

MADISON CONNECT HUB

# FINAL SPRINT

# DELIVERABLE

**Prepared For :**

Jeremy Ezel

Chris O'Brien

David Wang

**Prepared By:**

Hartman Consultants

12/3/22

# TABLE OF CONTENTS

<b>03-04</b>	Meet Our Team
<b>05</b>	Project Summary
<b>06</b>	Project Goals and Team Goals
<b>07</b>	Design Goals
<b>08</b>	Style Guide
<b>10-17</b>	Audience Information
<b>18-20</b>	UX Research
<b>21-22</b>	Wireframes
<b>23-33</b>	Core Features W/ Illustrated user Narrative
<b>34-37</b>	System Planning
<b>38</b>	Object Oriented Nature & AWS
<b>39</b>	Moving Forward

# OUR TEAM

**ANDREW  
FARQUHARSON:  
PROJECT  
MANAGER**



Hello! My name is Andrew Farquharson and I'm from Woodbridge, VA. I am a driven, hard worker that strives for excellence in individual or team settings. I find myself taking leadership roles in groups a lot of times because of my time management skills and my ability to keep a group together and informed on track to success. I love making people comfortable in group settings by being lighthearted, inclusive and understanding. I think a lot of challenges leave room for learning, mistakes and growth, and I believe the best project teams must involve all three to be successful! In my free time I play Ultimate Frisbee for JMU's Club Team, and I love to Golf, play Basketball and spend time with my friends!

**GARRETT  
NOROSKY:  
PROJECT LIAISON**



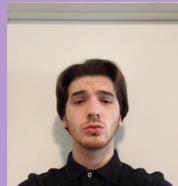
I am a Management/CIS major who discovered a fondness for coding last year. I always sought out coding classes at JMU in hopes that I would be able to improve my skill set for the professional world. My hobbies include weight lifting, cooking, gaming, and just being around good company. My skill set is based on my communication skills and problem solving. I gained experience in requirement gathering when I worked with the nonprofit Volunteer Prince William when I aided in automating their court ordered community service program and designed their website layout through Wix. I also have experience in CAD programs so I will be able to do minor graphic design changes.

**ZAIN FAROOQ:  
LEAD DEVELOPER**



Hello! My name is Zain Farooq and I am from Reston, VA. Due to my analytical and detail-oriented nature, I enjoy taking on more technical roles in group projects. I like to work in team environments that allow for constant feedback, constructive criticism, and broad ownership of the project. I have always been passionate about working on projects that allow me to create functional solutions from scratch, which is why I am extremely excited about this opportunity! Outside of academics, I enjoy playing soccer, cooking, and reading.

**NICK  
CARPENTER:  
DATABASE ADMIN**



Hello! My name is Nick Carpenter and I am from Woodbridge, VA. I am extremely passionate about delivering high quality work in group and individual settings. I strive to be the absolute best I can be in any academic or work environment. To achieve high quality work, I use my work ethic and drive to achieve things that I might have initially thought to be unfeasible. I feel attempting difficult challenges is the best way to learn and grow, especially in failure! I love and prefer working in groups because of the collaborative nature and the opportunity to bounce ideas off other teammates. I like to be social and fun to make people feel comfortable in group settings. In my free time, I like to hang out with friends and watch sports or T.V shows. I am excited and ready to see what our team is able to accomplish!

**SARA SKOLNICK:  
CREATIVE  
DIRECTOR**



Hi! My name is Sara Skolnick. I am from Richmond, Virginia. I am passionate about creating everyday, small habits of being kind, honest, a positive thinker, and much more while also continuing to bring these traits into being a part of a team for this project. I am hard working, creative, love working in groups of people, and am confident in mine, and others' ideas and abilities to collaborate in a team setting. I am ready to bring many ideas to the table and experience the creativity that others have to share as well! I always try to see other sides of stories and am open for discussion of ideas!

# OUR TEAM

**SARA CHABOT:**  
**VISUAL DESIGNER**



Hi! My name is Sara Chabot, and I am from Alexandria, Virginia. I am passionate about music and learning different cultures and languages. I am dedicated, creative, and an optimistic individual who loves to bind creativity and originality into work. I also consider myself to be a team player who is adaptable, compassionate, as well as perceptive; I strive to achieve success in both individual and team settings through my strong work ethic and my attention to detail. I am excited to be a part of this team and make use of each other's skill sets and ideas for this collaborative project!

**NIDA AHMAD:**  
**SYSTEM ANALYST**



Hi, my name is Nida Ahmad, I am from Lorton, Virginia. I enjoy painting on glass, and love portraying my creativity in my work. I am kind, and a team player who can adapt to almost any situation. I enjoy working in groups because it allows everyone to pitch in ideas to create one great idea. Post-graduation I plan on working in a consulting firm where I can utilize the skills that I have learned over the years. I am excited to work with everyone and see our ideas come to life.

**LIAM KAUTHEN:**  
**FRONT END  
DEVELOPER**



Hi, my name is Liam Kauthen, I am from Fredericksburg, Virginia. I currently produce my own music and I am very passionate about it. I enjoy creating and collaborating with others, especially other artists.

In my free time I enjoy doing resistance training with my gym partner, gaming, cooking, and watching UFC. I like re-organizing code to make it easier on the eyes and make it visually pleasing. I have been enjoying experimenting with HTML and creating more pleasing looking interfaces on our course lab assignments as well as on my own time.

**BENJAMIN  
SWOOPES:**  
**BACK END  
DESIGNER**



Hello! My name is Benjamin Swoopes, and I'm from Arlington, Virginia. Post-graduation I plan to do a fair amount of traveling while searching for a job back in the DC area. I am extremely dedicated to the overall mission and

keeping the team focused on the primary goals throughout the project. I enjoy working diligently with my nose to the grindstone in order to provide quality work in a timely manner. I believe working in groups offers a positive experience where everyone grows and benefits from a mutual exchange of ideas. Watching combined efforts culminate into a final project is something special and satisfying. My interests include fishing, traveling, cooking & snowboarding. In my free time I'm more than likely hanging out with my dog, Beau.

# PROJECT SUMMARY

- Team Bio:
  - Hartman Consultants is comprised of nine hard working and driven individuals with an array of skills and experience that will be applied to the project of improving and evolving the Madison Connection Hub website. We are tasked with improving the website functionality that will enable students and faculty to create, manage, and execute projects in a more efficient manner. This includes, but is not limited to, taking all existing features of the Hub and reimagining them in a new tech stack while adding new features requested by the Hub community and improving upon the Hub products value proposition in the process. We are confident in our ability to satisfy the project requirements to help the client with their needs.
- Summary of Issues at Hand/Clients' Problems:
  - The main problem of the Madison Connection Hub website project is that it is currently halted and has no one other than Chris O'Brien actively pursuing to improve and continue the project. The client is looking for assistance for improving the website, making it more user friendly, and increasing traffic flow of the website. The search functionality is limited across the whole site. Users need to be able to search for and invite potential team members based on skills, soft skills, hobbies, interest, experience and passions. Additionally, Users need to be able to search for projects and be able to request to join these projects, as well as project owners inviting users to their team. In our user experience research, we found that users were capable of producing errors in the search function. Without this functionality we are greatly limiting the potential of what Madison Connection Hub is capable of. In addition, we have found that the user profile lacks depth and insight into the user and emphasizes their hard skills too much. We feel like the user profile could help users get to know person better than just the worker. We want users to be able to complete their profile at their own pace, and bug-free. We also want to implement a way for users to friend/bookmark other users so they can add to their network of potential team members. A direct messaging function would add to this aspect greatly. Lastly, We want users to have a reason to come back to the site, so by adding meetings and a project message board, users will be able to communicate with their team on Madison Connect Hub if they wish to do so.

# PROJECT GOALS AND TEAM GOALS

- The main goal of Hartman Consultants is to meet and exceed the main needs and wants of our client. The main needs and wants of our client for this project consist of taking all the existing features of the Hub and reimagining them in a new tech stack while adding new features requested by the Hub community and improving upon the Hub products value proposition in the process. Some features of the project that are planned to be incorporated to achieve this goal include a user-friendly website for student and faculty that enables them to create and manage projects efficiently and effectively. Additional features that will be incorporated will allow students and faculty to search for viable team members and invite them to their project. These features will also permit students and faculty to search for projects and request to join them. The client emphasized from our first meeting that users absolutely need an ability to find suitable teams and other fitting users in the most methodical way possible. This will be done through a revamped user profile, adding to your network, and the ability to direct message other users. Other features will be added to facilitate the reoccurrence usage of the application that include a project message board and project meeting tracker.
- More specific team goals, that will facilitate the execution of our project goal(s), with user stories from our team or team members perspectives include:
  - As a front-end developer, I want to develop a pleasing to the eye, user-friendly interface that allows students and faculty to browse the Madison Connect Hub with ease, so that they can connect with other users.
    - Leverage Bootstrap widgets and ASP.net core to allow for a modern and clean user interface.
    - Use CSS/Bootstrap to make our sketches and color palette come to fruition.
  - As a Project Manager or Client Liaison, I want to communicate with our primary Stakeholders to ensure that all requirements are met, and our vision aligns with theirs.
    - Record date, time and length of each contact and who was involved in the meeting/conversation.
    - Create a Requirements Traceability Matrix for everything discussed in meetings.
  - As a Scrum Team, we want to communicate early and often our current impediments/blockers so that our project can meet our deliverable deadlines without late surprises.
    - Give frequent updates towards progress on a task.
    - Hold multi-weekly meetings to discuss our progress as a whole and how our tasks fit together to reach our Sprint goals.
  - As a backend developer, I want to create and maintain a secure database that flows seamlessly with User Input, so that Users can feel comfortable using our site without limitations.
    - Allow for User Specific view tailored to their account
    - Enforce a strict Password security process and User validation to ensure that users are JMU affiliated.

# DESIGN GOALS

- Accessible on various channels including but not limited to smartphone, computer, tablet, or any device that has an internet connection.
- Dynamic login that will be able to differentiate between students and faculty users.
- Straightforward navigation so users can easily move throughout the site with minimum effort and confusion.
- User profiles that dynamically display the essential user data depending on the type of user that is being displayed (Student or Faculty).
- Visually appealing pages that make the content on the page easier to read and understand.

