SMAD/CIS Capstone

March 2023

# AD Co. OfficeOURS: Sprint 1 Report

# Contents


| | |
|---|---|
| 03 | Team Members Page |
| 06 | Project Summary / Overview |
| 07 | Project Objectives / Approach |
| 08 | Project Goals / Requirements |
| 09 | Audience Information |
| 11 | Timeline |
| 11 | Obstacles / Potential Issues |
| 12 | Visual Samples |
| 13 | UX Research |
| 14 | UX Documentation |
| 14 | GitHub Repository |

# Team Members

**Maddy Baker**

Project Manager

Hello, I am a senior CIS major with interests in Consulting and Cyber Security. Post graduation, I will be an IT Auditor. Outside of class, I love animals and fashion.

**Abby Piper**

Lead Developer

Senior CIS and marketing double major with a minor in communications at JMU. Post graduation I plan to go into Government Contracting

**Devin Roche**

Lead Developer

Senior CIS major, working in Arlington VA post-grad as a technology solutions analyst. In my free time, I love working out, playing basketball/football, and listening to music.

**Alex Cybyk**

Database Administrator

Senior CIS Major, going into Tech Consulting in Arlington, VA after graduation. I enjoy playing and watching sports, hiking, lifting weights and spending time with friends.

# Team Members

**Neville Patel**

System Analyst

Hi everyone! I am CIS Major with HRD Minor. I am going into consulting post-graduation. In my free time, I like to play games, work out, and watch movies.

**Ryan Cunningham**

Developer

Senior Accounting and CIS double major. After graduation, I will be working for the accounting firm Wiss & Company in New Jersey and studying for the CPA exam. In my free time, I like to watch sports and hang out with friends and family.

**Joe Worman**

Developer

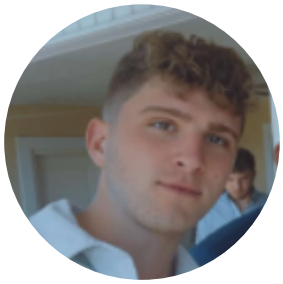
Senior CIS major. After graduation, I am either going to do government contracting or cyber security. In my free time, I love playing and watching sports as well as being with friends

**Matias Dieguez**

Developer

Senior CIS major, post-grad I'll be working for Amazon Web Services as a Cloud engineer in Northern VA. I enjoy playing soccer and lifting as well as spending time with my friends.

# Team Members



**Brady Vacca**

Developer

Senior CIS major with a CS minor. I enjoy going to the gym, golfing, and hanging out with my friends.
Postgrad I plan to go into Data Analytics in the Northern Virginia area.

**Madeline Miller**

Co UX Designer/ Developer

Senior CIS and marketing double major with a minor in communications at JMU. Post graduation I plan to go into Government Contracting

**Lyndsay Criscitello**

Co UX Designer/ Developer

Senior SMAD major, planning to work in Arlington, VA post-graduation as a UX/Product Designer. In my free time, I love taking pictures, baking, and listening to music.

# Project Summary / Overview

In this project, AD Co. will create a user-friendly and effective Office Hours Management System, streamlining the tedious and confusing process for both student and faculty stakeholders. The website will be securely hosted on an Amazon Web Services instance, also in a local environment, and developed using C#, HTML, and CSS. This system will provide users the ability to manage their office hours meetings easily and effectively through different pages focused on creation of meetings, sign-up forms, and management of all appointments. UX/UI Engineers will create visually appealing pages that fit the client's needs and preferences. Throughout the development of this product, AD Co. will work closely with various stakeholders through frequent interviews and user tests to receive feedback on design, functionality, and other needs, which will be implemented to deliver the best solution for our clients.

# Project Objectives / Approach

Our team will use an Agile project approach in order to ensure feedback can be acted on quickly and that responsive changes can be made at each stage of a sprint or product cycle. This is something that our group feels will promote a cohesion between all members of the group and foster the best possible product for the clients in the end. Since the Agile project management was originally developed for software development and collaboration within a timeframe it is the perfect fit for our team. We are looking to play into the strengths of our team members and this means that the CIS members will be focusing on the back end of the system development and our SMAD teammates will be using their creative vision to design an appealing and practical user experience.

