HookUp!

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Declaration of Sole Authorship

We, HookUp! Team, confirm that this work submitted for assessment is our own and is expressed in our own words. Any uses made within it of the works of any other author, in any form (ideas, equations, figures, texts, tables, programs), are properly acknowledged at the point of use. A list of the references used is included.

(Software Engineering)

Date: 12/14/2018

Abstract

Big cosmopolitan cities are usually home to a large scale of businesses, events, fairs, attractions and gastronomy. By having such a large variety of places of interest, tourists, newcomers, and even residents may get frustrated by the amount of time spent mining the internet to build an entertainment schedule that suits their availability and budget. In front of such situation, an opportunity was identified to take hold of potential customers that are both looking for a person to date and willing to discover a good place to have fun. By gathering all relevant variables related to personal preferences and life goals, users can be matched with people whose tastes and ideas converge, and as a bonus, are prearranged with the place where the date is going to occur. Users are provided with a new dating experience, and local businesses are offered a new marketing and sales medium to reach a large scale of customers. This document presents the platform whose objective is to seize the business opportunities herein detailed. HookUp! is presented as an application that will be primarily available on the Web, with subsequent platform compatibilities added as demand requests.

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1.0 INTRODUCTION

After a long and busy day, it is common that a person would crave for a good relaxation time. However, finding a good company and a good place can be challenging. There is a wide assortment of restaurants, nightclubs, bars, parks and malls; however, the more diverse, the more difficult it is to choose amongst these options. At the same time, it is not always easy to find someone who shares the same interests.

While there is a vast collection of dating applications currently available for every platform, they are only able to connect two people, not evaluating whether there is any profile compatibility in terms of interests and preferences. Additionally, after two people are matched, the application has no control as to where their date is going to take place, failing to take advantage of this marketing opportunity.

HookUp! is an application that aims to address the aforementioned scenarios, providing users with customized dates based upon their personal likings, not only being able to match two different people, but also connecting them to a place where their date can occur, such as events, restaurants, bars, parties, concerts, expositions, and more. Users are provided with an exciting dating experience, being allowed to plan the date directly from the app in one seamless operation. Additionally, businesses are provided with an unprecedent sales channel that

catches customers as soon as they are made available.

It is included on HookUp!'s system capabilities:

- Storing and managing a large scale of registered users.

- Collecting users' data and personal preferences in terms of entertainment options and people they would like to meet.

- Storing venues, places, and events in a database.

- Retrieving data from venues, places, and events according to the users' preferences.

- Creating a date schedule based on users' preferences.

It is not included on HookUp!'s system capabilities:

- Partner update its business profile or revoke the partnership agreement. These functionalities are not included because we optimize the solution by directing the analysis of documentation and revoking with the administrator through e-mail.

- Mate can block or unblock another mate. It is not included because once the mates meet each other, the system will not offer the same option of mate again, which means that there is no point to block or unblock someone who will not appear in your list again.

- Mate can rate a Partner. Even though is not included on the first releases, it is a feature that is planned to be included in the future.

It is anticipated that the rolling out of this system will provide the following benefits:

- One single platform to combine both the possibility of finding a person to go out with as well as a place or venue to visit.

- All relevant information regarding places and venues that may be relevant to the user is now centralized in one user-friendly platform.

- Attractions, events, venues, theaters, restaurants, and others are provided with a unique and centralized channel.

- Attractions, events, venues, theaters, restaurants, and others are provided with a new marketing medium that allows for greater reach for new potential customers.

- Users are provided with a unique and unprecedented experience.

Regarding to the problems faced during the development of the project, the database architecture was the major one. The fact that we stepped in directly to the development stage without having a solid modeling phase, impacted on the subsequently phases of the project. As a result, the further we advanced with the project, the more adjustments we had to deal with the database' architecture.

A unique approach has been used on this project. We have made a clear division of work among the team members, simulating a real IT workplace environment. On this way, we could explore the maximum of each one's skills and capabilities.

Everyone has contributed according to their fields of interest and we had engagement and positive results. The team is composed by three developers, one database specialist, one product owner and one UI/UX.

2.0   METHODOLOGY AND RESULTS

2.1   Literature Review

Currently, there is no application fully recognized on the market that match two different people and connect them to a place where their date can occur. However, there are well-established players that are good at promoting only the dating role. From this perspective, the player which is the major one in our business venture is Tinder. Other dating applications such as EHarmony and Match.com, although they are also dating applications, they do not offer real threat since their approach and major public are different as HookUp!'s and Tinder's.

Tinder was launched in 2012 and its main strengths are the fact that is not time-consuming, awkward or serious (Lee, 2018). Users do not spend time because they use their own Facebook profiles to login on Tinder, which means that they do not have to fill out forms with their information or upload their pictures, once everything will be imported from Facebook (Lee, 2018). It is not awkward because Tinder has promoted a positive environment in which two users have to like each other in order to start talking and have a date. If a person likes another and the other does not like he or she back, it is not possible to start chatting or dating (Lee, 2018). Tinder debunked the stigma of dating apps about being something to be used as a secret and to be shared only with close friends. Due to its informality, it has become more a conversation-starter than to find a loved

one (Lee, 2018).