# STYLE GUIDE

## COLOR PALLETTE

JMU PURPLE  
69R 0G 132B  
#450084

LIGHT PURPLE  
218R 204G 230B  
#DACEE6

JMU GOLD  
203R 182G 119B  
#CBB677

SLATE GRAY  
51R 51G 51B  
#333333

MEDIUM BLUE  
60R 115G 139B  
#3C738B

PRIMARY  
TYPEFACE

SECONDARY  
TYPEFACE

## LOGOS

**Arvo**  
**Arvo**

Depot  
Depot  
Depot  
Depot



Clean Innovative Inclusive Energetic Modern

## AUDIENCE INFORMATION

# PERSONAS

(PRIMARY: STUDENT)

## CLIMATE CHANGE CORA



20 years old  
Junior  
Lives off campus  
Major: Public Policy

### ABOUT

Cora is a 20 year old public policy student at James Madison University. She lives off campus in a house downtown with her two friends and pet dog. Cora loves to talk walks and participate in weekly Harrisonburg clean-up opportunities throughout JMU campus and downtown Harrisonburg. She loves to study on campus, but tried to find a quiet coffee shop to do her weekend homework. With her open schedule, she loves to make time into her hobby of being an advocate of climate change. She wants to start a project on climate change within the Harrisonburg and JMU community, but does not know what direction she wants to go in. She considers herself a team player and is up for a challenge when it comes to her local climate change passion.

### SCHOOL COLLABORATION PASSION



Spends most time studying



Willing to work in a team, but does not know where to start



Works hard when passionate about a topic

## KEY ATTRIBUTES

Open-Minded

Curious

Communication

Honesty

Fun

Optomistic

### GOALS

#### I want to

- Be able to see university acknowledgement about the app around campus
- Meet other students and professors with the same interests
- Have an accessible application or website to go to

### FRUSTRATIONS

#### I have trouble

- Knowing where to start
- Locating contact information of students
- Managing projects

### NEEDS

#### I need

- Ways to make a connections
- A team of passionate workers
- An easy way to control my projects

# USER NARRATIVE

## (Primary: Student)

### User stories:

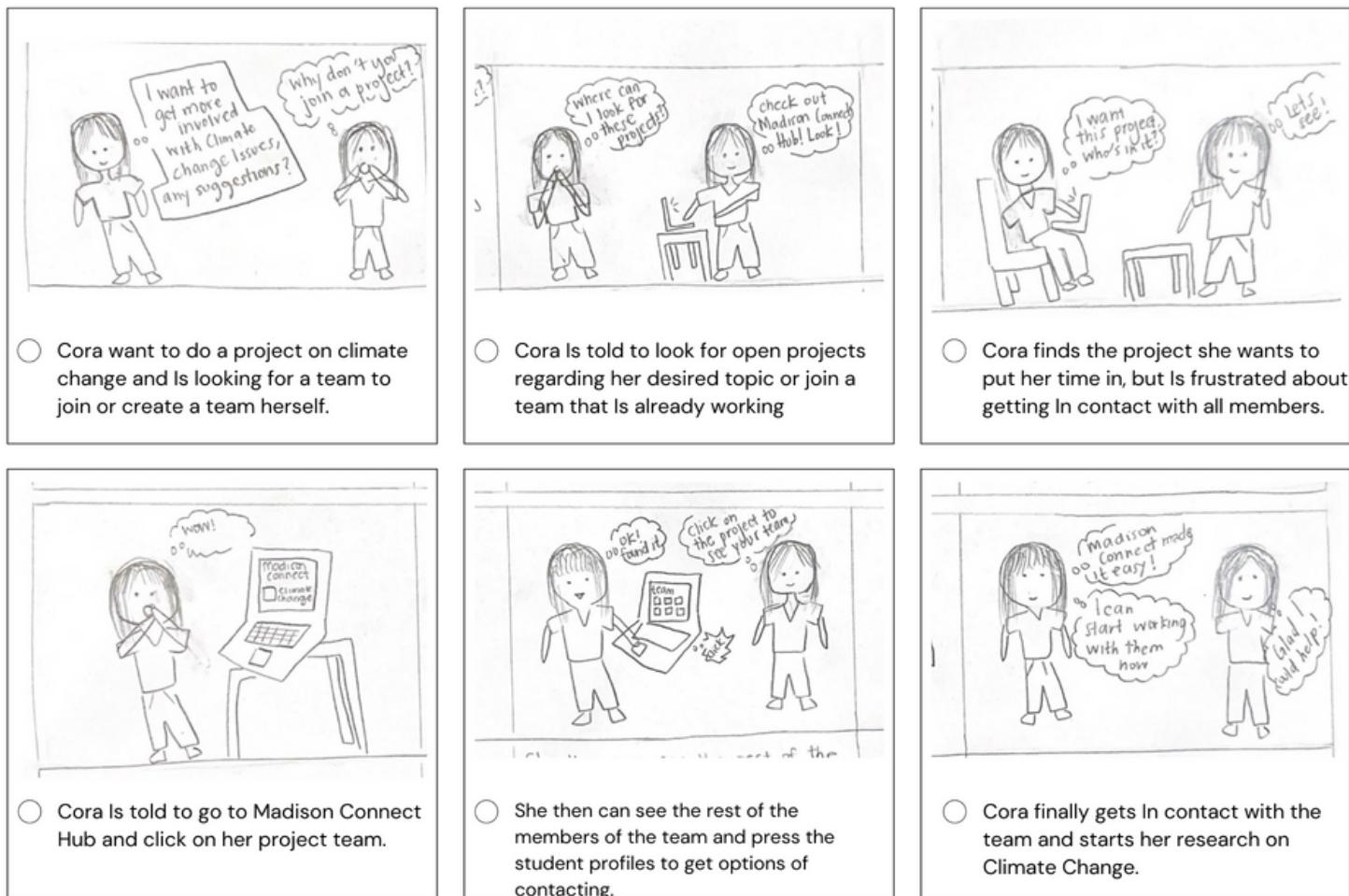
- As a user, I want several message options besides email, so I can easily reach out to collaborators.

Cora is a junior Environmental Science major at JMU and an advocate for climate change. She just transferred from a community college and is thrilled to start her semester at JMU. Because she is a transfer student, she does not have that many connections on campus, but wanted to connect with other students who also wanted to take action about the environmental issues.

One day, Cora was walking on campus and saw a booth that was promoting the new website “Madison Connect Hub.” A student walked up to her and explained that the website was a hub for students and faculties to start creative projects based on their passions. Cora, who thought this was a perfect opportunity to find other like-minded students who wanted to start an environmental project, immediately signed up. On her profile, she wrote down her “Hobbies” of being a climate advocate and studying at coffee shops and “Interests” for starting a project. Once she completed her profile, she searched for other students, but did not decide in the moment who to reach out to. Two days later, she received a message from another student who was an advocate for sustainability and a coffee lover. The student asked her if she wanted to meet up for coffee and discuss about potential collaboration. Cora responds and the two met at the coffee shop and eventually launched an official project on Madison Connect Hub. Thanks to the website's easy profile set up and flexible messaging options, Cora was able to easily connect and find other students with similar interests and turned her passion into a concrete project.

# USER NARRATIVE STORYBOARD

## STORYBOARD: STUDENT CORA



## AUDIENCE INFORMATION

# PERSONAS

## (SECONDARY: FACULTY)

### GOOD GUY GREG



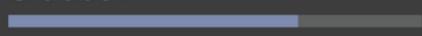
31 years old  
Faculty  
Lives off campus  
Profession: Assit. Anthropology Professor

### KEY ATTRIBUTES

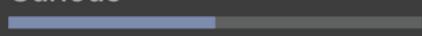
Eager



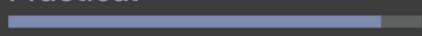
Stubborn



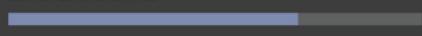
Curious



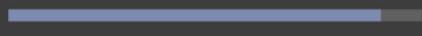
Practical



Motivated



Passionate



### ABOUT

Greg is a 31 anthropology professor at James Madison University. He lives with his wife just 20 minutes away from Harrisonburg. Outside of his profession, he loves to spend time focusing on spending time with his wife and finding his hobbies. He is passionate about anthropology and loves showing students national organizations in regards to anthropology. Since he is teaching and grading his students assignments most of his time, he has trouble managing his hobbies. He feels connected with his students, but does not think they are passionate about outside projects and current events. Greg wants to find a way where he can meet other students and help them with their projects outside of anthropology.

### SCHOOL COLLABORATION PASSION



Wants his students to learn something new every day



Spends some time on social media



Loves to contribute to community

### GOALS

#### I want to

- Get more involved with campus organizations
- Work outside of class time with students and faculty

### FRUSTRATIONS

#### I have trouble

- Using Microsoft Teams to collaborate with students and faculty
- Juggling my job and family life

### NEEDS

#### I need

- An easy to use platform
- Accessible forms of contact
- To have flexible meeting times
- Adjustable meeting modes (Zoom or In-Person)

# USER NARRATIVE

## (Secondary: Faculty)

### User stories:

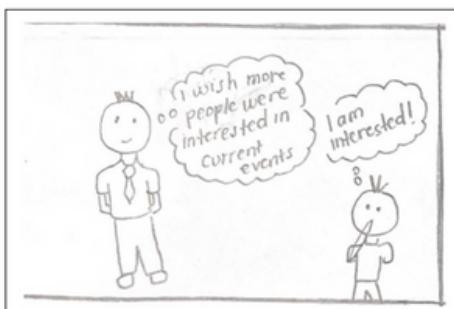
- As a user, I want multiple search bars, so I can easily search for other students, faculty, or projects.

Greg, is a part-time assistant professor at JMU as well as a father. He has a busy schedule as he teaches, meets with students during office hours, and then returns home on occasion to take care of his daughter. While he has a busy schedule, he is passionate about helping students reach their goals, and loves to collaborate with students and faculties on interdisciplinary projects. As his side hobby, he creates videos for his YouTube Channel related to Anthropology where he explains interesting things about the field.

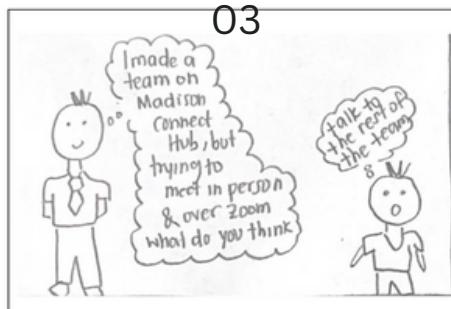
One day, Greg receives an email about a website called "Madison Connect Hub" that allowed JMU students and faculties to work on collaborative projects based on their passion and dreams. Greg, who was excited to learn about this website, immediately signed up and created his profile. Next, Greg wanted to find other students who are also passionate about his field of study of Anthropology. So he clicked on the User Search menu to search for other students and faculties who were majoring in his field. He then selected the "field" filter option and typed in "Anthropology." Based on the search result, he found a student who studies both Anthropology and Digital Video and Cinema. Greg, thought the student would be perfect to collaborate with as he also has experience in creating YouTube videos. He then came up with an idea and created a cinema project related to Anthropology on Madison Connect Hub and sends an invitation to the student. The student gladly accepted the invitation, and both Greg and student began brainstorming their ideas for writing scripts and filming the cinema project.

