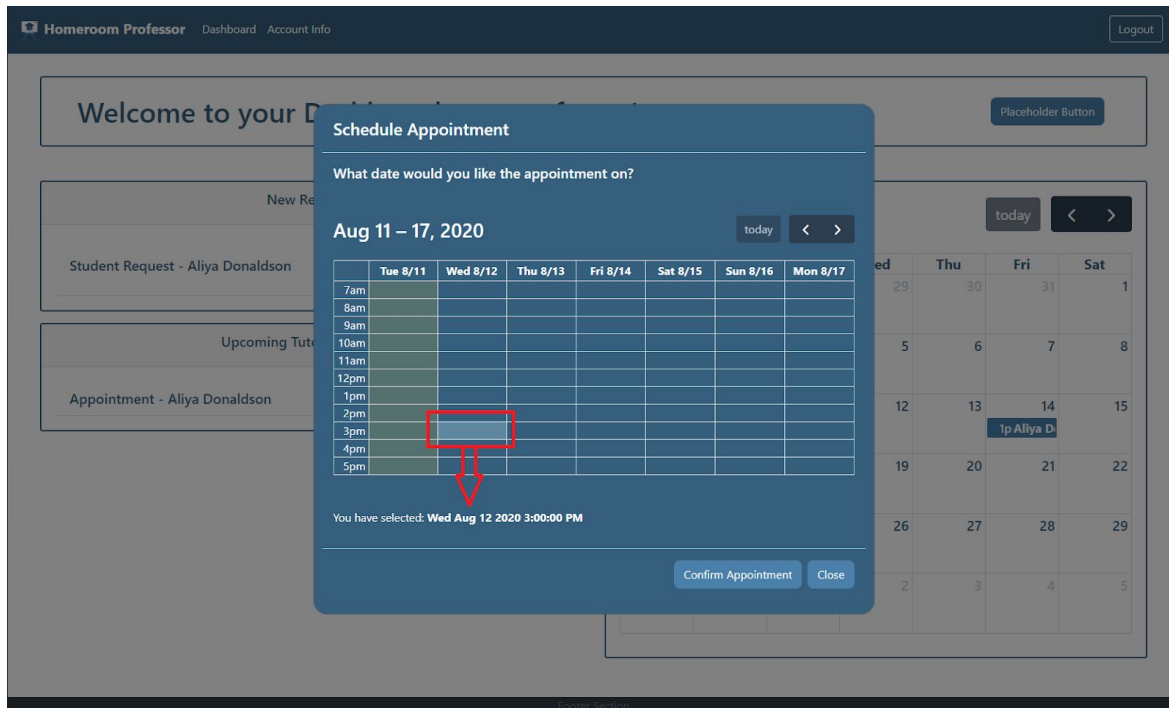
Professor accounts will be redirected to the Professor Dashboard. Here the professor can view events on their calendar on the right side of the dashboard. On the left side of the dashboard, the professor can view New Requests and Upcoming Tutoring Sessions. Click ‘Schedule’ under New Requests to schedule an appointment with the student.

The screenshot shows the Professor Dashboard. At the top, there's a navigation bar with 'Homeroom Professor', 'Dashboard', 'Account Info', and a 'Logout' button. Below this is a welcome message: 'Welcome to your Dashboard, test professor!' with a 'Placeholder Button'. The main content area is divided into two sections. The left section, titled 'New Requests', contains a 'Student Request - Aliya Donaldson' with a 'Schedule' button circled in red. Below this is the 'Upcoming Tutoring Sessions' section, which shows an 'Appointment - Aliya Donaldson' for 'Fri Aug 14 2020 1:00:00 PM'. The right section is a calendar for 'August 2020', showing dates from 26 to 5. A 'today' button and navigation arrows are at the top of the calendar. A date '14' is highlighted with a blue box labeled '1p Aliya D'.