Regarding to the Tinder's weaknesses, the lack of time-consuming, the

possibility of geolocate the user and the encryption format also generate

vulnerabilities. First, the fact that Tinder's account is created by using the user's

Facebook public information and pictures, make easy from Tinder's users to find

out all other social network accounts belonging to a specific user. Consequently,

with all information of the user on hands – such as first and last name, place of

working, place of living and others -, it is one step to harass he or she throughout

the webspace (Hackett, 2017). As a result, to create an account is not time-

consuming, but it can be psychologically consuming. Second, as Tinder works

with geolocation to triangulate and offer options of dates nearby, it can be risky to

the users' privacy and security (Hackett, 2017). Third, there is a vulnerability in

the way where the encryption traffic works. According to Hackett (2017), Tinder

uses barebones HTTP, which is more vulnerable than the HTTPS used by most

of the apps. According to this author, if a Tinder's user tries to access the app on

a not secure Wi-Fi network, there is a considerable chance that the

eavesdropper sees the user's activities on the application.

2.2   Proposed Solution

In order to innovate within the dating application market, HookUp! is emerging

with a proposal of keeping the essence of dating, which is swiping and finding a

match according to the user's preferences, but also presenting a differential by connecting the users to a place where their date can occur, such as events, restaurants, bars, parties, concerts, expositions, and more.

The greatest strengths presented by HookUp! application is the fact that matches are filtered based on user's preferences, the opportunity to function as a business-to-business channel and the less likelihood to expose greater user data. As opposed to the current major player Tinder, HookUp! has a form to be filled out by the users with the purpose to refine the mates that will be displayed as options of match. On this way, mates will not be displayed on the screen randomly, but they will appear on the screen if their preferences match with the other mates. Initially, it can sound time-consuming to fill out a form, but is more accurate and effective to find a match that really fits with users' style. Another strength in comparison to other dating applications is HookUp!'s proposal of function as a business-to-business channel. As HookUp!'s target is also stablishing partnerships with places and venues that will be suggested to the users according to their preferences, the application will be performing an important role as a medium to reach out large portion of users. Another strength of the application is security. The more the technology develops, the more exposed the personal information become. In order to mitigate that phenomena, HookUp! does not use geolocation to match people; instead, the mates must fill out on the form information about the country and city that they live. On this way, it is harder to hackers trace the users' location by triangulation of geolocation.

Moreover, HookUp! is not associated with Facebook, Google or any external account, which makes harder to HookUp!'s users find out other social network accounts of other users. Furthermore, HookUp! does not provide the feature of mates texting each other throughout the application, which avoid leaking or exposure of the messages' content.

HookUp! has items to improve on. The application is not generating reports automatically, which means that it will be difficult to track the main audience that is using the app and their preferences. Another point is that because the app does not include geolocation, it is difficult to provide an entertainment option that fits in terms of commute for both mates. The app asks about the city, state/province and country, but it does not know in which point of the city the mates are located. Another weakness is that for security reasons, HookUp! just allows the upload of one picture. If one of the criteria to give a match to another person is to be able to see as much of the physical appearance as possible, only one photo may be not enough to have an idea.

In regard to the architecture, the following System Architecture Diagram illustrates HookUp!'s design at a high-level perspective.
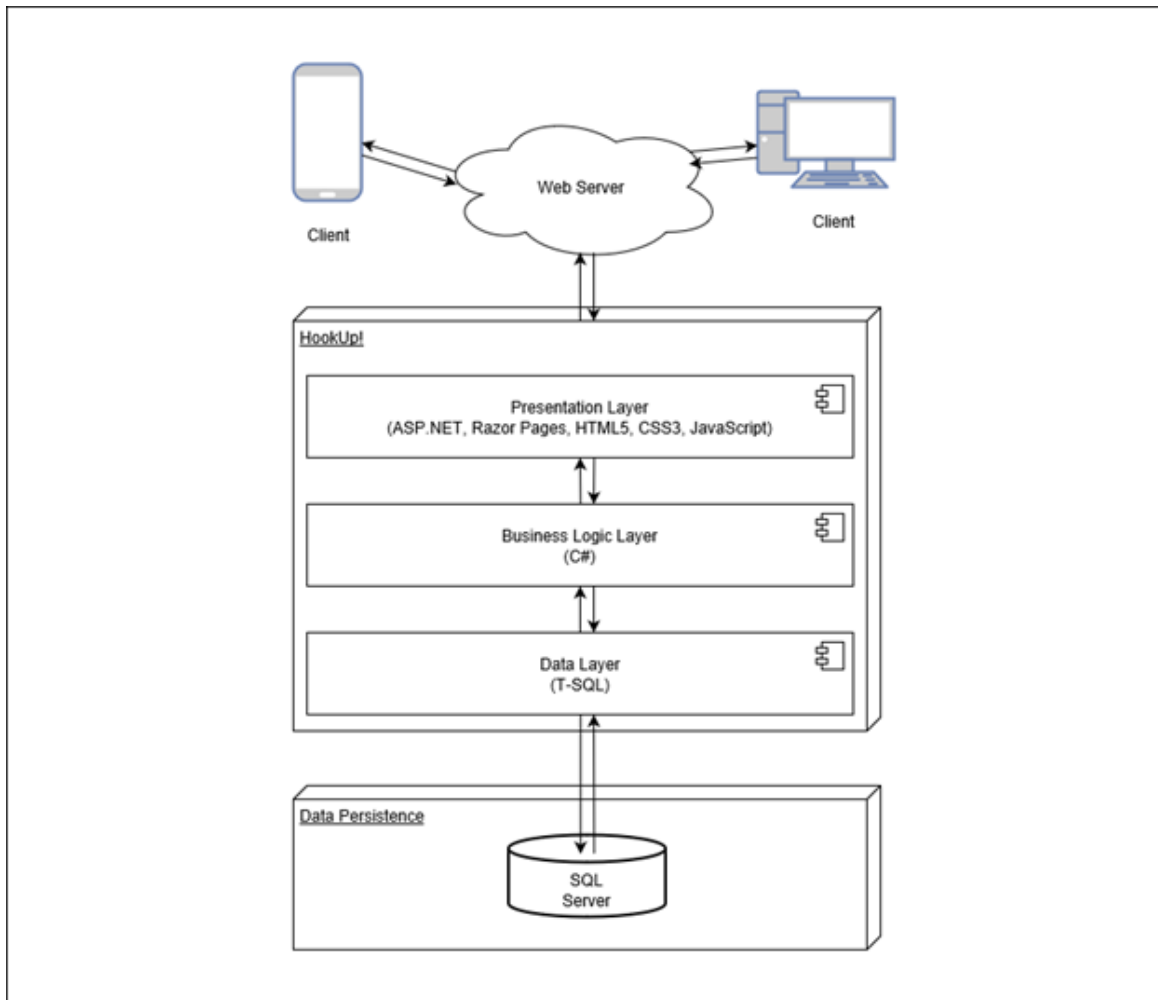
Figure 1: HookUp! System Architecture Diagram