# USER NARRATIVE STORYBOARD

## STORYBOARD: FACULTY GREG



- Greg wants to start a project where he can meet with students and discuss and explore current events.



- He is having trouble organizing meetings, for he is not always available to meet with everyone in person



- He gets in contact with his team through Madison Connect Hub, and finds alternative meeting modes that work for most members.



- He goes back into his project profile and adds a Zoom link for people to join if they are unavailable in-person.



- Greg goes in and edits meeting times to become flexible for all his students.



- He is finally able to manage his time for both his current event project and hobbies.

# PERSONA

## (SECONDARY: STUDENT)

### ROBOTICS RYAN



22 years old  
Senior  
Lives off campus  
Major: Media Arts and Design

## KEY ATTRIBUTES

Social	<div style="width: 80%;"></div>
Adventurous	<div style="width: 90%;"></div>
Curious	<div style="width: 70%;"></div>
Skillful	<div style="width: 60%;"></div>
Reliable	<div style="width: 85%;"></div>
Passionate	<div style="width: 75%;"></div>

### ABOUT

Ryan is a 22 senior at James Madison University. He studies Media Arts and Design. With being a senior, his life outside of education has opened up and he has more free time to focus on the things he's passionate about. Ryan loves to work with other people on projects. He knows of Madison Connect Hub, but has never finished his account and has forgotten about the website. He tried to reach out to people on GroupMe, but would not have much luck with that.

SCHOOL    COLLABORATION    PASSION



Wants to be able to work one something new

Loves leading teams

Cultivates excitement into his work

### GOALS

#### I want to

- Work on social projects during my free time
- Be more passionate about finding people to work with

### FRUSTRATIONS

#### I have trouble

- Contacting people through one platform
- Setting my Madison Connect Hub account up

### NEEDS

#### I need

- Ideas for a project to work on
- A team that's devoted, but flexible
- A team who I can easily contact

# USER NARRATIVE

## (Secondary: Student)

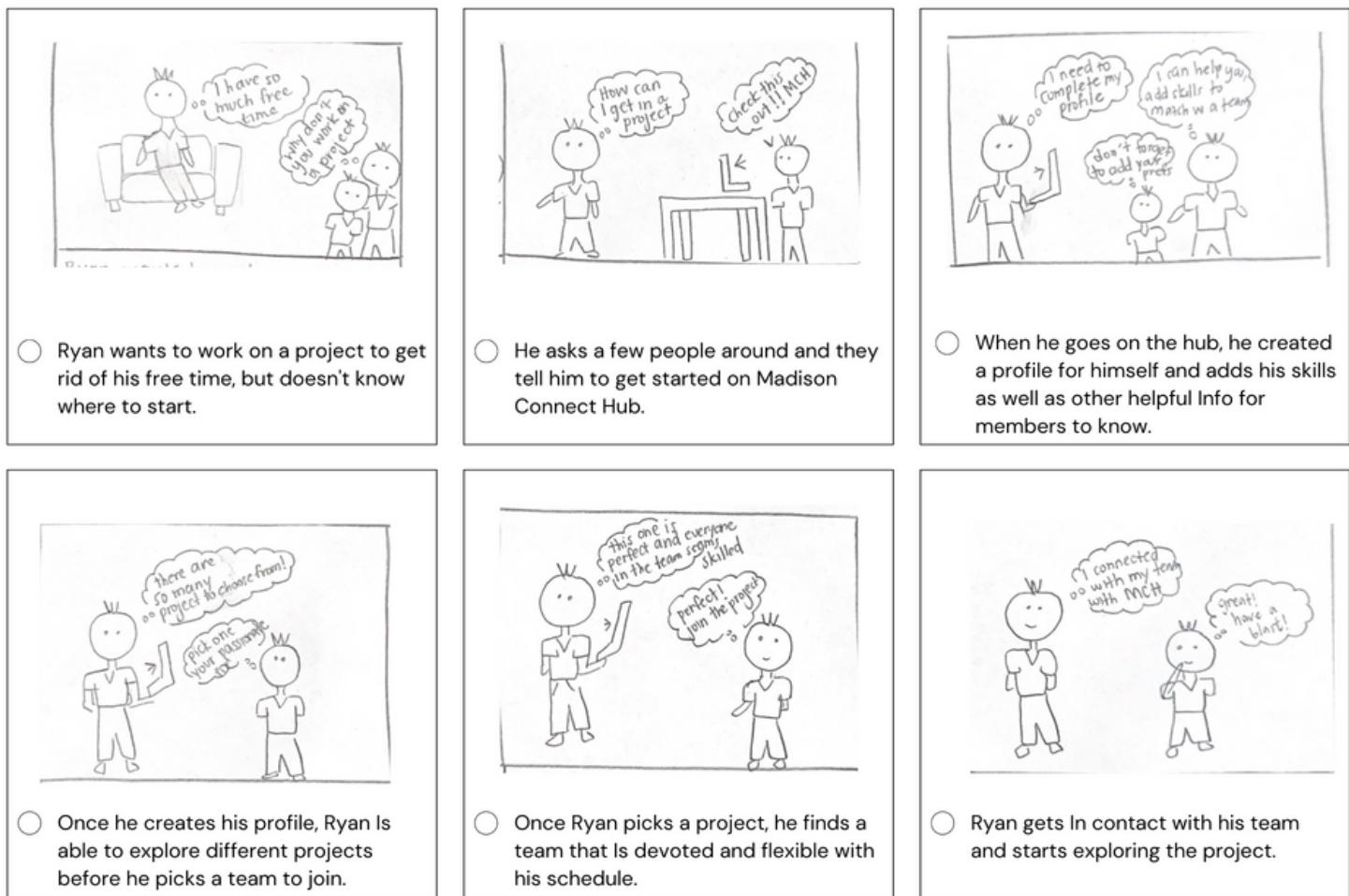
### User stories:

- As a user, I want to able to bookmark/friend other users, so I can accumulate a list of people I liked to work with or people I want to work with.
- As a user, I want a chat feature on the website to easily communicate and update the progress of the project
- As a user, I want to be able to retrieve my files and attachments easily from group chats

Ryan is a senior Media Arts and Design (SMAD) major at JMU. As a senior, he has a lot free time in his hand and lately has been coming up with many ideas about various social projects. After four years of attending JMU, he knows of a lot of other SMAD majors that he has worked with but only has their contact information on Group Me. Although Ryan wanted to reach out to people, he didn't know what platform to work on the project with where he could easily chat and update his progress of the work. He then, saw a flyer on campus about "Madison Connect Hub," a website that allows for easy collaboration between students and faculties. He remembered that he created an account for the website in one of his SMAD class, but never went back to use the website. Ryan, then logins to his account, and saw that there were updated features like the "Chat" where he could easily communicate with his collaborators and file his links and attachments to store his work. On top of that, he saw the bookmarking feature to accumulate the list of people that he knows of or wants to work with. Thanks to Madison Connect Hub's Bookmark and Chat features, Ryan goes on to bookmark his friends that he knows from SMAD, and begins to reach out to them for collaboration. He successfully gathered a group of SMAD majors to work on a creative project and used the flexible Chat feature to easily share and pull up the team's work to update the progress of the project.

# USER NARRATIVE STORYBOARD

## STORYBOARD: STUDENT RYAN



# UX RESEARCH

Interviews were conducted with two students and two faculties. Neither of them knew of Madison Connect Hub, so the users were asked to set up an account and browse the website to test the usability of the website. From this interview, we wanted to gather insights into any apps or websites that the students use to collaborate with others. We also wanted to collect user feedback on the website to understand the users' needs and wants to improve the overall function and design of the website.

## Interview questions

1. What is your major/minor and what year are you in at JMU?
2. What is your job/occupation?
3. What does your day-to-day schedule look like?
4. Have you ever connected with other students, faculties, or alumni through a collaborative project? If so, why?
5. If not, do you plan to do so in the future?
6. Is there a website or application you use to find other students, faculties, or alumni for collaborative purposes?
7. If so, what do you like about those websites or applications? Are there any useful features?
8. What are some difficulties you face when using those websites or applications?
9. What improvements can be made on those websites or applications?
10. Did you find any helpful features using Madison Connect Hub?
11. What are some frustrations that you face when using Madison Connect Hub?
12. What suggestions do you have in improving your experience using Madison Connect Hub?
13. Is there anything else that you would like to mention or discuss about?

# UX RESEARCH

## Summary

We conducted in total four interviews and usability testing on the Madison Connect Hub's website. Two faculty interviews were conducted after Sprint one, so we were able to gain more insights from the faculty's perspective as they had experience working on collaborative projects within JMU. Overall, three out of four users mentioned how the Madison Connect Hub has simple layouts and functions for searching people or starting a project. However, users mentioned how the current website serves more as an informational website; two out of four users did not know what the next step would be to carry out the project after forming a team. Moreover, users mentioned that it would be helpful to know the updates and progress of the project. This suggests that the website needs added features that allow students and faculties to easily communicate and update their progress on the project that they are working on.

Based on the feedback from our users, we updated our user stories and hope to integrate features that would accommodate the users' needs.

[VIEW THE INTERVIEW NOTES](#)

Scan to access Interview Notes



# UX RESEARCH

## User stories

- As a user, I want an improved visual hierarchy of the website and placements of icons and buttons, so I can navigate the website with ease.
- As a user, I want to save my profile picture without having to update it, so I can save the picture in one step.
- As a user, I want multiple search bars, so I can easily search for other students, faculty, or projects.
- As a user, I want an error-free search bar, so I can search potential collaborators and projects without having to type in the search bar again.
- As a user, I want several message options besides email, so I can easily reach out to collaborators.
- As a user, I want to be able to bookmark/friend other users, so I can accumulate a list of people I liked to work with or people I want to work with
- As a user, I want to be able to retrieve my files and attachments easily on group chats.
- As a user, I want a chat feature on the website to easily communicate and update the progress of the project.

# WIREFRAMES

## Projects Profile page

This wireframe shows the 'Project Profile' section of a web application. It includes fields for 'Project Owner' (Cora Chavez) and 'Project Owner Email' (chavezco@buk.edu). Below this is a 'Project Description' section with a placeholder text about weekly cleanups in Harrisonburg. A 'Mission Statement' section follows, containing the text: "To keep the city of Harrisonburg clean as possible with the efforts of weekly clean up volunteer opportunities." At the bottom, there are buttons for 'Edit Project' and 'View Profile'.