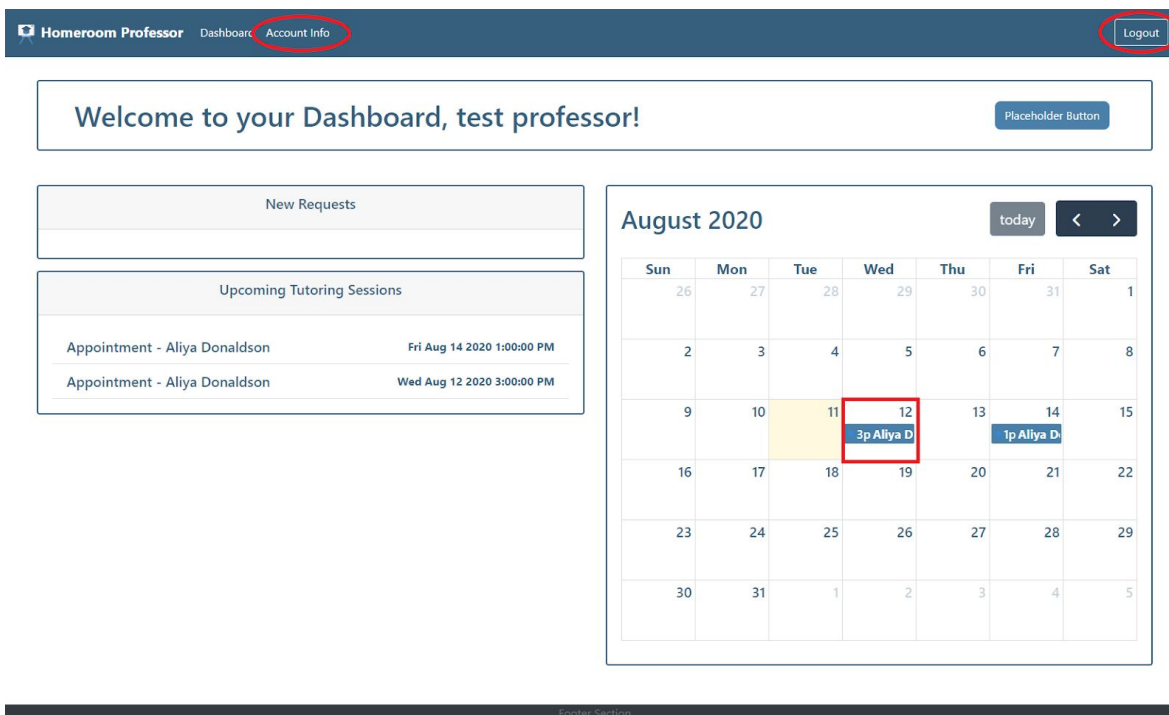
A pop-up will appear where the professor can choose to ‘Schedule Appointment’, ‘Contact Student’, or ‘Deny Request’. Selecting ‘Schedule Appointment’ will forward to a calendar to select a time slot on.

This screenshot shows the same Professor Dashboard as the previous one, but with a 'Student Appointment Request' pop-up window in the center. The pop-up has a title bar 'Student Appointment Request' and a question 'What would you like to do?'. It contains three buttons: 'Schedule Appointment' (circled in red), 'Contact Student', and 'Deny Request'. There is also a 'Close' button at the bottom right of the pop-up. The background dashboard elements are dimmed.

Selecting a date will highlight that location and render in your selections data and time. Click ‘Confirm Appointment’ to approve the request for the selected time slot.



Once the appointment is confirmed, it will render into the calendar as an interactive zoom link to connect the tutoring session. Click ‘Account Info’ in the Navigation Bar to view account information. Click ‘Logout’ to return to the ‘Login’ page.



On the professors Account Info page, the professor can view their own account information. Click on 'Dashboard' to return to the Professor Dashboard.


Homeroom Professor

Dashboard

Account Info

Logout

Account Information



Name: Test Professor

Personal Summary: Summary.