Clients, which are considered to be either smartphone browsers or computer browsers, communicate directly with the web server, which in turn responds to all requests by interacting with the application.

HookUp! is implemented with the Repository Design Pattern. The chosen design results in structured, organized layers that provide soft-coupling between individual components, allowing for better integration, maintainability and scalability. At a high level, the system incorporates 3 primary layers: A

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presentation layer, a business logic layer, and a data layer.

The presentation layer holds the responsibility of displaying information to users, by responding to requests made via web-browser and handled by the web server. All information is translated into a graphic interface in accordance to the latest web standards in terms of UX/UI.

The business logic layer houses the logical gears that allow for events and interactions take place in the system. When a user interacts with the graphical interface, the controllers in the logic layer is responsible for interpreting that input, handling the logical sequence of events, dealing with data (if necessary), and sending back to the presentation layer the result of the original request. The presentation layer never interacts with the data layer directly, as this is the exclusive responsibility of the business logic layer.

The data layer accommodates all data structure and basic logic necessary to maintain users' data and respond to requests made by the business logic layer. Its main responsibility is to communicate with the database, and translate data objects into logical objects, which in turn are used by the business logic layer to create the views that are presented to the user. Its main responsibility is to define the tables, queries, fields and records that are necessary for the seamless execution of all different workflows that interact with data. Ultimately, it performs all CRUD (create, retrieve, update and delete) operations against the database in

order to assure appropriate data persistence. It is the only layer that carries the responsibility of communicating with the database.

Finally, the Data Persistence element in the architecture represents the database itself, which is designed in accordance to the needed entities that are present in the HookUp! ecosystem. It holds all tables that are responsible for storing information regarding users, locations, dates, matches, user preferences, registration information, among others.

2.3 User Role Modelling

2.3.1 Brainstorm and Group

The results of the brainstorming session for identifying initial user roles and how they are organized can be seen on the Figure 2.
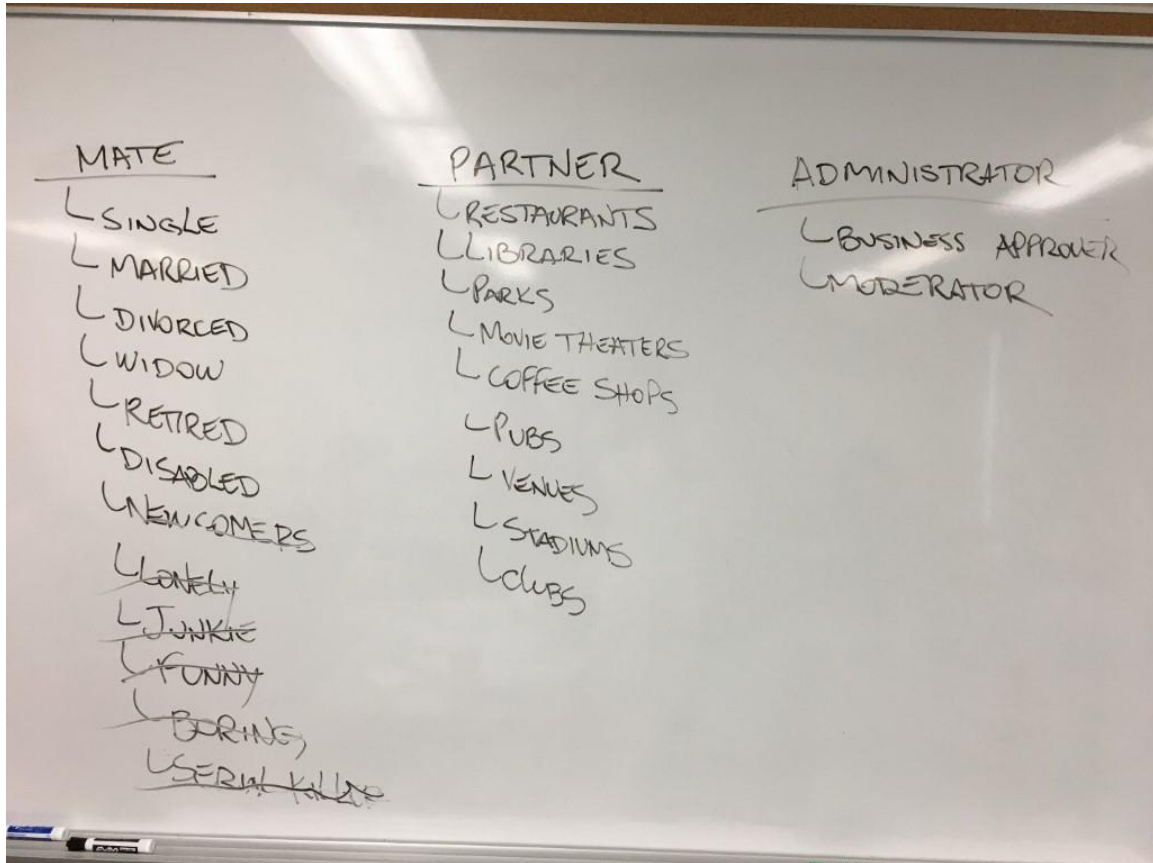
Figure 2: Organizing the user role cards on a table [1].