## Create a Project

This wireframe shows the 'Create a Project' form. It requires input for 'Project Name' (e.g., 'World Savers'), 'Project Owner' (e.g., 'Cora Chavez'), and 'Project Owner Email'. There is also a 'Project Mission Statement' field and a 'Project Description' field. A date input field is shown with the placeholder 'mm/dd/yyyy'. At the bottom are 'Create Project' and 'Cancel' buttons.

## Create Team

This wireframe shows the 'Create Team' page. It has a 'Team Name' field with 'World Savers' entered. A dropdown menu labeled 'Choose a Project' contains 'Climate Change'. A 'Create Team' button is at the bottom.

## Send Message to Users

This wireframe shows the 'My Inbox' section. It displays an unread message from 'Cora Chavez' with the subject 'Join my Team'. The message body says: 'Hi Greg! I would love for you to take a look at my project and join my team!' and includes a timestamp 'Wednesday, November 30, 2022 8:22:02 PM'. Buttons for 'Mark as Read' and 'Reply' are at the bottom.

This wireframe shows the 'Search for Recipient' page. It lists a single result: 'Greg Matthews' with the title 'Associate Professor' and affiliation 'James Madison University Anthropology'. Buttons for 'Send Message' and 'View Profile' are at the bottom.

This wireframe shows the 'Send a Message' page. It has fields for 'Meeting Title', 'Subject', and 'Message'. At the bottom are 'Send Message' and 'Cancel' buttons.

## Create a Meeting

This wireframe shows the 'Create a Meeting' form. It requires 'Meeting Title', 'Meeting Date' (in mm/dd/yyyy format), 'Meeting Time', and 'Meeting Location'. There is also a 'Meeting Plan' text area. At the bottom are 'Create Meeting' and 'Cancel' buttons.

## Project Message Board

This wireframe shows the 'Project Message Board' page. It displays a message from 'Greg Matthews' to 'Local Farm'. The message content is: 'Subject: Local Farm To: Everyone Message: Hey guys! I found a local farm to volunteer at! I will post more details later!' A 'Send a Message' button is at the bottom.

## Invite to Project

This wireframe shows the 'Invite to Project' page. It has a dropdown menu for 'Project' with 'Climate Change' selected. There is a text area for 'Write about why they should join your project!' and another for 'We need your communication skills!'. A 'Invite to Project' button is at the bottom.

# WIREFRAMES

## Bookmark User

This wireframe shows a faculty profile for Greg Matthews. It includes fields for Full name (Greg Matthews), Email (matthewgreg@dukes.jmu.edu), and More Info (https://www.linkedin.com/in/greg-matthews/). Below these are sections for Interests, Experience, Soft Skills, and Hobbies. The Interests section describes his work on collaborative projects related to ethnozoology and linguistics. The Experience section mentions teaching and video-editing. The Soft Skills section lists communication skills at advanced levels. The Hobbies section lists studying anthropology and using technology.

This wireframe shows a form titled "Bookmark User" with a field for "Reason for Bookmarking". Below the form are "Bookmark >" and "Cancel" buttons. At the bottom of the page is a footer with the text "© 2022 - Capstone Project - Privacy".

## Change Password

This wireframe shows a login form with fields for "Email" (chavezco@dukes.jmu.edu) and "Password". Below the form are "Log In", "Sign Up", and "Forgot Password?" buttons. A message "Logged Out Successfully!" is displayed in red at the bottom.

This wireframe shows a modal window titled "Enter Username" with a field for "corachavez". Below the field are "Cancel" and "Go to Security Questions" buttons. A message "Logged Out Successfully!" is displayed in green at the bottom.

This wireframe shows a "Security Questions" form. It asks "Choose which Security Question to Answer" with a dropdown menu set to "What is your Mother's Maiden Name?". Below is a field for "Answer the Question you selected" with "Enter Answer" and "Submit" buttons.

This wireframe shows a "Change your Password" form with fields for "Enter New Password" and "Verify New Password". Below are "Submit" and "Cancel" buttons. A message "Logged Out Successfully!" is displayed in green at the bottom.

This wireframe shows a "Create Account" form. It includes fields for "Enter New Username" (corachavez), "Enter New User's Password", "First Name", "Second Name", "Choose Your JMU Affiliation" (Student), and "Security Questions". The security questions section includes fields for "What is your Mother's Maiden Name?", "What was the name of your first pet?", and "What city did your Parents meet in?". Below are "Enter Answer" and "Submit" buttons.

Scan to access prototype



[Link to prototype for online PDF](#)

# CORE FEATURES W/ ILLUSTRATED USER NARRATIVE

## LOG IN/CREATE AN ACCOUNT

Once the user lands on the Madison Connect Hub home page, they are expected to log into their account with the previous log in details they used to create their account when first landing on the page. To create an account, the system will ask you for a short list of credentials for a username, password, first name, surname, a JMU affiliation which includes student or faculty and 3 security questions for resetting a password in the future. Each user, new or lasting will see the navigation bar with the logo and a prompt for new users asking “Are you new?” The login page is designed to be functional, easy to use, and will have project and search functions restricted for those who has not created an account.

The screenshot shows the Madison Connect Hub login interface. At the top, there's a purple header bar with the "Madison Connect Hub" logo, a "Home" link, and dropdown menus for "Projects" and "Search". On the right side of the header are "Login" and "Sign-up" buttons. The main body of the page has a light beige background. It contains two input fields: one for "corachavez" and another for a password. Below these is a blue "Log in" button. To the right of the password field are links for "Are you new?", "Sign Up", and "Forgot Password?".

The screenshot shows the Madison Connect Hub "Create Account" page. The header is identical to the login page. The main content area has a light purple background and is titled "Create Account". It contains several input fields: "Enter New Username" (with placeholder "Enter Username"), "Enter New User's Password" (with placeholder "Enter Password"), "First Name" (with placeholder "Enter First Name"), "Second Name" (with placeholder "Enter Second Name"), and a dropdown menu for "Choose Your JMU Affiliation" set to "Student". Below this is a section titled "Security Questions" with three questions: "What is your Mother's Maiden Name?", "What was the name of your first pet?", and "What city did your Parents meet in?". Each question has an "Enter Answer" placeholder. At the bottom is a blue "Submit" button.

# CORE FEATURES W/ ILLUSTRATED USER NARRATIVE

## CHANGE/RESET PASSWORD

The user can select Forgot Password, where they will be directed to enter their Username. The user will then be directed to a Security Questions page where they can select to answer one of the 3 Security Questions they answered when creating an account. If answered correctly, then the user will have to input their new password twice and if they match, their password will be reset!

A screenshot of the Madison Connect Hub website. At the top, there is a purple header bar with the logo 'Madison Connect Hub' on the left, and 'Home', 'Projects', and 'Search' dropdown menus on the right. Below the header, there is a dark brown background area. In the center, a white modal window is open, prompting the user to 'Enter Username'. A text input field contains the value 'corachavez'. At the bottom of the modal are two buttons: 'Cancel' and 'Go to Security Questions'. To the right of the modal, there is a 'Log in' button, a link 'Are you new?', a 'Sign Up' button, and a 'Forgot Password?' link.

The user can also directly access this when logged in, they just will not be directed to enter their username.

A screenshot of the Madison Connect Hub website. The header is identical to the previous screenshot. The main content area has a light blue background. In the center, there is a white rectangular form titled 'Security Questions'. It contains the text 'Choose which Security Question to Answer' and a dropdown menu showing 'What is your Mother's Maiden Name?'. Below this, it says 'Answer the Question you selected' and has a text input field labeled 'Enter Answer'. At the bottom of the form is a 'Submit' button.

A screenshot of the Madison Connect Hub website. The header is identical to the previous screenshots. The main content area has a light purple background. In the center, there is a white rectangular form titled 'Change your Password'. It has two text input fields: 'Enter New Password:' and 'Verify New Password:', both currently empty. At the bottom of the form is a 'Submit' button.

# CORE FEATURES W/ ILLUSTRATED USER NARRATIVE

The screenshot shows a user profile for Cora Chavez. At the top, there's a profile picture placeholder with an 'Upload Profile Picture' button. Below it, the name 'Cora Chavez' and title 'Student' are displayed, along with the text 'James Madison University 2022'. A blue 'Edit Profile' button is present. The profile section includes fields for 'Full Name' (Cora Chavez), 'Email' (chavezco@dukes.jmu.edu), 'Major' (Environmental Science), 'Minor' (Business), and 'More Info' (a LinkedIn link). The 'Skills' section lists 'Communications' and 'Time Management' both at 'Skill Level: Advanced' with 'Edit' buttons. There's also a 'Skills' button to add new ones. The 'Soft Skills' section lists 'Open-Minded', 'Optimistic', 'Passionate', and 'Team Player', each with an 'Edit' button. The 'Hobbies' section lists 'Participating in clean-up opportunities' and 'Studying at coffee shops', each with an 'Edit' button. A large purple sidebar on the right contains sections for 'Interests' and 'Experience'.

**Interests**  
I am passionate about volunteering as well as being an advocate for climate change. I am dedicated, passionate, and always up for a challenge when it comes to solving environmental issues. I am currently looking for other like minded individuals who are also passionate about starting a project related to sustainability.

**Experience**  
I have experience in volunteering and participating in weekly clean-up opportunities throughout JMU campus and downtown Harrisonburg. I also have great time management skills as I strive to balance my school work and social activities. I am confident in my communications skills through the experience of volunteering and working with others.

## VIEWING ACCOUNT

After the user has created an account they are able to view their profile. A unique feature we have integrated into viewing one's profile is how their public profile will be seen. To view your profile, the user will be able to hover and click on their profile picture which will lead to a drop down of "View Profile", "Edit Profile", "My Inbox", and "Sign Out."

The screenshot shows the 'Edit Profile' page. At the top, there's a navigation bar with 'Madison Connect Hub', 'Home', 'Projects ▾', 'Search ▾', and a user icon. The main form has fields for 'First Name' (Cora), 'Second Name' (Chavez), 'Email' (chavezco@dukes.jmu.edu), and 'User Type' (Student). Below these are sections for 'Write about your Interests!' and 'Tell us about your Experience!'. The 'Interests' section contains the same text as the user profile. The 'Experience' section contains the same text as the user profile. At the bottom, there are fields for 'Graduation Year' (2022), 'Major' (Environmental Science), 'Minor' (Business), and 'More Info (Link)' (a LinkedIn link). Two buttons at the bottom are 'Submit' and 'Cancel'.

## EDIT ACCOUNT

After creating the account, the user is able to add a variety of information about themselves. One key point about editing a profile is that you do not have to complete all fields all at once. The editing page ranges from contact information to skills, interests, and educational status.

