

Date

October 07, 2024

Coffee Spot

Team 03 Members

Miguel Antonio Logarta - **Lead** |

Alan Yu - **Scrum Master** | Diane Bilse - **Front End** |

Halia Tavares - **Front End** | John Bagwell - **Back End** |

Su Tun (Emily Su) - **Git Master** | Timmy Tram - **Back End** |

Milestone 1

User Stories and

High-Level

Requirements

SW Engineering CSC648/848 - Section 01



History Date

Vo.1 9.25.2024

Executive Summary


In today's fast-paced world, finding a productive "third place" (A location outside of home or work) can be a significant challenge for students, freelancers, and professionals alike. From a student looking for a quiet place to focus on their studies, to a remote worker looking for an environment that will foster creativity, or an executive that requires an impromptu locale to meet clients, locating the perfect venue that can fulfill these diverse needs can often be frustrating and time-consuming. On-campus spaces are frequently overcrowded or noisy, while off-campus options often come with uncertainties regarding availability, ambiance, and amenities. Coffee Spot addresses this challenge by offering a reliable solution to help users find the ideal location for their needs.

Coffee Spot is an intuitive and user-friendly application designed to help users discover the ideal third place tailored to their specific needs. By using user input and location data, Coffee Spot will allow users to filter spaces based on Wi-Fi quality, seating availability, and animal friendliness. The application will deliver personalized recommendations, helping users find coffee shops, libraries, and other suitable locations. It also integrates reviews from our users and will update space availability to help users make informed choices.

The novelty of Coffee Spot comes from the crowd-sourced information that the app gathers so that users can help others find the perfect place for their needs. Additionally, the data the app gathers on optimal "third places" will be valuable for businesses and event organizers that want to partner with high-performing venues.

Our team consists of passionate students with a shared vision and a coffee app idea that will be the solution to an everyday challenge. With a blend of technical experience and real-world experience in a cafe, we are committed to delivering a product that will enhance productivity and create a community for our users.

Personas and User Stories





LIFE PHILOSOPHY


"Studying doesn't suck as much as failing."


ABOUT

JULIA

 18

 Associates in Biology

 Student

 San Diego, California

BIO

Julia is a first year student at University of California Davis. She is majoring in Biology and shares a dorm with three other roommates. She often has a hard time focusing due to sharing a dorm which can get noisy.

GENERAL BEHAVIORS

Julia is young and often has trouble waking up early, she tends to study later into the night.

- Wakes up late
- Often is stressed due to her demanding workload
- Reserved and doesn't like loud or busy places
- Tends to procrastinate on assignments

INTERESTS

Julia is a pet lover that hopes to go to veterinary school after graduating from UCSD

- She prefers matcha drinks over coffee
- Julia volunteers at a local animal shelter to gain experience for veterinary school
- She would like to pet sit or dog walk on the side to earn some money
- Cares about sustainability

SKILLS

Julia works well with animals. Although she tends to procrastinate she manages her time well.


- Handling animals like dogs and cats
- Time management to balance social life and school work
- Researching whether it is for her own personal knowledge or essays

PAIN POINTS

Julia finds it difficult to concentrate on her studies at times due to noisy roommates.


- Hard time focusing in her dorm
- Financial instability due to living away from home and not currently having a job
- Missing her pets at home
- Overwhelming amount of school work


As a Student, I want a quiet place to study later in the day so I can do well in my classes despite having noisy roommates. I would use this app to find locations close to campus that have a low noise level rating and are open late to study at. It is also extremely important that these places have wifi and outlets so that I can stay and study for long hours.





ABOUT

MARK

 34

 BA Business Finance

 Financial Analyst

 Houston, Texas

BIO

Mark is financial analyst for a start up company. He often works long hours and on top of that, he has a new born son. Although he loves his family, working from home is becoming difficult because of the chaotic environment. When he's not working he enjoys being in nature and going on hikes with his family.

GENERAL BEHAVIORS

Mark usually starts his days early with a workout and then gets to work.

- Has a cup of coffee and breakfast after his early morning workout
- Tends to be stressed between work and being a new dad
- Plans ahead and stays organized

INTERESTS

Mark enjoys being active and being in nature although his work tends to take away from pursuing his interests.

- Exploring new hiking paths
- Mark is a foodie and likes to post on his social media about food
- Photography of food and nature
- Traveling and exploring new places

SKILLS

Mark is very passionate about his work and is great at managing finances.