The initial set of identified user roles was reviewed and reorganized. Some roles were found to be very similar. Others were disregarded because they were considered too broad or not worth focusing on during the app development.

2.3.2 Consolidated User Roles

After a closer examination of the resulted cards and their relationships, the team has decided on removing some roles as being repetitive, or redundant.
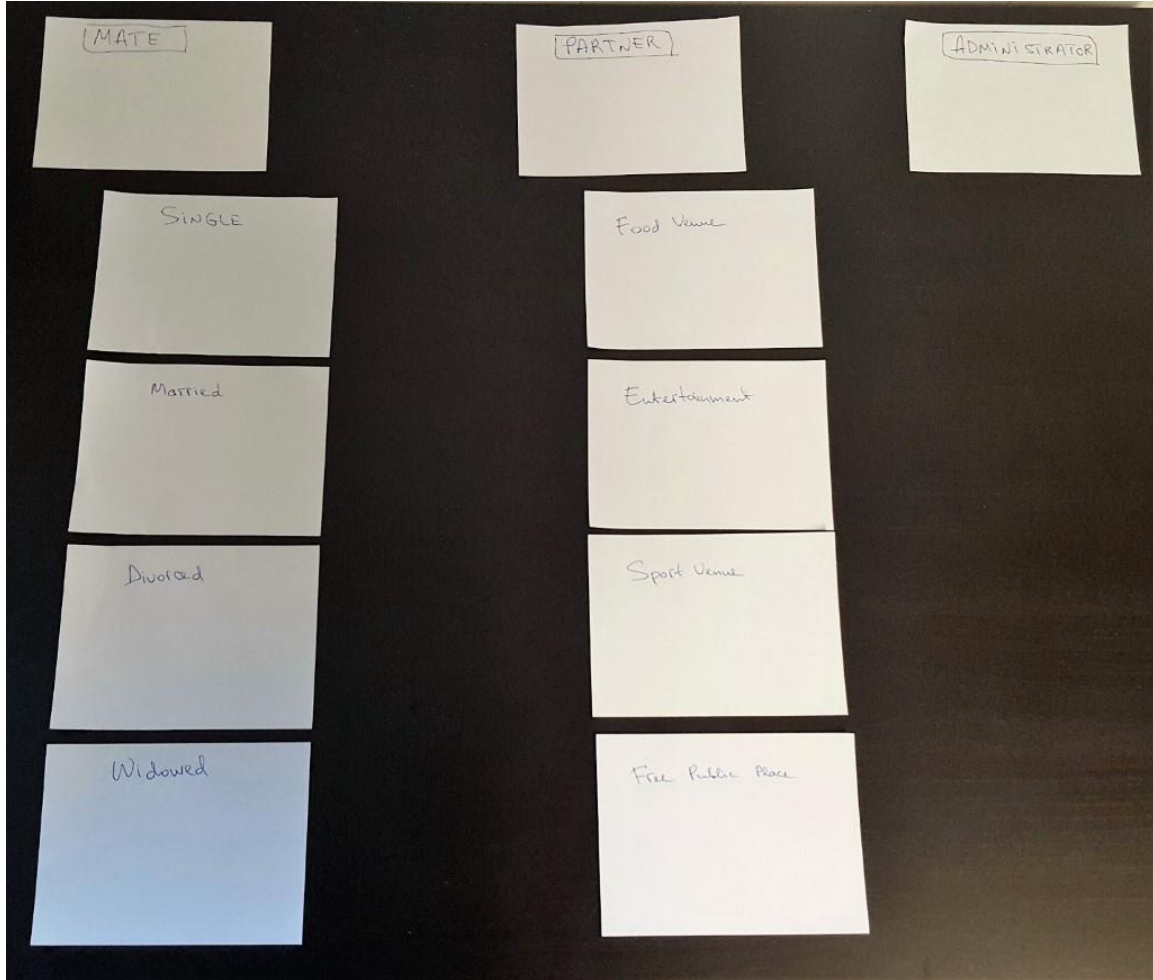
Figure 3: The consolidated role cards [1].