When the user is finished with filling out the desired fields, a unique function we included is being able to edit and add soft or hard skills. Hartman Consultants believes being able to add soft skills into the profile will make it more personable and relatable when trying to build a team.

# CORE FEATURES W/ ILLUSTRATED USER NARRATIVE

The screenshots show the following sequence of interactions:

- My Inbox:** Shows a list of messages. A blue box highlights the envelope icon in the top right corner.
- Search for Recipient:** A search bar contains "greg". Below it, a profile box for "Greg Matthews" is shown, including a photo, title ("Associate Professor at James Madison University"), department ("Anthropology Department"), and two buttons: "Send a Message" and "View Profile".
- Send a Message:** A message is being composed to "Greg Matthews" with the subject "Join my Team". The message body says "Hi Greg! I would love for you to take a look at my project and join my Team!". Buttons for "Send Message ->" and "Cancel" are at the bottom.
- My Inbox:** Shows a new message from "Cora Chavez" with the subject "Join my Team". The message body is identical to the one sent to Greg. Buttons for "Mark as Read" and "Reply" are at the bottom.

## VIEWING MESSAGES

The user has now created an account and is ready to look into starting or joining a team! under the envelope icon in the top right corner, the user can view new and existing messages and can also send a new message. These functions ensure the user will not lose any past and future messages.

## SENDING A MESSAGE

If wanting to send a new message, we created a search function to search a person you would like to contact. Similar to project profile boxes, a profile box will come up with a short piece of information. Following the information, the user can then view the profile for more information, or send a message.

Good news, the user is interested in messaging Greg! This chat function is easy to use and similar to an email chain with a subject line included. Once the user has written the message, it will send immediately to the other user. Hartman Consultants plans to excel on this function, but as for now if a user has a message, it will show up in the bell icon and messaging page.

# CORE FEATURES W/ ILLUSTRATED USER NARRATIVE

The screenshot shows the 'User Search' interface. At the top, there's a search bar with the text 'jeremy'. Below it, a user profile for 'Jeremy Ezell' is displayed, including a circular profile picture, the name 'Jeremy Ezell', the title 'Associate Professor', and the department 'JMU CIS Department'. A blue 'View Profile' button is at the bottom. The background is purple and yellow.

## User Search

The user is now interested in finding a suitable faculty member to join a project that they will create later. The user can click on the search tab in the navbar and select "search for a user" and enter a field they would like to search for. The search function will be able to find users with an array of attributes found in the database making it easier for users to find other users. The user remembers a faculty member good at communication named Jeremy Ezell and is interested in finding them.

The screenshot shows the 'Faculty Profile' page for 'Jeremy Ezell'. It includes sections for 'Full Name' (Jeremy Ezell), 'Email' (ezellj@jmu.edu), 'More Info' (empty), 'Interests' (empty), 'Skills' (Communications: Skill Level Advanced), 'Soft Skills' (Communication), and 'Hobbies' (Coffee Connoisseur). The background is purple and yellow.

## VIEWING PROFILE & BOOKMARKING

Good news, the user has found faculty member Jeremy Ezell and would like to view their profile and bookmark them. The bookmarking feature will allow users to quickly find other users without having to search for them again. To do this, first the user will want to click "view profile" and the respected profile page will appear. This will allow the user to see what this person is like.

The screenshot shows a 'Bookmark User' dialog box. It has a text input field labeled 'Reason for Bookmarking' and two buttons at the bottom: 'Bookmark ->' and 'Cancel'. The background is purple and yellow.

Next, the user will want to click "Bookmark user" under the profile picture and the user will be asked to input a reason for bookmarking Jeremy Ezell. The user will input their reason and they will be added to their network. The user can view their bookmarks on their profile page. To get here, the user can click their picture icon in the top left corner, click view profile, and select the my network tab from their profile page.

# CORE FEATURES W/ ILLUSTRATED USER NARRATIVE

The screenshot shows a purple header bar with the Madison Connect Hub logo, Home, Projects, and Search buttons. Below the header is a light blue sidebar containing a navigation menu with links like 'About', 'Events', 'Groups', 'Jobs', 'Careers', 'Volunteer', 'Log In', and 'Sign Up'. The main content area has a light gray background and features a form titled 'Create a Project'. The form includes fields for 'Project Name' (with placeholder 'Project Name'), 'Project Owner' (with placeholder 'Project Owner'), 'Project Owner Email' (with placeholder 'Project Owner Email'), 'Project Mission Statement' (a large text area), 'Project Description' (another large text area), and a date input field ('mm/dd/yyyy'). At the bottom are two buttons: 'Create Project ->' and 'Cancel'.

## Create Project

The user is now ready to create a project about Climate Change! To do so, click on "projects" in the navbar and click "add a new project". This will take the user to an input page to record important project data to be saved in the database. The page is designed to be minimal and only ask the user to record critical information about a project.

The screenshot shows a purple header bar with the Madison Connect Hub logo, Home, Projects, and Search buttons. Below the header is a light blue sidebar containing a navigation menu with links like 'About', 'Events', 'Groups', 'Jobs', 'Careers', 'Volunteer', 'Log In', and 'Sign Up'. The main content area has a light gray background and features a form titled 'Create Team'. The form includes fields for 'Team Name' (with placeholder 'World Savers') and 'Choose a Project' (a dropdown menu). At the bottom is a single button: 'Create Team ->'.

## Create Team

After creating a project, another input page will appear to record important team data. The page is also designed to be minimal and only ask the user to record critical information about a project.

The screenshot shows a purple header bar with the Madison Connect Hub logo, Home, Projects, and Search buttons. Below the header is a light blue sidebar containing a navigation menu with links like 'About', 'Events', 'Groups', 'Jobs', 'Careers', 'Volunteer', 'Log In', and 'Sign Up'. The main content area has a light gray background and features a profile card for 'Jeremy Ezell'. The card includes a circular profile picture, the name 'Jeremy Ezell', the title 'Associate Professor at James Madison University', and the department 'CIS Department'. At the bottom of the card are two buttons: 'View Profile' and 'Remove From Network'.

## VIEW NETWORK

Now the user is ready to Invite Jeremy Ezell from their network to their project. To do so, the user can click their picture icon in the top left corner, click view profile, and select the my network tab from their profile page. This tab is designed to help users find previously found users quickly.

# CORE FEATURES W/ ILLUSTRATED USER NARRATIVE

Full Name: Jeremy Ezell  
Email: ezelljd@dukes.jmu.edu  
More Info  
Interests  
Experience

Skills  
Communications Skill Level: Advanced  
Soft Skills  
Communication  
Hobbies  
Coffee Connoisseur

## INVITE TO PROJECT

The user, now on their network tab, will see a list off their bookmarked users in a card fashion for easy visibility. They will click "View Profile", that will show what was displayed in the view profile section previously. From this page they can click "invite to project" under the profile picture and they will be brought to an input page to record important information to be sent the user about why they should join the team. This page helps users find suitable users to join their project

Project  
Choose a Project  
Write about why they should join your Project!  
I need you for your communication!

Request > Cancel

## User Search and Invite To Project

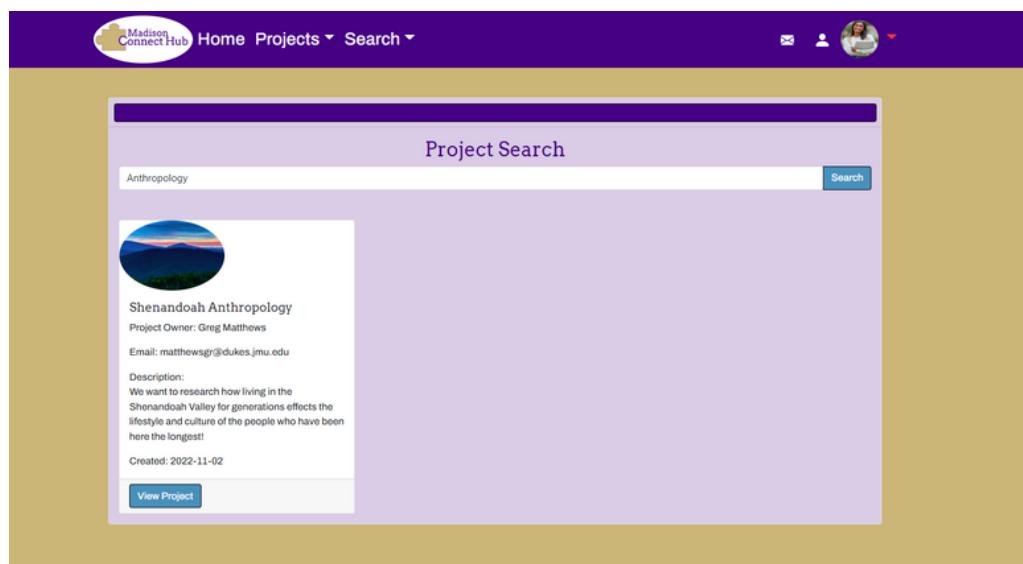
After inviting Jeremy Ezell, the user wants to continue to diversify their team, they decided they want another team member that is light hearted to keep team morale high. Once again, they'll utilize the user search function. Once the result appear, the user will click "view profile" on the desired user, that will show what was displayed in the view profile section previously. Then the user will click the button under the profile picture that says "invite to project". They will be brought to an input page to record important to be sent the user about why they should join the team. This page helps users find suitable users to join their project. This page will be the same as the page displayed previously.

Light-hearted

Nick Carpenter  
Student  
James Madison University 2022

View Profile

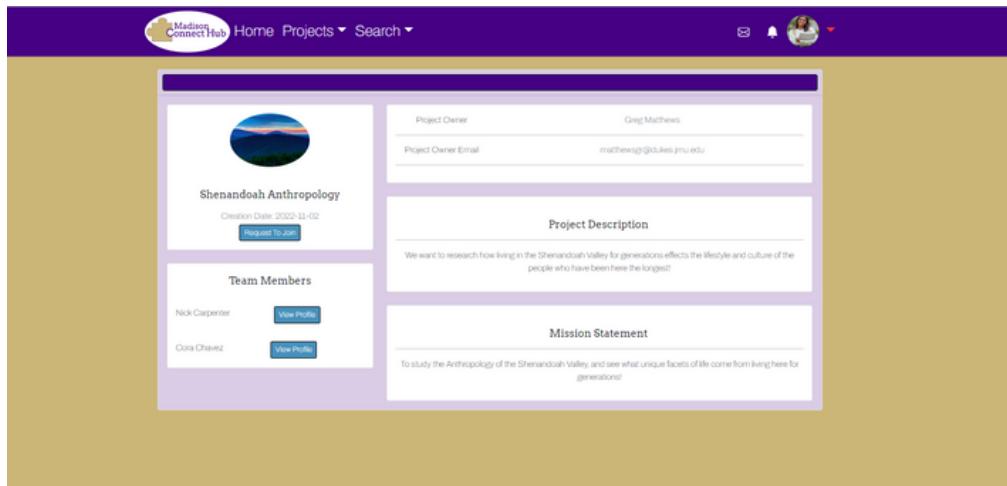
# CORE FEATURES W/ ILLUSTRATED USER NARRATIVE



The screenshot shows the "Project Search" page with a search bar containing "Anthropology". Below the search bar, there is a card for the "Shenandoah Anthropology" project. The card includes a thumbnail image, the project name, the owner's name (Greg Matthews), email (matthewsg@dukes.jmu.edu), a description (about research in the Shenandoah Valley), and a creation date (2022-11-02). A "View Project" button is at the bottom of the card.