University: Testu

Department: TESTD

Email: test@professor.com

Phone Number: 1234567890

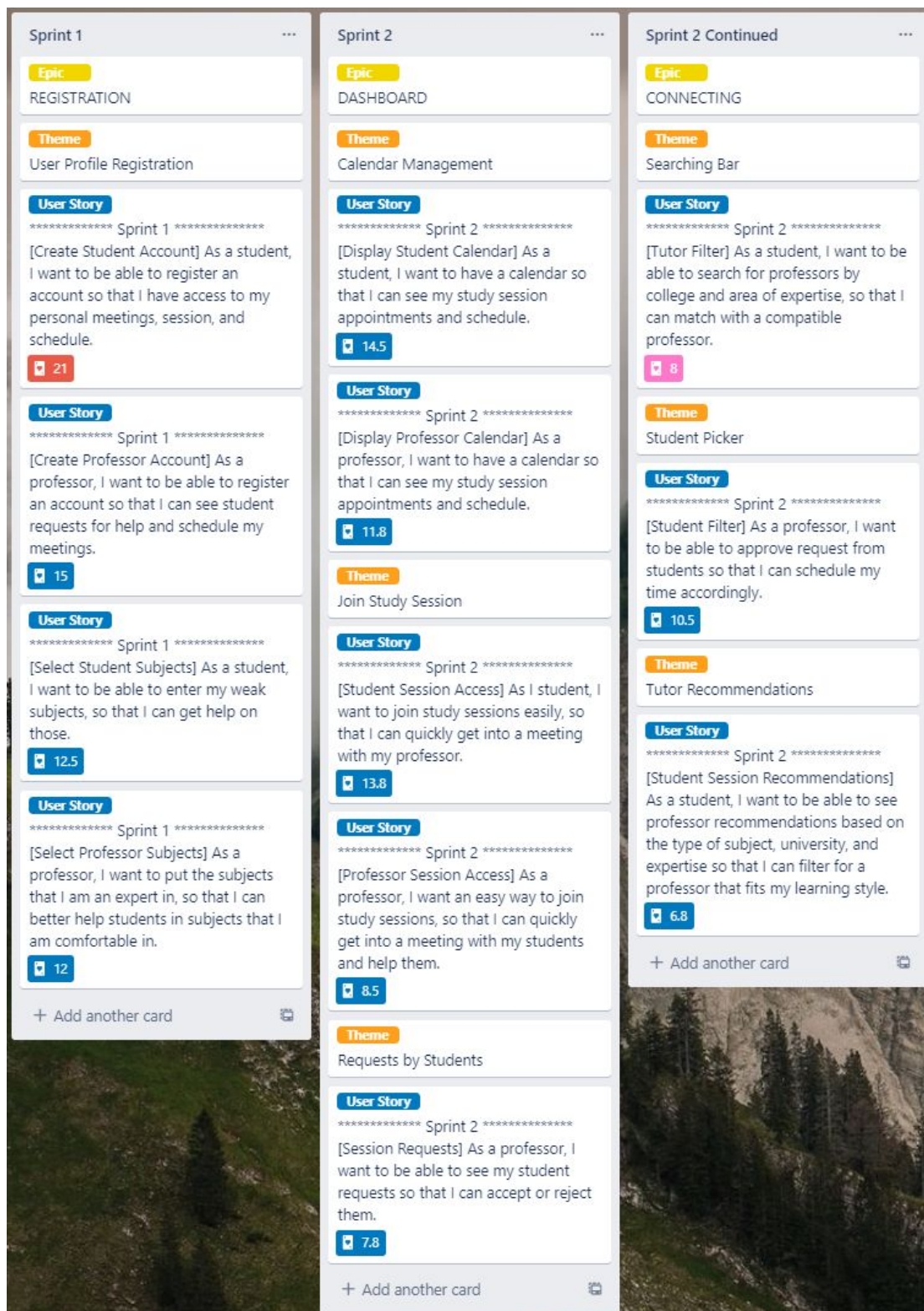
Tutoring Availability: Monday, Wednesday, Thursday

Tutoring Subjects: English, Spanish, French, Latin, Earth Science, Government

Footer Section



# User Stories and Story Map





Sprint 3

Epic

COMMUNICATION

Theme

Video and Whiteboard Feature

User Story

\*\*\*\*\* Sprint 3 \*\*\*\*\*  
[Student Video] As a student, I want to have access to video so that I can communicate directly with a professor.  
13

User Story

\*\*\*\*\* Sprint 3 \*\*\*\*\*  
[Session Engagement] As a professor, I want to have video communication with my students so that there is a more stimulating environment and a sense of real interaction.  
13

User Story

\*\*\*\*\* Sprint 3 \*\*\*\*\*  
[Student Whiteboard Access] As a student, I want to have access to a whiteboard so that I can show my work and work out problems.  
4.5

User Story

\*\*\*\*\* Sprint 3 \*\*\*\*\*  
[Professor Whiteboard Access] As a professor, I want to have access to a whiteboard so that I can demonstrate examples and work out problems.  
7.8

Theme

Notifications

User Story

\*\*\*\*\* Sprint 3 \*\*\*\*\*  
[Student Notifications] As a student, I want to receive notifications, so that I can know when my requests are accepted, when a professor sends messages, when a meeting is scheduled, and to receive a reminder for a meeting.  
9.3