We hope to:

- Create an application that is efficient and easy to use
- Create a single place where faculty and students at can go to sign up for and monitor meetings
- Complete the finished application within the desired timeline.
- Have an open and clear communication approach between all team members and the clients in order to keep up with any developments in requirements.
- Build in some sort of tracking or penalty to avoid abuse for missing or late cancel.
- Ability to cancel for a student / ability to reschedule.
- Ability to see where you are in the queue for both parties.
- Alert system for the student when the instructor is ready to meet.
- Ability for instructors to override queue for authority or priority.
- Reschedule office hours and an alert for those in the queue.
- Be able to look at and analyze data of what hours are busiest and not (Time data).
- Stats on how many times a student has missed or attended office hours.
- Able to extend or shorten office hours and open or close the queue at a time accordingly.
- Send messages to students in the queue.

# Project Goals / Requirements

### Notifications

As a professor, I want a notification to go to the student when I am ready to meet, and give them 5 minutes to arrive so that the meetings are efficient and on time.

### Prioritize Users

As a professor, I want to implement a priority system that will allow me to "over-ride" the priority order and prioritize students with urgent needs or emergencies.

### Alternative tutoring times

As a professor, I want the application to provide alternative tutoring hours for students if the waiting time exceeds 30 minutes, so that students have the option to meet with a tutor instead of waiting for me.

### More accurate meeting time

As a student, I want to be able to pick the purpose for my visit from a drop-down menu so that the instructor can prepare for our meeting and allocate the appropriate amount of time.

### Waiting Time

As a student, I want to be able to see how many are in the queue before me or where I am in the queue so that I can plan my visit accordingly and minimize my waiting time.

### Easy Organization of all meetings

As a student, I want to be able to check the queue for multiple classes so that I can strategically plan my visits and avoid missing any meetings.

# Audience Information

## Primary Audience

The primary audience for this application is students who need to schedule appointments with their instructors during office hours. These students may have multiple classes and want to be able to see the queue for each class so they can plan their visits accordingly. They will need to have a Dukes account to register for the app and will provide their name and mobile phone number for appointment confirmation and text purposes.

## Secondary Audience

The primary audience for this application is students who need to schedule appointments with their instructors during office hours. These students may have multiple classes and want to be able to see the queue for each class so they can plan their visits accordingly. They will need to have a Dukes account to register for the app and will provide their name and mobile phone number for appointment confirmation and text purposes.

# Personas

USER PROFILE

EMILY JENKS

| | | |
|---|---|---|
| Gender | : | Female |
| Age | : | 21 |
| Education | : | High School Diploma |
| Major | : | Marketing |
| Address | : | James Madison University |

**BIOGRAPHY**

Emily is a detail-oriented undergraduate student who likes to stay on top of her academic schedule. She frequently uses her smartphone to access class materials and organize her coursework. She values an efficient and reliable way to sign up for office hours with her professors, and appreciates being able to plan ahead and strategize her visit with the ability to check the queue for multiple classes.

**GOALS**

- Being able to plan her visits ahead
- Set specific goals for each meeting
- Monitor wait times and plan her visit
- prepare targeted questions ahead of time

**FRUSTRATIONS**

- difficulty finding a time slot that fits schedule
- unavailable professors
- people cutting in line to see the professor
- having to plan multiple meetings

**PERSONALITY**

Introvert — Extrovert

Thinking — Feeling

Judging — Perceiving

Sensing — Intuition

**TECHNOLOGY**

Software

Social Media

Mobile App

# Personas

USER PROFILE

## JENNIFER MILES

| | | |
|---|---|---|
| Gender | : | Female |
| Age | : | 42 |
| Education | : | Bachelor's degree |
| Occupation | : | Professor |
| Address | : | James Madison University |

### BIOGRAPHY

Jennifer is an accommodating instructor who values an application that streamlines the process of scheduling office hours. She appreciates being able to see who is in the queue and the average wait time, which allows her to plan her time effectively. The ability to message individual students in the waiting room helps her communicate with students who may need additional assistance, while the ability to reschedule office hours times and alert individuals in the queue makes her job easier.