## Project Search

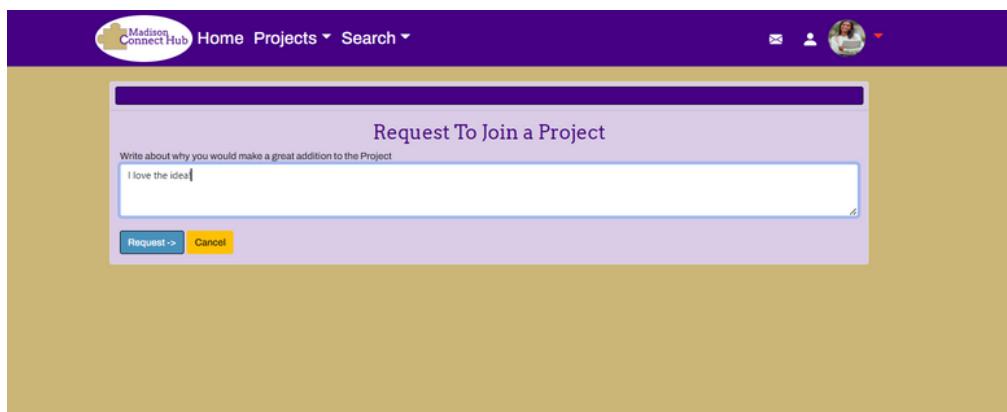
The user decides they would like to request to join a project that would broaden her interest. First, they need to click the "search" tab and select "search for a project". Next the user will enter into the search bar a desired field and the search results will appear. The search bar searches for projects matching the desired field to project names in the database. This type of search we found was the best because it kept things simple for the user.



The screenshot shows the "View Project Profile" page for the "Shenandoah Anthropology" project. It displays the project owner (Greg Matthews), owner email (matthewsg@dukes.jmu.edu), project description (researching living in the Shenandoah Valley), and mission statement (studying anthropology to see unique facets of life). On the left, there is a sidebar with "Team Members" listed as Nick Carpenter and Cora Chavez, each with a "View Profile" button.

## View Project Profile

From the search results, the user can select "View Project" on a respected card and see valuable information about a project. The view project page enables users to determine if the project their viewing is right for them to request to join or not.

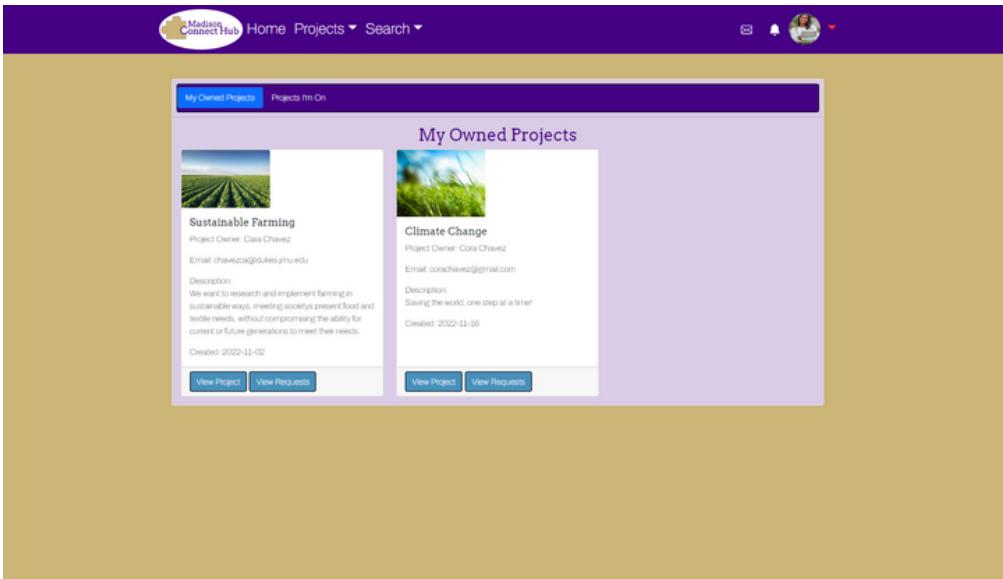


The screenshot shows the "Request To Join a Project" input page. It has a text area for writing a message, with the placeholder "Write about why you would make a great addition to the Project" and a sample message "I love the idea!". At the bottom, there are "Request ->" and "Cancel" buttons.

## Request To Join Project

From the view project page, the user decided that the anthropology project they found was satisfactory. They decide to request to join. They are brought to an input page to record important information to be sent to the project owner about why they should be able to join the team. This page helps users determine if a person requesting to join their project is a suitable project/team member.

# CORE FEATURES W/ ILLUSTRATED USER NARRATIVE

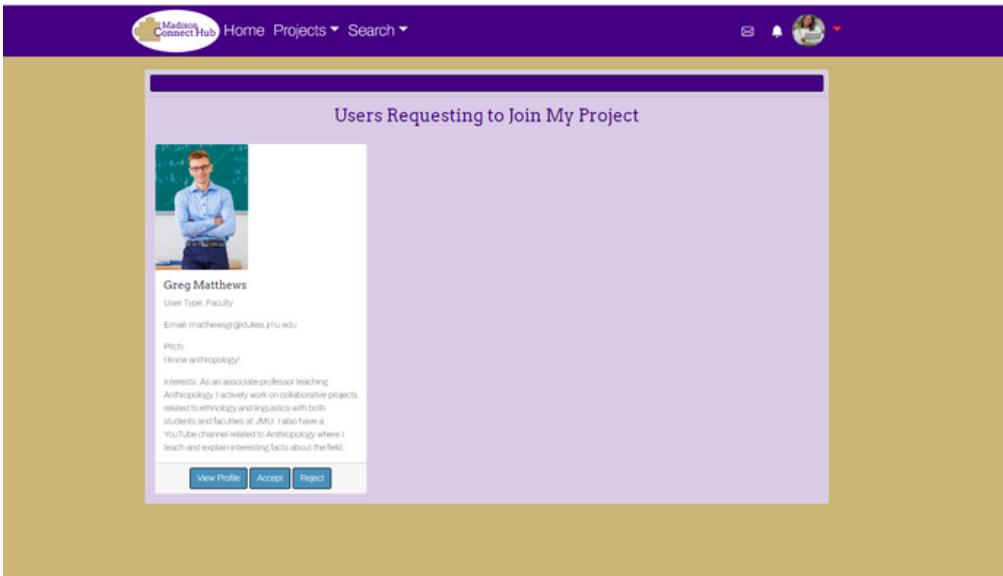


The screenshot shows the 'My Owned Projects' section of the Madison Connect Hub. At the top, there are two tabs: 'My Owned Projects' (which is active) and 'Projects I'm On'. Below the tabs, there are two project cards:

- Sustainable Farming**: Project Owner: Cora Chavez. Email: chavezco@dukes.jmu.edu. Description: We want to research and implement farming in sustainable ways, meeting society's present food and textile needs, without compromising the ability for current or future generations to meet their needs. Created: 2022-11-02. Buttons: View Project, View Requests.
- Climate Change**: Project Owner: Cora Chavez. Email: corachavez@gmail.com. Description: Saving the world, one step at a time! Created: 2022-11-16. Buttons: View Project, View Requests.

## View My Projects

The user decides they want to see their project in Madison Connection Hub. To do so, they will navigate to the projects tab in the navbar and click "view my projects". This page is made to be easily navigable and managed. There will be two tabs one with owned projects and one with projects you are apart of but do not own.



The screenshot shows the 'View Request' page for a project. The title is 'Users Requesting to Join My Project'. It displays a single request from 'Greg Matthews'.

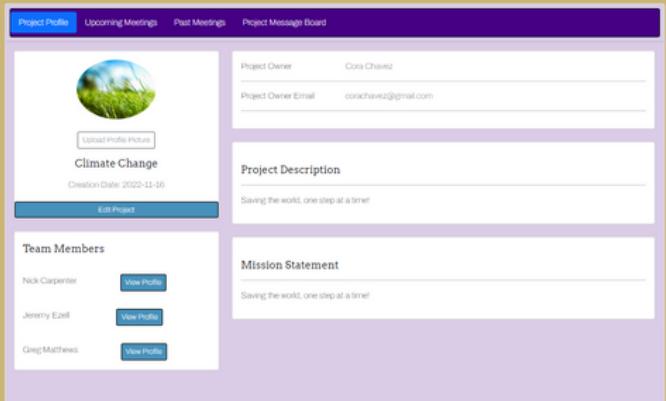
**Greg Matthews**  
User Type: Faculty  
Email: matthewsg@dukes.jmu.edu  
Pitch: I know anthropology!  
Interests: As an associate professor teaching Anthropology I actively work on collaborative projects with Anthropology and other departments both students and faculty at JMU. I also have a YouTube channel related to Anthropology where I teach and explain interesting facts about the field.

Buttons: View Profile, Accept, Reject.

## View Request

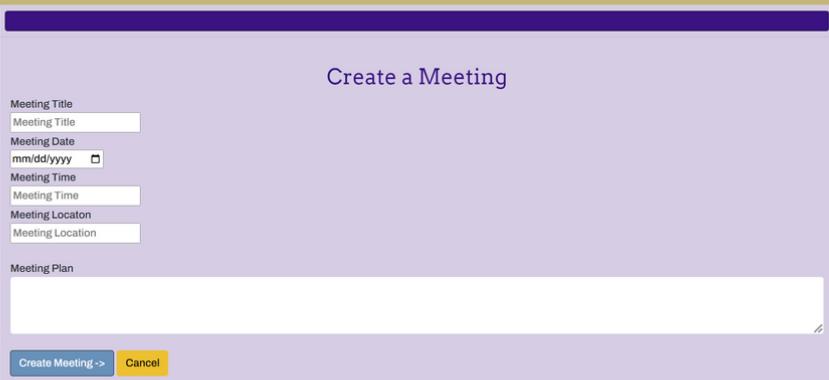
The user now decides they want to see if Greg Matthews has requested to join their project after the message they sent. To do so, the user should select "view request" on the project they are expecting Greg to join. From here they will see all user requesting to join the respected project. The user is in luck! Greg has requested to join and the user will accept them to join.