User Story

\*\*\*\*\* Sprint 3 \*\*\*\*\*  
[Professor Notifications] As a professor, I want to receive notifications, so that I can know when my requests are accepted, when a student sends messages, when a

+ Add another card

Sprint 3 Continued

Epic

COMMUNICATION

Theme

Chat Functionality

User Story

\*\*\*\*\* Sprint 3 \*\*\*\*\*  
[Student Chat] As a student, I want to have access to a text chat so that I can communicate directly with a professor.  
13.8

User Story

\*\*\*\*\* Sprint 3 \*\*\*\*\*  
[Professor Chat] As a professor, I want to have access text chat so that I can communicate directly with a student.  
13.8

User Story

\*\*\*\*\* Sprint 3 \*\*\*\*\*  
[Group Communication] As a student, I want to have a group chat when in group study sessions so that I can ask questions to other students and the teacher.  
1.5

Theme

File Upload

User Story

\*\*\*\*\* Sprint 3 \*\*\*\*\*  
[Content Access] As a student, I want to be able to share files with my professor so that they can see what I'm working on or what I need help on.  
9

+ Add another card

Sprint 3 Continued

Epic

REGISTRATION

Theme

Parental Consent and Control

User Story

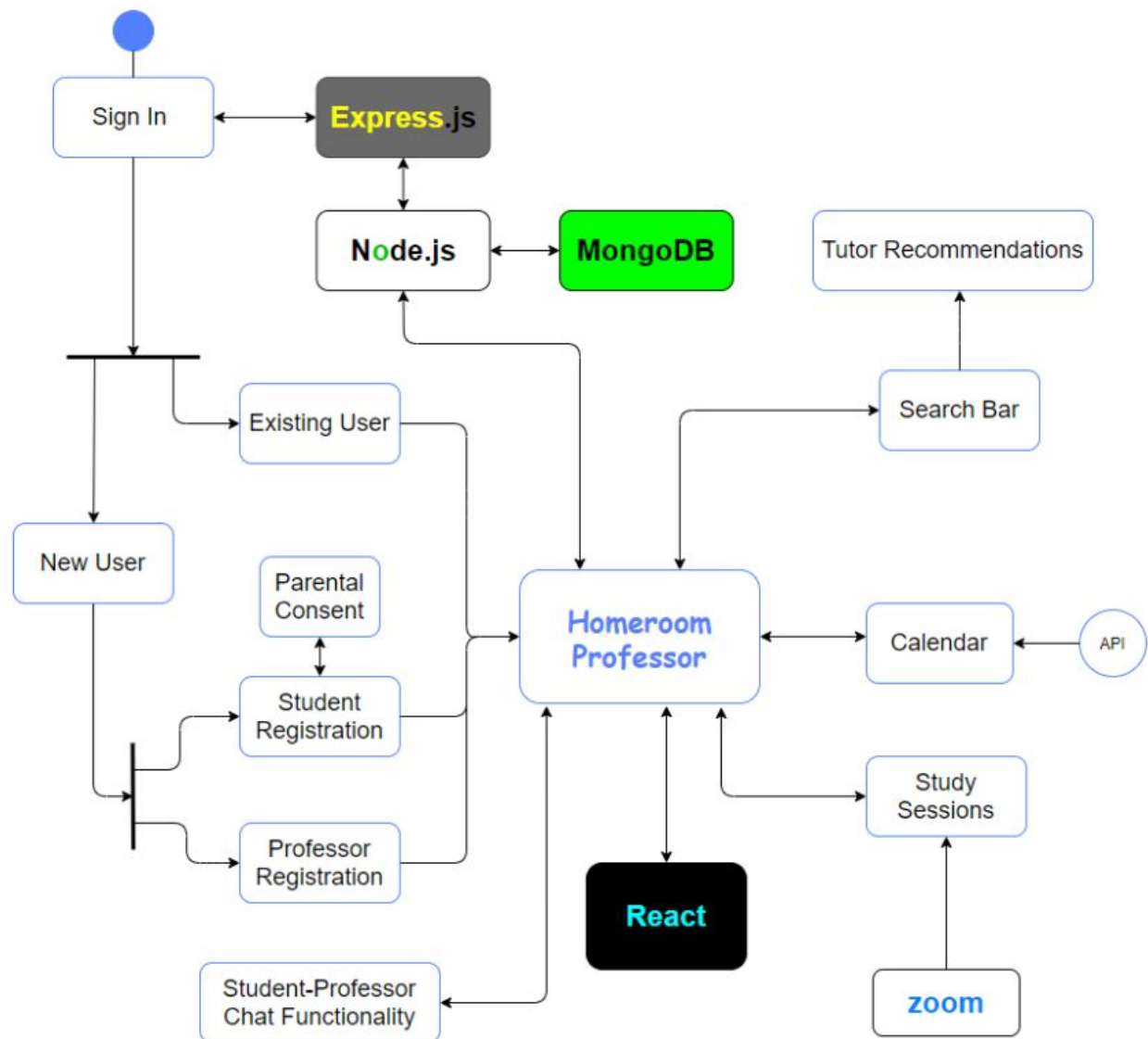
\*\*\*\*\* Sprint 3 \*\*\*\*\*  
[Child Safety] As a parent, I want to see who my child is communicating with and when the study sessions are, so that I can make sure my child is having safe interactions.  
6.5