- Saving and spending his money wisely
- He is proficient with financial softwares and tools
- Communicating to his coworkers

PAIN POINTS

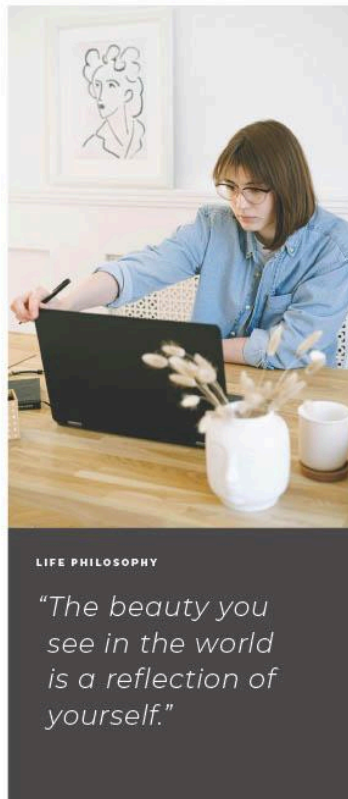
Mark tends to be tired due to having a newborn but still needs to get his work done to provide for his family.

- Overworked and often lacks energy
- Tends to indulge into work and forget to take breaks
- Often works overtime
- Can't focus well, especially in loud environments

LIFE PHILOSOPHY

"Balance is not something you find; it's something you create. Embrace the chaos, and let it fuel your growth."

As a father and full-time employee, I need somewhere close to home where I can get my work done and support my family. I don't mind a moderate amount of noise since I do have occasional meetings. I may disturb an environment with a quiet setting. I would use this app in order to find a place as close to home as possible with very strong wifi. It is important that I am able to get home quickly if my wife needs me.



ABOUT

ALEX

32

BA Graphic Design

Graphic Designer

San Jose

BIO

Alex is a graphic designer who's been working with her company for 4 years. She lives on her own in an apartment with her 3 cats. Although she enjoys alone time, working from home can make her feel isolated from the world and likes to get out as much as she can.

GENERAL BEHAVIORS

Alex lives a simple life focusing on her art and work. She often seeks out inspiration for her projects

- Enjoys drawing on her free time
- Likes meeting new people in public spaces
- Enjoys going to museums or supporting local artists and small businesses

INTERESTS

Alex takes her work seriously and is always looking to improve.

- Logo and brand design
- Photography and capturing images that can inspire ideas for her designs
- Trying DIY projects and upcycling
- Traveling and exploring new places

LIFE PHILOSOPHY

"The beauty you see in the world is a reflection of yourself."

SKILLS

Alex is a very talented artist trying to network and make her name known in the industry.

- Various art and graphic design programs
- Communication with coworkers and clients on what their needs are
- Attention to detail
- Creativity and ability to offer clients varieties of solutions

PAIN POINTS

Alex can have a hard time working from home in isolation.

- Too much alone time
- Creative burnout due to having many projects and deadlines
- Perfectionism and spending too much time on work
- Financial stability due to her cat's living expenses

As a work from home graphic designer, I want someplace where I can meet new people and gain inspiration so I can create better designs for my work. I would use this app to find cafes with a fun and lively atmosphere. I enjoy observing people and their interactions as it gives great inspiration for my work. I don't mind a loud atmosphere and don't need wifi in order to complete my work.

Data Definitions

User Entity

Representation of a user who uses our web app.

Username: A unique identifier used to distinguish each user.

Email: Used for communication, such as account recovery or notifications.

Password: Encrypted and hashed; the primary method for users to authenticate their identity.

Role: Defines user permissions. Regular users can post reviews, while Admin users have the additional ability to moderate content.

Timestamp: The date and time when the user account was created.

Location Entity

Representation of a place listed on our web app.

Name: The name of the point of interest.

Address: The physical location, helping users find and reach the location.

Phone Number: The phone number associated with the location.

Has Wifi: Indicates whether the location offers internet connectivity, relevant for users needing computer access.

Seating Capacity: Provides an indication of whether the location is crowded or has available seating.

Operating Hours: Specifies the hours during which the location is open for users to visit.

Category: Categorizes the location (e.g., cafe, library, park) and is useful for filtering searches.