### GOALS

- Respond to student office hour appointments
- High-quality support to each student
- follow up with students
- Optimize her time during office hours

### FRUSTRATIONS

- Students who miss their appointments
- Unclear information provided by students
- Not knowing who's waiting to see her
- Students who do not come prepared

### PERSONALITY

Introvert — Extrovert

Thinking — Feeling

Judging — Perceiving

Sensing — Intuition

### TECHNOLOGY

Software

Social Media

Mobile App

USER PROFILE

## MIKE HURRELL

| | | |
|---|---|---|
| Gender | : | Male |
| Age | : | 18 |
| Education | : | High School Diploma |
| Major | : | Communications |
| Address | : | James Madison University |

### BIOGRAPHY

Mike is a first-year undergraduate student who is new to the university experience. He often feels anxious about approaching her professors, and values an application that provides a structured way to sign up for office hours. The drop-down menu for indicating the purpose of the visit helps him prepare for the meeting and feel more confident. The text confirmation also reassures him that the appointment is confirmed.

### GOALS

- Develop relationships with his professors
- Meet with at least one professor every week
- Prepare for each meeting ahead of time
- Book a meeting for every major assignment

### FRUSTRATIONS

- Limited availability of office hours
- Unreachable professors
- Being able to plan her visits ahead
- Lack of guidance on how to prepare

### PERSONALITY

Introvert — Extrovert

Thinking — Feeling

Judging — Perceiving

Sensing — Intuition

### TECHNOLOGY

Software

Social Media

Mobile App

# Timeline

In order to complete the project, our team will have team-wide meetings before and after each sprint, otherwise the team will meet in smaller groups that interact as needed.

## Sprint 1

**March 1st - 9th**

- Determine whose project to move forward with
- Determine considerations for Amazon cloud deployment
- Meet with the client to refine systems necessities and wants
- Meet with SMAD to better understand how our group can complete the project considering both majors' knowledge
- Segment group into smaller groups with similar strengths
- Bug fixes of chosen system

## Sprint 2

**March 10th - 30th**

- Determine system requirements to avoid abuse by users
- Determine data collection methods and how to present the data
- Determine how to handle students that were not seen in an office hours session they signed up for
- Add additional controls to professor accounts to customize their office hours
- Add recurring office hours
- Implement necessary changes for a cloud-based system

## Sprint 3

**March 31st-April 13th**

- Final client meeting for final thoughts or changes
- Code clean-up and testing
- Optimization for mobile devices
- Implement smaller requirements or wants
- User testing
- Implement student-user wants that were not included by the client

# Obstacles

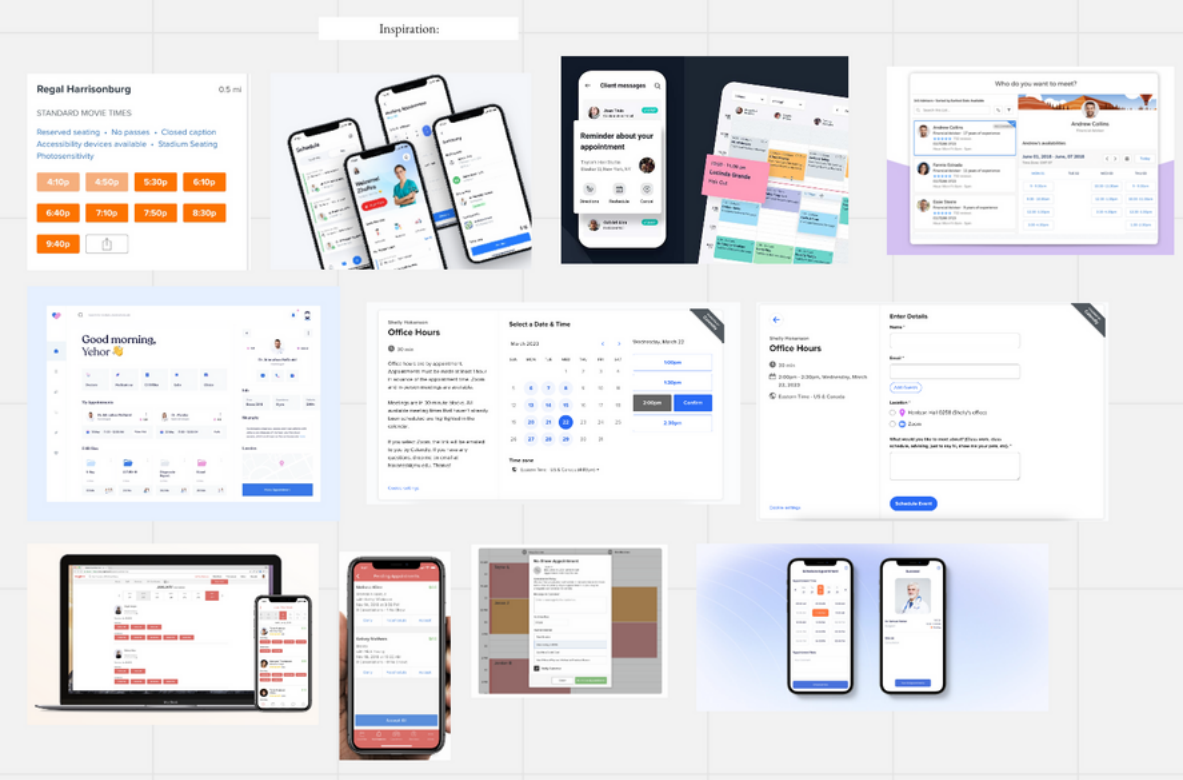
Technical:

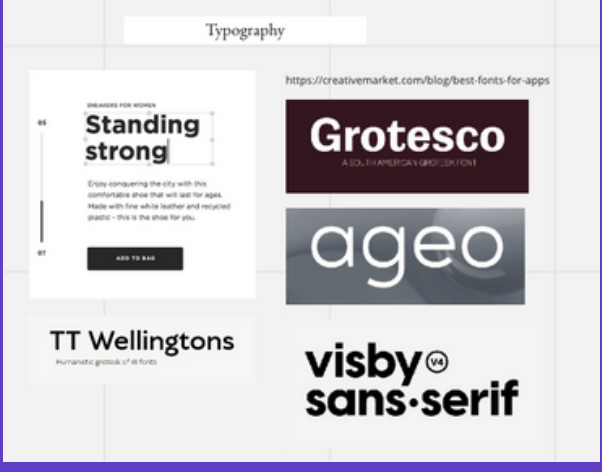
- Finding solution to allow faculty to set recurring office hours rather than having to create individual office hours slots
- Fix current bugs:
  - Allow for the ability for faculty to notify multiple students in the queue consecutively without having to exit and reload the page
  - Issue that causes notification hub screen to go blank when one notification is dismissed (only occurs in faculty notification hub)
    - The dismissed notification deletes correctly but to see all other notifications again the faculty has to exit out of the notification hub and reload it

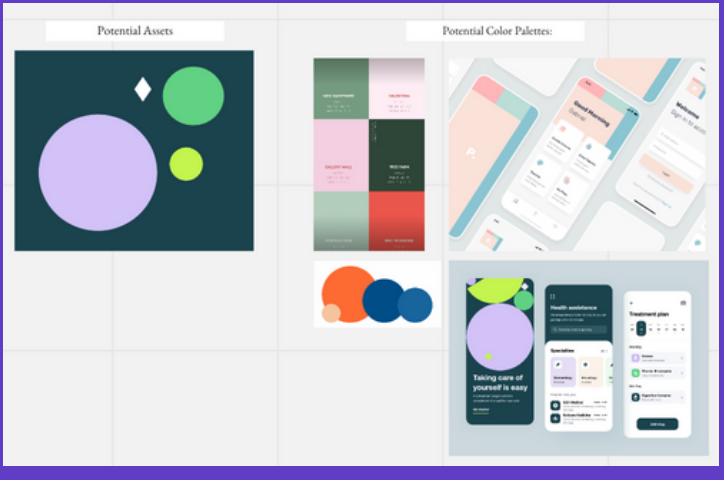
Team Dynamic:

- Finding meeting times that work for everyone in the group
- Establishing goals and delegating tasks clearly and efficiently

# Visual Samples



# UX Research

The user research was conducted through an online survey, which received 47 responses from college students aged between 19-23 years old. The survey aimed to understand students' experience with scheduling office hours with their professors, and how an app could make this process easier and more efficient.

The survey was diverse, with respondents from different majors to make the app as versatile as possible. When asked how often they schedule office hours with their professors, the majority of respondents (51.1%) said less than once a month, with only 2.1% saying they schedule office hours twice or more per week. The average score for scheduling ease on a scale of 1-5 was 3.66, indicating that scheduling office hours with professors is not always straightforward.
The survey also sought to understand the reasons why students attend office hours. The most common reasons were to get help with course content or test preparation (74.5%), followed by additional help with assignments (38.3%) and personalized feedback (46.8%). Other reasons included building relationships with professors (34%), discussion of ideas and topics (17%), and career and academic advice (12.8%).