User Story

\*\*\*\*\* Sprint 3 \*\*\*\*\*  
[Parental Access] As a student, I want to have my parent be capable of seeing when my study sessions are so that they can stay involved and give advice.  
2.5


+ Add another card

# System Context Model



# Wireframes

**1 Sign in Page**

Homeroom Professor Title  **2**

Sign in Welcome Graphics **3**

Username

Password

Submit


Student Register Professor Register

1) Main welcome page for new users to sign in or register their count if not previously created

2) Homeroom Professor Title will include a logo / graphic for the website as well as act as a link to returning back home

3) Sign in welcome graphics might include additional logos and / or information on the product and its features

**Professor Registration Page**

Homeroom Professor Title 

**1** First Name Last Name Phone Number

Email Age University

Username Password Department

Subjects for tutoring **2**

☐ Calculus ☐ Biology

☐ English ☐ Physics

☐ Chemistry ☐ History


Can return back to sign in page or submit information to

Back Submit

1) Professor registration allows professors to enter their personal information as well as attributes like University and Department for searching purposes

2) Will also allow professor to choose subjects they wish to tutor in (list not exhaustive)

**1 Student Registration Page**

Homeroom Professor Title 

First Name Last Name Phone Number

Email Age City / State

Username Password

Subjects for tutoring **2**

☐ Calculus ☐ Biology

☐ English ☐ Physics

☐ Chemistry ☐ History

Can return back to sign in page or submit information to

Back Submit

1) Student registration allows students to enter their personal information as well as attributes like age and location to help search for relevant professors and meeting requirements.

2) Will also allow student to choose subjects they wish to be tutored in (list not exhaustive)

**1 Dashboard Page**

Homeroom Professor Title

Search

**2**

Upcoming Events

**3**

Recent Messages

Courses

**4**

Calendar

Courses

Quick links to view account information, inbox, and logging out

- 1) The Dashboard will be the central location for both the student and professor.
- 2) Upcoming events will show meetings that the professor and student have registered for.
- 3) Recent messages will display the last contact made between a professor and a student or vice versa
- 4) Calendar will show more distance scheduled events in the future or past ones

**1 Account Settings Page**

Username Displayed

Bio (Optional)

☒ Calculus
 ☐ Biology
 ☒ English
 ☒ Physics
 ☐ Chemistry
 ☐ History

**2**

**3**

- 1) The account settings page will display information pertaining to a user's account, starting with the username displayed at the top.
- 2) Each field will allow a user to change different attributes of their information, such as password, email, and username
- 3) There will also be a section for listing which courses a user had previously chosen at registration, as well as the capability of removing or adding more courses to the list.

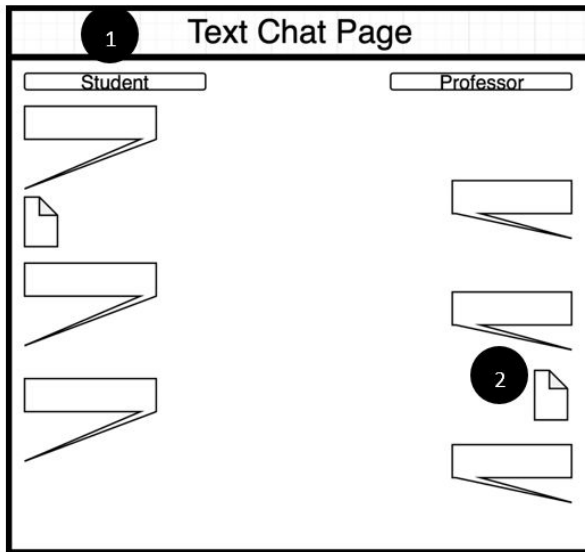
**1 Video Chat Page**

Screensharing (Off/On)

**2**

White Board

- 1) The video chat page will allow video stream interaction between a professor and a student.
- 2) There may also be support for additional features if time allows, such as including screensharing and a digital whiteboard



1) The text chat page will allow text input interaction to be shared between a professor and a student.