Consolidated roles:

"Lonely" was consolidated with the remaining groups (Single, Divorced, Married) as the team considered that the majority of app users will feel "lonely" at some

point, so it's rather a characteristic peculiar to all prospective app users.

"Newcomers" was consolidated with the remaining groups as well, as any newcomer at any point will probably be either single, divorced, married or widowed.

"Restaurants", "Pubs", "Clubs" and "Coffee Shops" were consolidated under "Food Venues" because they'd attract users with the same purpose – going to an eating place.

"Movie theaters" and "Venues" were consolidated together under "Entertainment". "Libraries" and "Parks" were consolidated under "Free Public Places". The team recognizes the fact that the last two consolidated groups might encompass more examples of locations as the app develops and the business partner list grows.

"Business Approver" and "Moderator" were consolidated under the more general name "Administrator", there being no reason in distinguishing between minor types of administrators and functions that they will perform.

Discarded roles:

The team has decided on removing the attributive adjectives "Funny", "Boring" as they could be related to any user at a point of time and represent rather

temporary characteristics.

"Retired" and "Disabled" were discarded because the functionality that this group might require (increase font, voice commands are supplied by the OS and don't need implementation.

"Junkie" was dropped as not being relevant.

"Serial Killer" was dropped at this point because the team has decided to focus on major user roles. Being an extreme character, it might be considered later on.

2.3.3 Description of User Roles and Persona

	Single
The frequency with which the user will use the software.	More than once a week.
The user's level of expertise within his/her domain.	High proficiency, however user's domain is not relevant to the app being developed.
The user's general level of proficiency with computers and software.	Low to Moderate depending on previous exposure to computers, software, as well as depending on the age group.
The user's level of proficiency with the software being developed.	Low to Moderate proficiency depending on previous exposure to similar dating apps.
The user's general goal for using the software.	Finding new mates for dating or starting a friendship.

	Married
The frequency with which the user will use the software.	More than once a week.
The user's level of expertise within his/her domain.	High proficiency, however user's domain is not relevant to the app being developed.
The user's general level of proficiency with computers and software.	Low to Moderate depending on previous exposure to computers, software, as well as depending on the age group.
The user's level of proficiency with the software being developed.	Low to Moderate proficiency depending on previous exposure to similar dating apps.
The user's general goal for using the software.	Finding new mates for dating or starting a friendship. Most probable scenarios: - Not happy with current relationship - Happy with current relationship, but looking to have fun

	Divorced
The frequency with which the user will use the software.	More than once a week.
The user's level of expertise within his/her domain.	High proficiency, however user's domain is not relevant to the app being developed.
The user's general level of proficiency with computers and software.	Low to Moderate depending on previous exposure to computers, software, as well as depending on the age group.
The user's level of proficiency with the software being developed.	Low to Moderate proficiency depending on previous exposure to similar dating apps.
The user's general goal for using the software.	Finding new mates for dating or starting a friendship. Most probable scenarios: - Looking for serious relationship - Looking to have fun because is tired of serious relationships

	Widowed
The frequency with which the user will use the software.	More than once a week.
The user's level of expertise within his/her domain.	High proficiency, however user's domain is not relevant to the app being developed.
The user's general level of proficiency with computers and software.	Low to Moderate depending on previous exposure to computers, software, as well as depending on the age group.
The user's level of proficiency with the software being developed.	Low to Moderate proficiency depending on previous exposure to similar dating apps.
The user's general goal for using the software.	Finding new mates for dating or starting a friendship. Most probable scenarios: - Looking for a distraction as a way of coping with the solitude - Looking for another serious relationship

	Food Venue
The frequency with which the user will use the software.	Once per month or more frequently if the information has to be updated.
The user's level of expertise within his/her domain.	High proficiency
The user's general level of proficiency with computers and software.	Moderate proficiency
The user's level of proficiency with the software being developed.	Low to Moderate proficiency
The user's general goal for using the software.	Advertising the business and getting more visitors.

	Entertainment
The frequency with which the user will use the software.	Once per month or more frequently if the information has to be updated.
The user's level of expertise within his/her domain.	High proficiency
The user's general level of proficiency with computers and software.	Moderate proficiency
The user's level of proficiency with the software being developed.	Low to Moderate proficiency
The user's general goal for using the software.	Advertising the business and getting more visitors.

	Sport Venue
The frequency with which the user will use the software.	Once per month or more frequently if the information has to be updated.
The user's level of expertise within his/her domain.	High proficiency
The user's general level of proficiency with computers and software.	Moderate proficiency
The user's level of proficiency with the software being developed.	Low to Moderate proficiency
The user's general goal for using the software.	Advertising the business and getting more visitors.

	Free Public Space
The frequency with which the user will use the software.	Not applicable as this category of "business partner" will be represented by app developers.
The user's level of expertise within his/her domain.	
The user's general level of proficiency with computers and software.	Developers will import the free public spaces to the app.
The user's level of proficiency with the software being developed.	
The user's general goal for using the software.	Free public spaces will be imported automatically to the app by app developers.

	Administrator
The frequency with which the user will use the software.	On a daily basis
The user's level of expertise within his/her domain.	High proficiency
The user's general level of proficiency with computers and software.	High proficiency
The user's level of proficiency with the software being developed.	High proficiency. Owner of the software being developed.
The user's general goal for using the software.	Administrating registered business partners and mates. Resolving conflicts between mates, mates and business partners, partners and the app.