# CORE FEATURES W/ ILLUSTRATED USER NARRATIVE



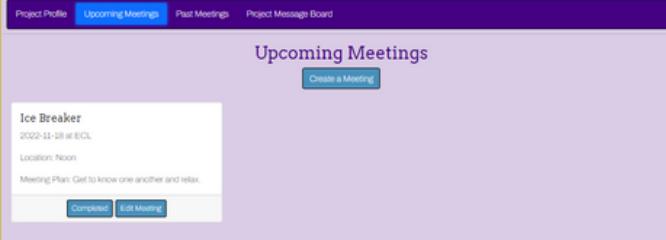
## View Project

After accepting Greg, the user wants to schedule an upcoming meeting with her project team and break the ice. To do so, the user will navigate back to the projects tab in the navbar and click "view my projects" and click 'view project' on the desired project to view. This page is designed to be easy to use and a one stop shop for managing a project.

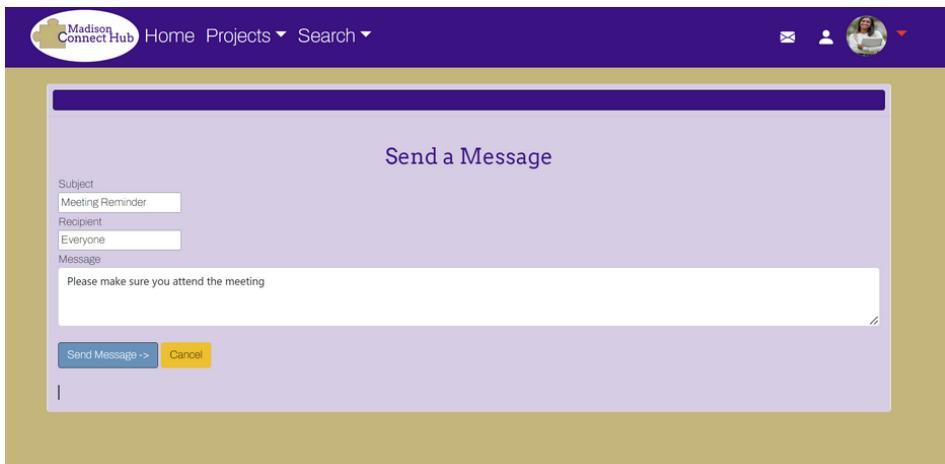


## Upcoming Meetings

From the project profile page, click on the upcoming meetings tab and click "create a meeting ". The user would like to schedule their ice breaker on campus at ECL at noon. The purpose of the meetings tab is to give reasons to users to come back to Madison connection hub and continue using the site.

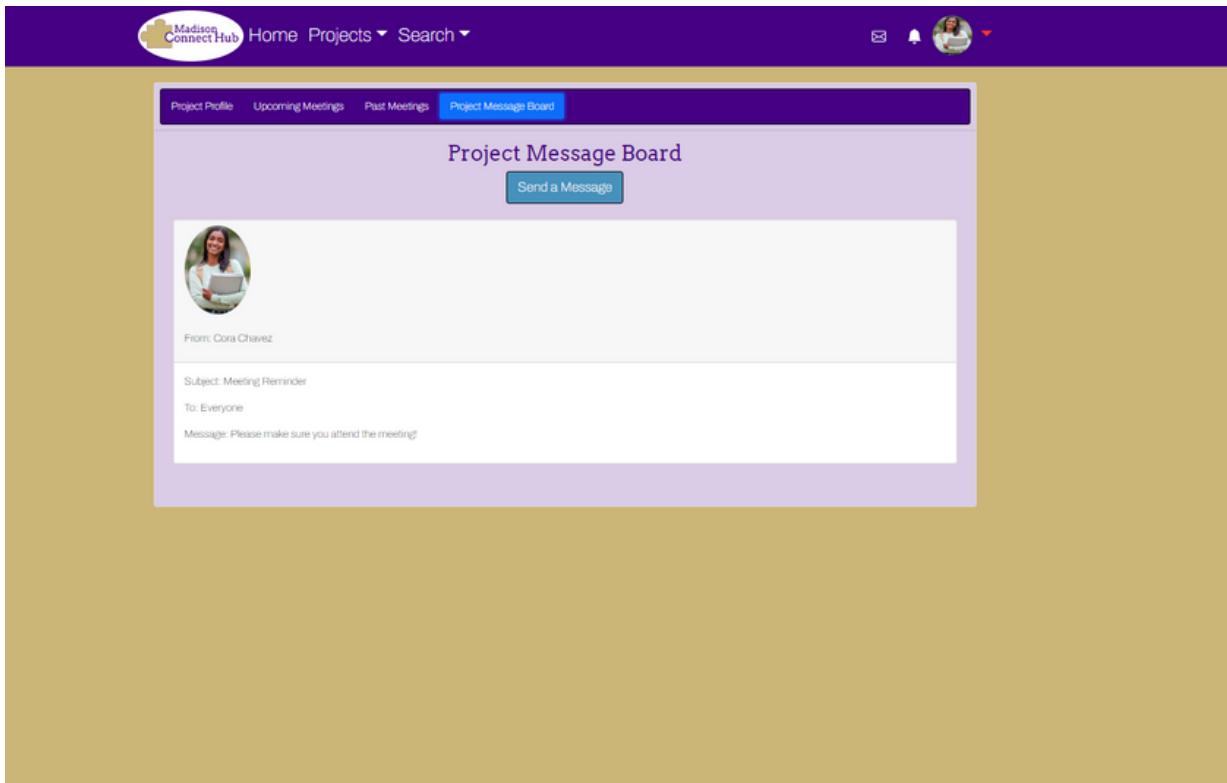


# CORE FEATURES W/ ILLUSTRATED USER NARRATIVE



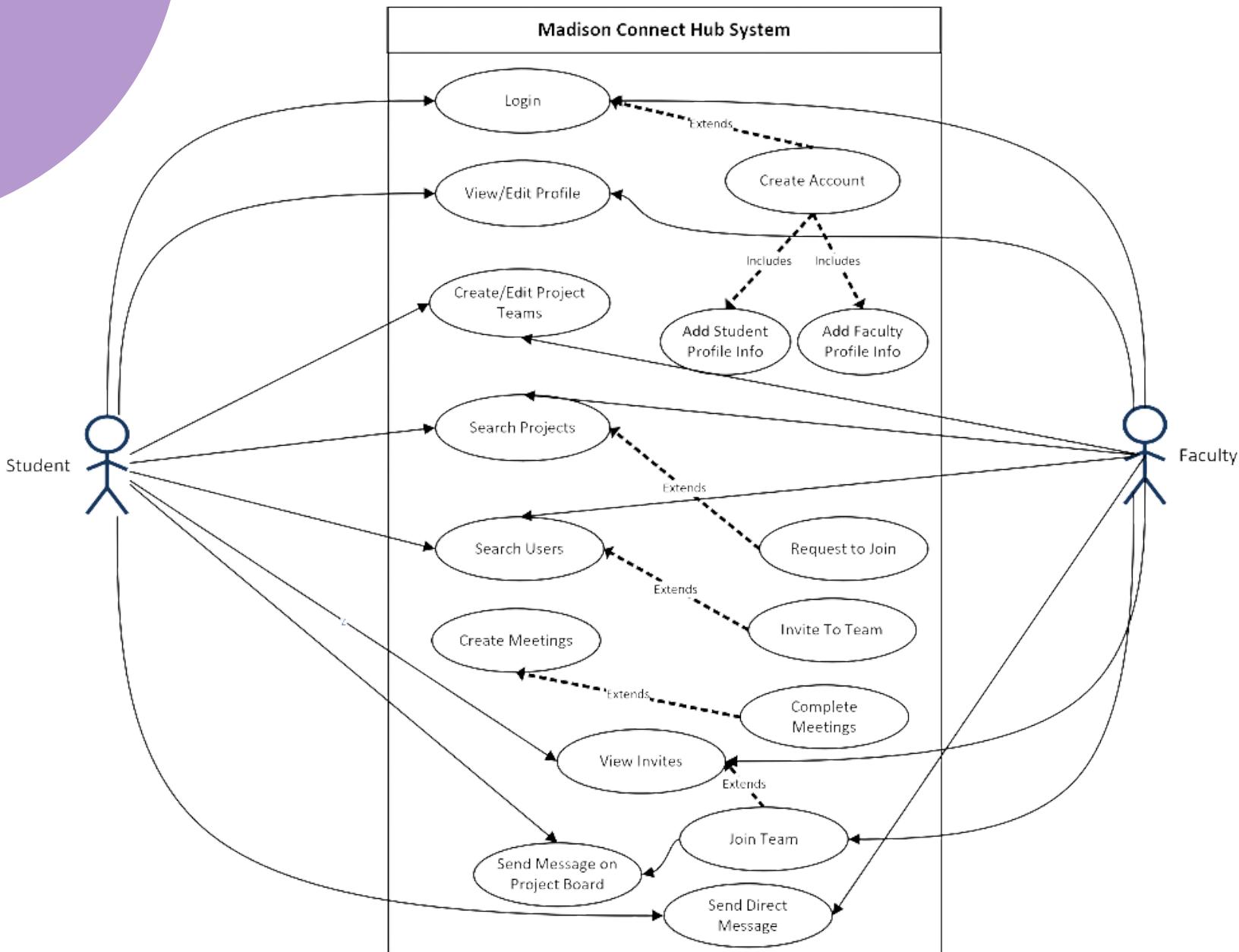
## Project Message Board

After setting up a meeting, the user wants to ensure everyone on their team knows the meeting is scheduled. To do so, The user will post on the project message board. From the project profile, click on the project message board tab then click "send a message". The message board allows users from a project to communicate freely.