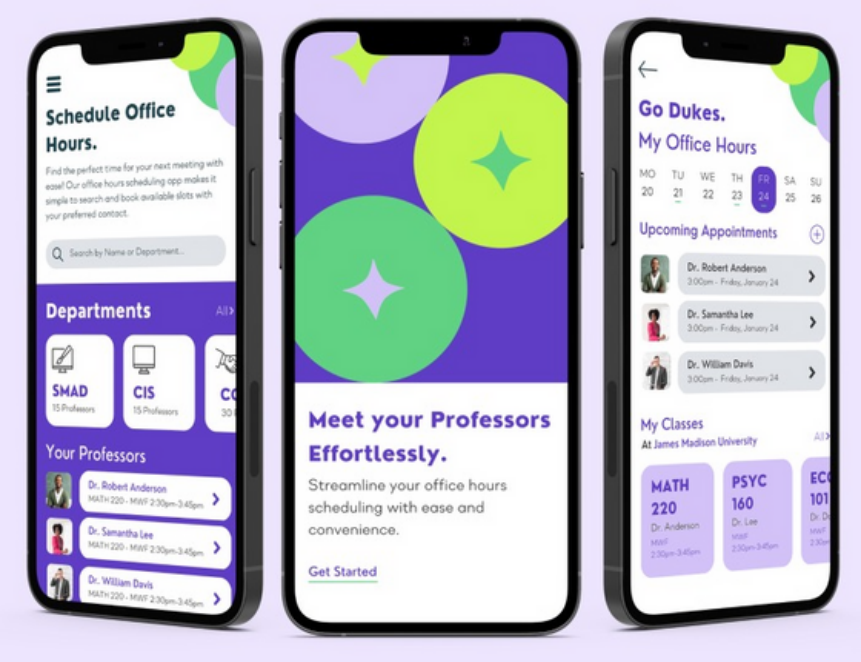
The biggest challenge students faced when scheduling office hours was finding a mutually convenient time for both the student and the professor. Respondents mentioned difficulties with conflicting schedules, class times, and availability, as well as communication issues such as email exchanges and not being able to see all available hours listed and updated. Some students expressed discomfort with the scheduling process, while others reported a lack of familiarity with it.
When asked if they had ever missed an office hours appointment due to scheduling conflicts, 25.5% of respondents said yes. The reasons for missing appointments included conflicts with other mandatory meetings, having class during the scheduled office hours, emergencies, oversleeping, and having a busy schedule with work and other commitments. Some students reported that the teacher's availability did not align with their own, making it impossible to attend office hours.

In terms of app features, respondents indicated that they would like to see an easily navigable interface, the ability to view professors' schedules and availability, a shared calendar, and a notification system for reminders. They also suggested the ability to schedule appointments for specific lengths of time, customization of hours to fit personal schedules, and the ability to see how many other students are scheduled to meet with the professor. The app should be user-friendly and universal, with a design similar to existing scheduling tools such as Calend.ly or Signup Genius.
Respondents considered it important to view the availability of their professors in real-time while scheduling office hours appointments, with an average score of 4.23 on a scale from 1-5. Email was the preferred method of communication with professors for most students (63.8%), followed by in-person communication (27.7%) and phone (7.8%). Respondents also considered the ability to communicate with professors through the scheduling app important, with an average score of 4 on a scale of 1-5.

The majority of students scheduled office hours appointments 2-3 days before, with appointments typically lasting between 10-30 minutes. Respondents considered reminders before scheduled appointments important, with an average score of 4.55. A quarter of students had to reschedule appointments due to conflicts that arose after the initial appointment was scheduled, making the ability to reschedule appointments through the app important, with an average score of 4.34.

The survey also sought to understand what an appropriate penalty for a student who misses a scheduled appointment would be. Responses varied, with some suggesting no penalty or a simple apology, while others suggested a 2 or 3-strike system where students lose the privilege of scheduling appointments if they miss too many.

# UX Documentation




# Github Repository

https://mille6mp.github.io/capstone/