2.3.4 Additional Documentation

This section includes the file name and link for the first video from the workshop in which our team:

1. Brainstormed for the initial set of user roles.

2. Organized the initial set of roles.

3. Consolidated and condensed the roles.

4. Generated detailed description of each consolidated role.

Video 1

File Name: HookUp! Week1

URL to the video in the shared folder: https://centennialcollegeedu-my.sharepoint.com/:v:/g/personal/lparent2_my_centennialcollege_ca/EUqcLuE8jchIlQDGIyI3KJkBr2FLechHGoEU27Ka--DbOg?e=E0mJPo

2.4   Release 1.0

2.4.1 User Stories

Low-fidelity prototype for mate:
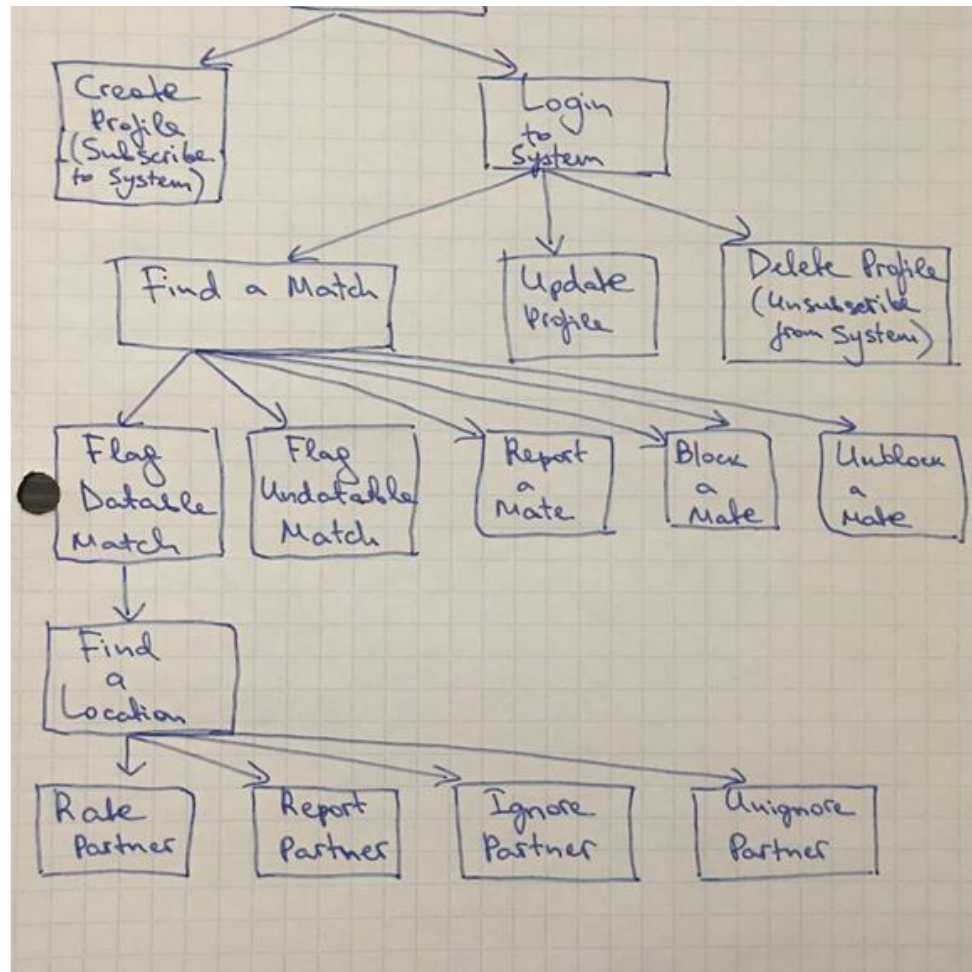
Figure 4: Low-Fidelity Prototype for Mate

Low-fidelity prototype for partner:
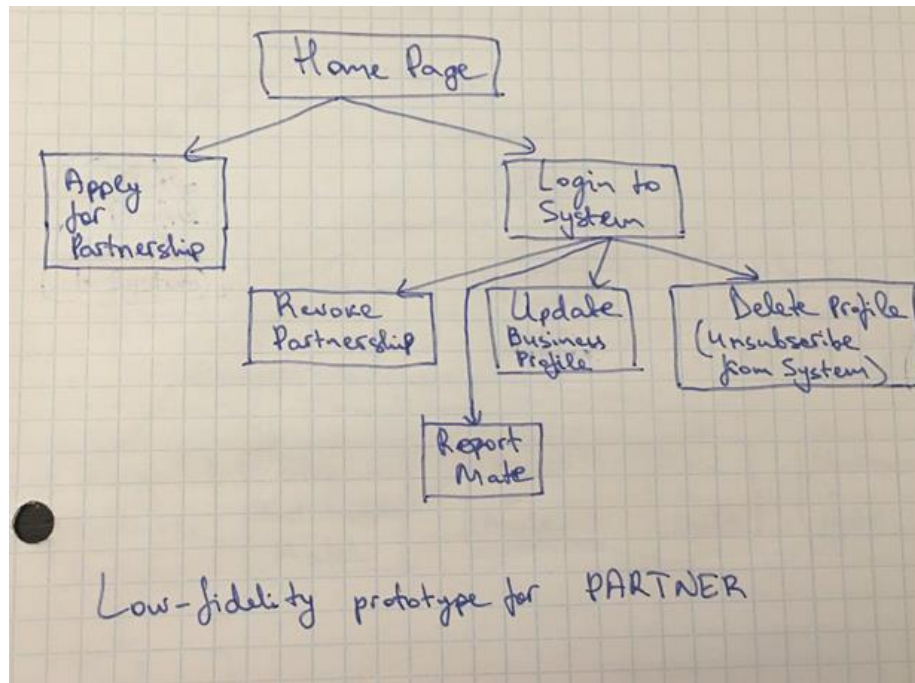
Figure 5: Low-Fidelity Prototype for Partner