2) Potential features to be included are also file sharing, so that a student may scan a PDF of their assignment to send to a professor for review.

# System Requirements

## Environmental Variables and API Keys

- Database URI Config Variable (Located on line 3 of config.js file inside the config folder inside the server directory)
  - Key: DB\_URI
  - Value: mongodb+srv://Me:123@[projectdatabase.gywc6.mongodb.net/HomeroomProfessorDB?retryWrites=true&w=majority](https://projectdatabase.gywc6.mongodb.net/HomeroomProfessorDB?retryWrites=true&w=majority)
- JWT Secret (Located on line 5 of config.js file inside the config folder inside the server directory)
  - Key: secret
  - Value: secretKey

## Login Credentials

- Test Student Login Credentials
  - Username: student1
  - Password: password
- Test Professor Login Credentials
  - Username: sanethiathomas
  - Password: password



## ReadMe File

### HomeroomProfessor

#### Project Description

The purpose of Homeroom Professor was to provide a volunteer service for faculty and professors in college to be able to tutor elementary, middle, and high school students in a variety of different subjects. This service was created in direct response to the COVID-19 pandemic, where many students were forced to work online and away from easy access to conventional tutors and teachers.

This service can be supplemental to student learning, assist parents and teachers, provide direct interaction between students and college professors, and allow higher education individuals to give back and serve as role models. This unique interaction between professors and K-12 students could also lay the foundation for future connections in college, as well as give more insight into college for the average student. Professors could also be a resource of encouragement to students, so that they may succeed in their subjects in school and potentially pursue a college education, should they desire.

The website has been built with a variety of different features including but not limited to, unique student and professor dashboards, requesting and scheduling appointments, a professor lookup table, an integrated calendar, professor profile pages, and zoom meeting support. Additional features could be incorporated in future versions, and the dashboard layout on the site provides an easy interface to build off of.

#### Tech Stack

This full stack web application was developed using the MERN (MongoDB, Express, React, and Nodejs) Stack.

#### Scripts

##### Installing

--npm install in the directory with the client and server FOLDERS. This directory also has a package.json and will be where your node modules for the server (backend) go.

--npm install inside the client directory will install nodemodules and stuff for the client (frontend)

##### Running

--npm run server in the directory with client and server folder will run the server via nodemon, refreshing server for any changes.

--npm start in the directory with client and server folder will run the server via node. You will have to restart the server after any changes in the server/backend.

--npm start in the client folder will start and launch the front end

--npm run client from the directory with client and server folder will start the frontend(client)

--npm run dev from the directory with the client and server folder will start both frontend and server (backend)

##### Deployment

--The application was deployed using Heroku. The link is: [homeroomprofessor-autodeploy.herokuapp.com](https://homeroomprofessor-autodeploy.herokuapp.com)

## Config File



```
JS config.js  X
server > config > JS config.js > ...
1  module.exports = {
2    db: {
3      uri: 'mongodb+srv://Me:123@projectdatabase.gywc6.mongodb.net/
        HomeroomProfessorDB?retryWrites=true&w=majority'
4    },
5    secret: "secretKey"
6  };
```

## Project Handoff Guidelines

If the client wishes to use this application, the following are the steps to set up the application.

1. Download the repository at <https://github.com/ammarsyed/HomeroomProfessor.git> by either downloading it as a zip file or clone it using the github documentation at <https://help.github.com/en/github/creating-cloning-and-archiving-repositories/duplicating-a-repository>
2. Create and deploy a MongoDB Atlas server with their account. Instructions on how to this are at <https://www.mongodb.com/try>
3. Update the DB\_URI in the config file with the database URI of the client's database. Please refer to the config file section above.
4. Refer to the readme file for various scripts on running the application.
5. When the application is being deployed on a platform such as Heroku, please refer to the environmental variables section above and replace the uri above with the client's uri.