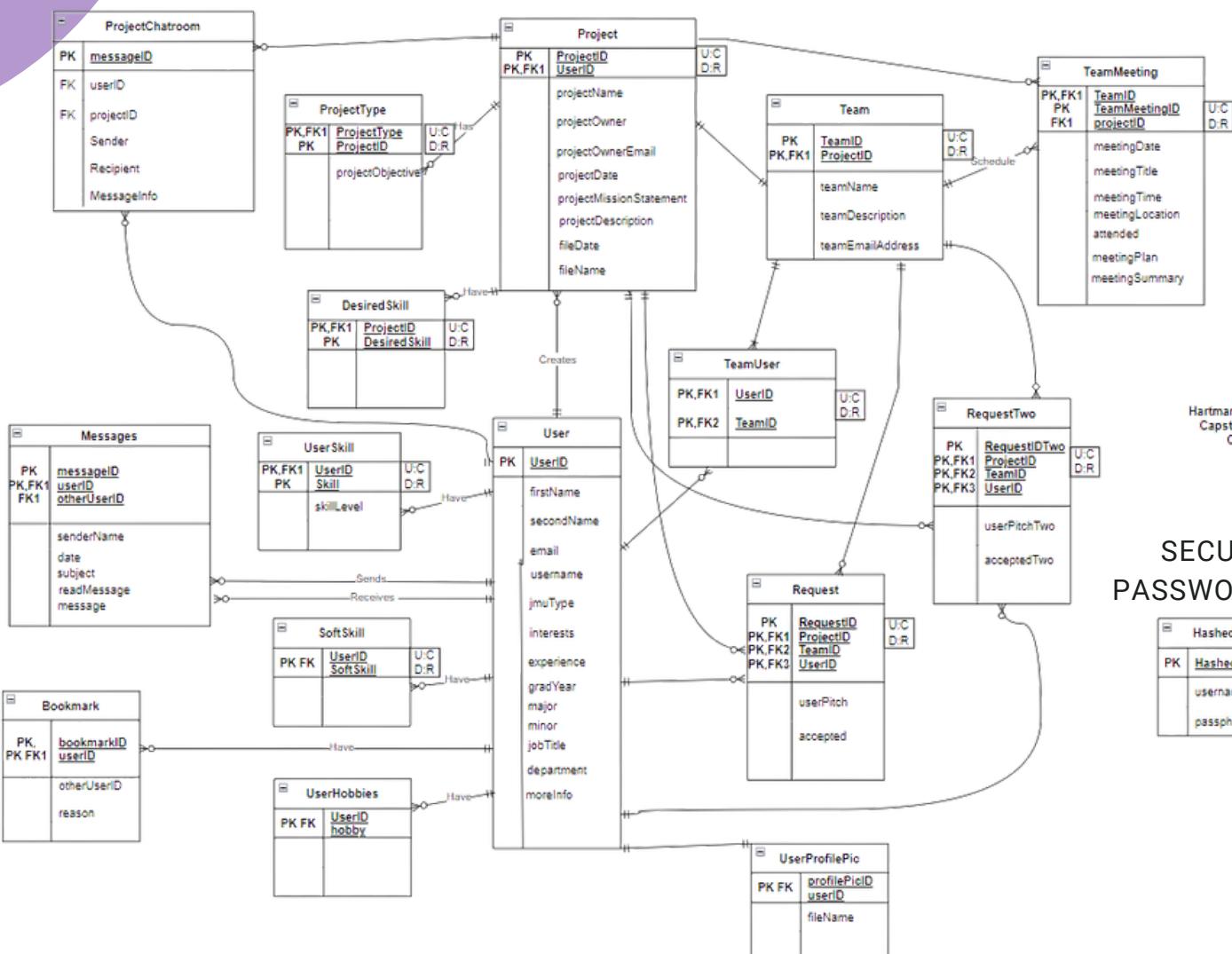
# USE CASE

# DIAGRAM

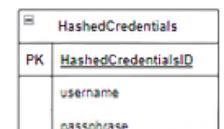


# DATABASE DIAGRAM

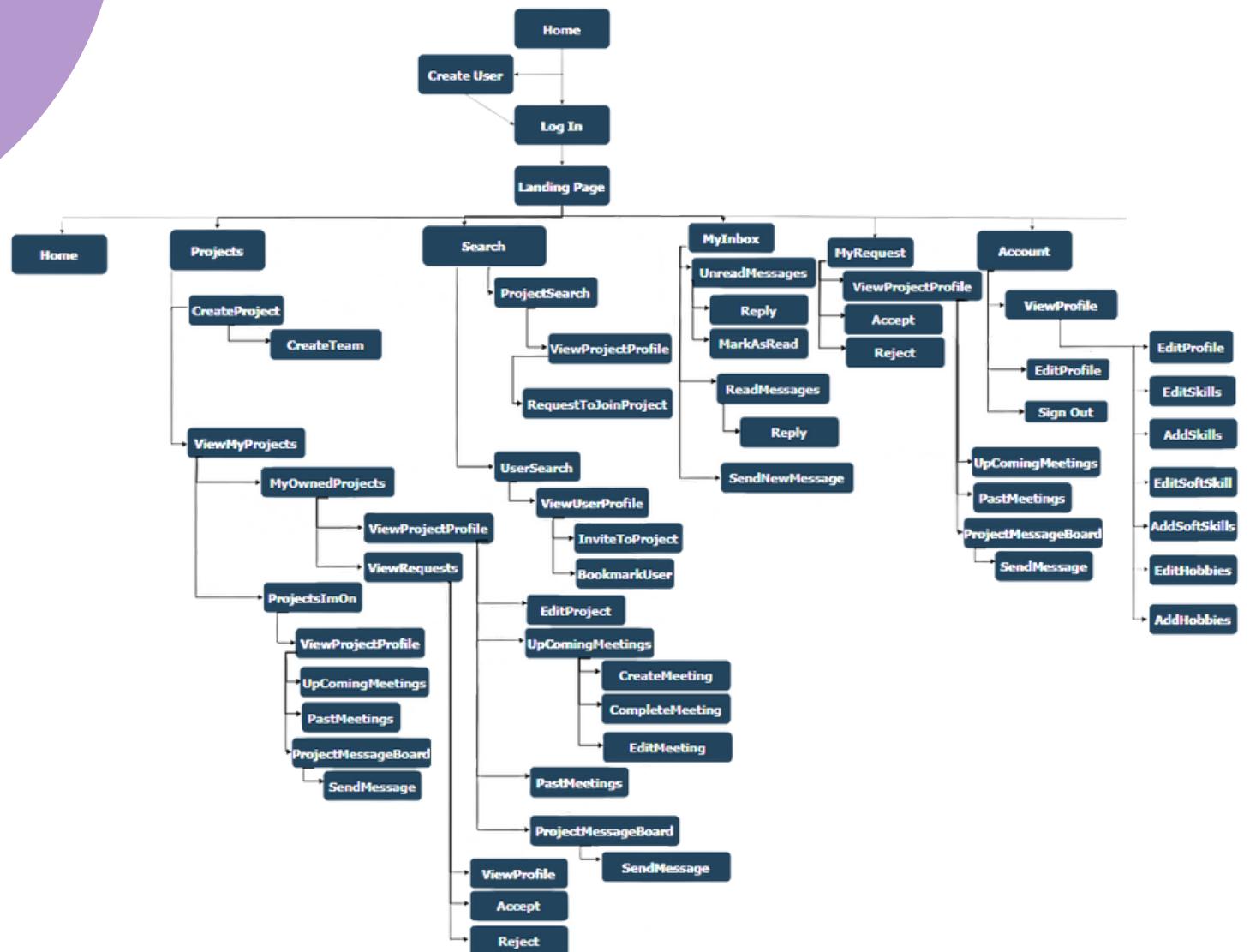
MAIN DB



SECURE  
PASSWORD DB



# CURRENT SITEMAP



# GETTING STARTED

1. Users will first access the website through the Home page.
  - a. Users can and should choose from the following:
    - i. Login (go to step number 5 to continue)
    - ii. Create Account
2. From the Create Account page users will need to input their desired account information and credentials
  - a. Once all information is inputted, the user should select the submit button
3. Once submitted the user will have to login with their newly created credentials from the login page (this will automatically load after the user selects the submit button from the previous step)
4. The user should then update their profile with further information
  - a. All of the following can be updated in the user profile page (not all is required):
    - i. Profile Picture
    - ii. Skills, Soft Skills, Hobbies
    - v. Interests
    - vi. Experience
5. Once the user's profile is updated or the user is logged in, they can do the following:
  - a. From the navigation bar at the top of every page
    - i. Add a New Project
    - ii. View My Projects (view already owned and created projects)
    - iii. Search for a Project
    - iv. Search for a User
  - b. From the user profile picture dropdown in the top right corner of the page:
    - i. View Profile
    - ii. Edit Profile
    - iii. My Inbox
    - iv. Sign out

## Login Info

username: admin  
password: password

username: corachavez  
password: corachavez

username : gregmatthews  
password: gregmatthews

# OBJECT ORIENTED NATURE

Our system uses object-oriented principles to allow for a readable, modularized, and scalable code base. Our frontend is developed through the ASP.NET core framework which uses an object-oriented structure for its pages. Each page has a model class associated with it that contains the data and the methods used on it. This allows us to encapsulate programmatic logic in a separate container from the publicly exposed page, allowing us to hide data implementation and create readable HTML. Secondly, the ASP.NET framework has many public class libraries that proved useful for us. For example, we relied heavily on the SqlClient class to use data from our SQL database. We also created over 20 C# classes to allow for code reuse for data that was needed for many different pages. This included classes for users, projects, etc., and also classes that implemented key functionality such as a database class for our database method and a hashed password class for storing passwords securely. They also allowed for the creation and signing in of users, creation and management of teams and projects, basic chat functionality, searching for users and teams, bookmarking users, and having secure logins. Lastly, we relied heavily on classes from the bootstrap CSS library to create an aesthetically appealing and intuitive front-end design with user experience in mind.

## AMAZON WEB SERVICES (AWS)

The new Madison Connect Hub website will be hosted in the US East (N. Virginia) region. The application will be deployed to AWS Elastic Beanstalk running through their EC2 service. The elastic compute pricing is estimated to be \$18 a month. The RDS service for the database is currently the free tier, utilizing 750 hours of potential use using t2, t3, or t4g micro instance, with 20 gbs of storage and 20 additional gbs of automated backups. Currently we are utilizing their t2.micro database type. After implementation we have estimated it to cost around \$50 a month to maintain and update the web application when needed.

WEBSITE LINK BELOW

<http://lab-dev.eba-he83pxes.us-east-1.elasticbeanstalk.com>

# MOVING FORWARD

- After the final presentation, Hartman Consultants would like to accomplish the following:
  - Conduct a final presentation retrospective meeting that could pertain about topics that include, but are not limited to:
    - Features we should have incorporated that did not get added, which include
      - Pop-up windows for input/form pages
      - Improve the email notification system when user's account receives an invite, message, new meeting that directs the user to that page.
      - Site-wide Accessibility that conforms to all WCAG 2.0 AAA regulations
      - A live chat room for users to create groups.
      - A functionality that recommends projects for users based on their profiles and other projects they are on.
    - Ensure all deliverables are submitted to their appropriate locations
    - Continue pilot period of live site and receive user feedback.