Rating: Average star rating ranging from 1 to 5 based on users' thoughts/experience. 1 being lowest, 5 being highest.

Busyness Status: 1 to 5 range that indicates how busy a location is on average. 1 being lowest, 5 being highest.

Web Link: A link to a location's official website if they have one. N/A if they do not have one.

Animal Friendliness: Binary; Location either allows a pet or it does not.

Review Entity

Representation of review detailing a user's thoughts.

Username: Identifies the user who posted the review.

Location Name: The name of the location being reviewed.

Description: The content of the review, reflects the user's opinion about the location.

Timestamp: The date and time when the review was posted.

Functional Requirements

1. User functions:

- a. User registration w/ necessary info
- b. User login + logout with password
 - i. Ability to leave reviews on locations
 - ii. Ability to add an instance of location status
 1. E.g. how busy it is etc.
 - iii. Ability to change account info such as password/email

2. Location Owner Functions:

- a. Ability to set images for the location
- b. Ability to add/delete content on regarding their location's information

- c. Ability to see analytics for their location (times clicked, busiest times, reviews, etc...)

3. Admin Functions:

- a. Method to add/delete locations that are not already in the DB
- b. Ability to delete and add content on the website for purposes of moderation
- c. **(OPTIONAL):** Ability to add locations/spaces to a “promoted/sponsored” position in the list system, such as at the top

4. Map functions:

- a. Ability to see locations on a map with pins
- b. Pins are clickable and lead to the location’s information
- c. Locations can also be shown on a list in addition to the map

5. Location Information

- a. Ability to see ratings for a location
- b. Ability to see the address which also opens the user’s preferred map application
- c. Ability to see general accessibility of the location (amenities, busyness, disabled friendly, etc...)

6. Search/Filter function:

- a. Allow a user to try and search using a specific location name
- b. Allow a user to try and search/filter using a specific Category
- c. Allow a user to try and search/filter that has wifi
- d. **(OPTIONAL):** Allow a user to try and search using any location attribute

7. Reservation function:

- a. If the location’s owner allows it, users can reserve a spot such as a study room
- b. Links that lead to the location’s website for further information and additional functions not available in our app.

Non-Functional Requirements

1. Compatibility:

- Application can be used on several mobile browsers including Chrome and Mozilla Firefox. Additionally, since a large majority of younger adults use an iPhone, support for Safari browsers is also a must.

2. Development Requirement:

- Database data shall be stored in a Mongo Atlas Database instance
- Large files will be stored in Amazon S3.
- The master branch of the team's GitHub repo will be the production/deployment branch. Any changes pushed to this branch shall undergo prior testing to prevent any changes that cause our production environment to crash.
- We will leverage CI (Continuous Integration) to speed up our deployment process
- New features being developed by our team will be split into their own branches (feature1, feature2, feature3, etc...). Once these features are finished, they are merged into our development branch and then pushed to our production branch.

3. Fault Tolerance:

- Should a system failure occur, the program needs to self-recover in five minutes, enabling users to resume their prior session without any disruption or loss of data.

4. Localization:

- The application should allow users to easily switch between several languages, such as English, Spanish, etc.
- In the app settings, users will easily find a “Language” dropdown, then they can choose their preferred language

5. **Performance:**

- With an anticipated user base of 10,000 active users, the program must answer user inquiries (such as locating the study place) in less than two seconds, even during peak usage hours.

6. **Accessibility:**

- The application must adhere to accessibility guidelines in order for users with disabilities - such as those with visual impairments- to properly utilize screen readers and other assistive technology to interact with the application.

7. **Security:**

- The user’s passwords shall be stored in encrypted form.

Competitive Analysis

Competitor's Feature (Yelp, Google)	Our Feature
Basic capacity number	Enhanced seating capacity tracker
General recommendations	Personalized recommendations
Omits WiFi information	Highlights WiFi
General reviews	Study specific reviews/ratings

Our app will cater specifically to those who invest their time working in a space they love and are comfortable in. The ability to see a location's capacity allows our users to plan their time accordingly and help the spot itself stay less crowded. Other apps have been created to focus only on college campuses, however, we strive to cover the whole city. Highlighting qualities such as WiFi and seating availability gives our users assurance in where they choose to go. Personalized recommendations help users find new favorite spots and give variety based on their specific needs. User's reviews can help others find areas such as cafes, parks, libraries, and other public spaces to go there specifically to work and study. Competitors such as Yelp or Google search broadly for restaurants, cafes, and other shops, while our app focuses specifically on quality study spaces. By catering to students, workers, and professionals alike, our app addresses their needs to give them well-tailored options.