Low-fidelity prototype for administrator:
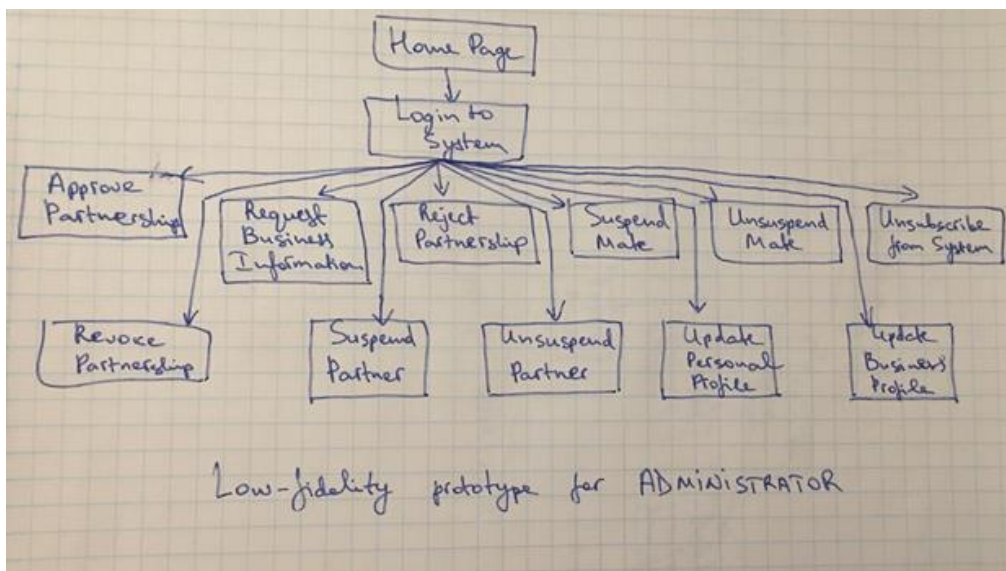
Figure 6: Low-Fidelity Prototype for Administrator

Estimates of stories

1	2	3
Login to System (all)	Update Business Profile (by Admin)	Find a Match (by Mate)
Update Personal Profile (by Admin)	Subscribe to System (all)	Apply for Partnership (by Partner)
Unsubscribe from System (by Admin)	Ignore Partner (by Mate)	Approve Partnership (by Admin)
Revoke Partnership (by Admin)	Unignore Partner (by Mate)	
Update Personal Profile (by Mate)	Unblock Mate (by Mate)	
Reject Partnership (by Admin)	Request Business Information (by Admin)	
Report Partner (by Mate)	Update Business Profile (by Partner)	
Report Mate (by Mate)	Suspend Mate (by Admin)	
Suspend Partner (by Admin)	Block Mate (by Mate)	
Unsuspend Partner (by Admin)	Flag Datable Match (by Mate)	
Revoke Partnership (by Partner)	Flag Undatable Match (by Mate)	
Unsuspend Mate (by Admin)	Rate Partner (by Mate)	
Unsubscribe from System (by Mate)		

User Stories: Administration Subsystem

Approve Partnership

As an Administrator, I want to be able to approve a Partner as soon as the

partner details are submitted online, so that Mates have a large set of locations

to choose from.

Acceptance Criteria:

1. Administrator must be logged in the subsystems.

2. Partner information must be received and stored in the system.

3. A notification must be sent to Administrator when an application is received.

4. A new partner account should be created.

Request Business Information

As an Administrator, I want to be able to request business information from Partner, so that the complete information is stored on every Partner.

Acceptance Criteria:

1. Administrator must be logged in to the subsystem.

2. Administrator is able to create an additional information request.

3. Administrator is able to indicate all missing documents.

4. Administrator is able to send to Partner a request for additional information.

5. An email is sent out to Partner providing them with an URL with a form to submit missing documents.

Reject Partnership

As an Administrator, I want to be able to reject a Partner if the details provided by the Partner do not conform to our partnership criteria or a Partner did not respect the partnership agreement, so that the application only suggests verified businesses.

1. Administrator must be logged in to the subsystem.

2. Administrator is able to view a list of Partners.

3. Administrator is able to select a Partner.

4. Administrator is able to write and send a warning to the Partner notifying them about the agreement clause that is not being fulfilled.

5. Administrator is able to cancel the partnership with the Partner.

<u>Suspend Mate</u>

As an Administrator I want to be able to suspend a Mate if there are enough reasons proving their infringement of HookUp!'s Terms and Conditions, so that other Mates do not feel threatened or unsafe when using the application or meeting other Mates.