High-level System Requirements

Main software component tools used for this project:

- File Hosting: Amazon AWS
- Operating System: Linux Ubuntu 24.04.1 LTS
- Database: MongoDB Atlas 7.0.14
- Back-end Technology: Next.js 14^ (primary), Node.js, Express
- Front-end technology: React.js -> Next.js 14^
- Web server: Vercel
- Typescript
- Testing Library: Jest
- UI Library: Tailwind CSS
- Authentication Library: NextAuth.js

Additional tooling:

- IDE: Visual Studio Code
- Figma (Front-end design tool)
- Trello (Project management tool)

List of supported browsers:

- Chrome (Chromium-based browsers)
- Firefox (Gecko-based browsers)
- Safari (Webkit-based browsers)

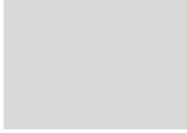
Team

Team Member and Role	Study Plans
Miguel Antonio Logarta - Lead	<p>Milestone 1: I will learn Next.js in the first 2 weeks after the M1 announcement</p> <p>Milestone 2: I will learn MongoDB Atlas after Next.js, and I will try to integrate it into Vercel and Next.js.</p> <p>Milestone 3: I will begin to use Prisma with Next.js.</p>
Alan Yu - Scrum Master	<p>Milestone 1: I will learn how to deploy with Vercel with MongoDB as my database within the next 2 weeks</p> <p>Milestone 2: I will be comfortable enough to Demo to the team how to deploy with Vercel before M2 concludes</p>
Diane Bilse - Front End	<p>Milestone 1: I will learn Tailwind CSS and review Next.js and TypeScript in the first 2 weeks after the M1 announcement.</p> <p>Milestone 2: I will integrate my learning to create a simple front-end design.</p> <p>Milestone 3: I will be comfortable enough to demo to the team how to style web apps with Tailwind CSS.</p>
Halia Tavares - Front End	<p>Milestone 1: I will become fluent in figma to be able to work on wireframing for M2 as well as study tailwind and typescript</p> <p>Milestone 2: I will focus on becoming comfortable with Next.js</p> <p>Milestone 3: Will begin designing the UI/UX through</p>

	next.js and tailwind
John Bagwell - Back End	<p>Milestone 1: Get more familiar with MongoDB Atlas + Prisma, Next.js + NextAuth. Get started on a personal practice project which focuses on login/password auth and connecting to a simple database.</p> <p>Milestone 2: Continue working on personal practice projects. After finishing the back-end for the project, learn tailwind/css.</p> <p>Milestone 3: Finish practice project and make sure all requirements are met and make sure they are in-line with the requirements for the actual project to make things easier when working on it.</p>
Su Tun (Emily Su) - Git Master	<p>Milestone 1: I'll focus on learning the basic knowledge of NextJS and also learn how to build fullstack react with NextJS.</p> <p>Milestone 2: I will begin working with data fetching, client components, server components and more.</p> <p>Milestone 3: I'll become familiar with all of the essential Next.js features including file-based routing, authentication and pre-rendering.</p>
Timmy Tram - Back End	<p>Milestone 1: I will learn the basics of CRUD using Prisma as well as filtering and pagination</p> <p>Milestone 2: I will learn the Credentials Provider in NextAuth and if time permits, then I will try to learn Google Provider so we can have oauth logins.</p> <p>Milestone 3: Begin implementing some of the functional requirements as well as authentication.</p>

Checklist

Status	Item
Done	Team found a time slot to meet outside of the class
Done	Scrum Master shares meeting minutes with everyone after each meeting.
Done	Github master chosen
Done	Everyone sets up their local development environment from the team's git repo.
Done	Team decided and agreed together on using the listed SW tools and deployment server
Done	Team ready and able to use the chosen back/front-end frameworks.
Done	For each technology (front/back-end/DB/cloud) , team decides who will lead the study of each technology and what will be the specific goal of the study within one month from the M1 announcement.
Done	List a detailed study plan
Done	Team lead ensured that all team members read the final M1 and



agree/understand it before submission