<u>Acceptance Criteria:</u>

1. Administrator must be logged in to the subsystem.

2. Administrator is able to view the reasons why other Mates previously have reported the given Mate.

3. Administrator is able to contact Mate to request his/her view on a given situation, should the need be identified.

4. Administrator is able to suspend Mate for a given amount of time or definitely.

Unsuspend Mate

As an Administrator I want to be able to unsuspend a Mate if I am convinced there was no infringement of HOOKUP!'s Terms and Conditions, so that the Mate under review is not suspended for unmotivated reasons.

Acceptance Criteria:

1. Administrator must be logged in to the subsystem.

2. Administrator is able to view the reasons why other Mates previously have reported the given Mate.

3. Administrator is able to contact Mate to request his/her view on a given situation, should the need be identified.

4. Administrator is able to unsuspend Mate for a given amount of time or definitely.

Suspend Partner

As an Administrator I want to be able to suspend a Partner if there are enough reasons proving their infringement of HOOKUP!'s Partnership Agreement. I shall be able to suspend a Partner, so that HOOKUP! is able to deliver suggestions for verified businesses to Mates and our partnership agreements are dully fulfilled.

Acceptance Criteria:

1. Administrator must be logged in to the subsystem.

2. Administrator is able to view a history of previous issues raised with the Partner.

3. Administrator is able to contact the Partner in order to clarify existing

issues.

4. Administrator is able to suspend Partner for a given amount of time (until certain conditions are met) or definitely.

<u>Unsuspend Partner</u>

As an Administrator I want to be able to unsuspend a Partner if they have met and accepted the modifications required by Administrators. I shall be able to unsuspend a Partner, so that HOOKUP! resumes offering suggestions for their business through our application.

<u>Acceptance Criteria:</u>

1. Administrator must be logged in to the subsystem.

2. Administrator is able to view a history of previous issues raised with the Partner.

3. Administrator is able to view the steps made by Partner to solve the raised issues.

4. Administrator is able to unsuspend Partner.

User Stories: Authentication Subsystem

<u>Login to System</u>

As a user of the app, I want to be able to login to the system, so that I can have access to further provided functionalities.

1. Authentication form should be available.

2. User must enter correct credentials. Credentials include the login chosen during subscription to the system and latest recorded password with the system.

3. System must display additional information with possible fixes when the login attempt is unsuccessful.

4. User may change the password, provided that they can first login to the system using the existing one.

5. System should display a confirmation message confirming a successful login.

User Stories: Subscription Subsystem

Subscribe to System

As a Mate, I would like to be able to register with HOOKUP! application, so that I can find other Mates and date locations based on the preferences that I specify in my profile.

Acceptance Criteria:

1. Registration form has to be ready.

2. Mate should provide information for every field that is marked as required.

3. All fields should successfully pass validation.

4. Mate is able to upload a profile picture.

5. Mate is able to set preferences regarding another Mate.

6. Mate is able to set preferences regarding a business.

7. Mate is able to create an account with the system.

Update Personal Profile

As a Mate, I want to be able to update my personal profile on HOOKUP! application, so that it reflects the latest information about me, my preferences about a Mate and my preferences about a business.

Acceptance Criteria:

1. Mate must be logged in to the system.

2. Update Profile form has to be ready.

3. Mate is able to update information related to their profile.

4. Updated information must pass validation.

5. Mate is able to update and save their profile in the system.

Unsubscribe from System

As a Mate, I want to be able to unsubscribe from system by deleting my profile and removing my account, so that I can ultimately control all the data that I share with the system.

Acceptance Criteria:

1. Mate must be logged in to the system.

2. Unsubscribe form has to be ready.

3. Mate is able to send an unsubscribe request.

4. Mate is able to remove their account and all information related to their

account.

Update Personal Profile

As an Administrator, I want to be able to update the personal profile of any Mate on HOOKUP! application should a Mate make a request for update. I shall be able to do this, so that I can assist a Mate in updating their profile and create a pleasant user experience for them if a Mate is not able to update the information themselves for any reason.

Acceptance Criteria:

1. Administrator must be logged in into the system.

2. Update Profile form has to be ready.

3. Administrator is able to access a Mate's profile.

4. Administrator is able to update information related to a Mate's profile.

5. Updated information must pass validation.

6. Administrator is able to update and save a Mate's profile in the system.

Unsubscribe from System

As an Administrator, I want to be able to unsubscribe a Mate from system by deleting their profile and removing their account if they express the wish to have their account removed. I shall be able to do this, so that I can assist a Mate in unsubscribing from system and removing their account and any information related to it in order to create a pleasant user experience if a Mate is not able to remove the information themselves for any reason.

Acceptance Criteria:

1. Administrator must be logged in to the system.

2. Unsubscribe form has to be ready.

3. Administrator is able to place an unsubscribe request for any Mate's profile.

4. Administrator is able to remove a Mate's account and all information related to their account.

User stories: Partnership Subsystem

Apply for Partnership

As a Partner, I want to apply for partnership so that my business can be suggested to more Mates through the application, ultimately allowing me to reach out to Mates to come use the services I am offering.

Acceptance Criteria:

1. Application form must be available online with all the terms and regulations.

2. Partner is able to upload business pictures and files (licenses, permits etc.) to be reviewed.

3. Partner is able to set multiple locations for each business.

4. Partner is able to determine a contact person per business/per location.

5. Emails must be sent to notify of the application status.

Update Business Profile

As a Partner, I want to be able to update my business profile, so that there is the most recent information about my business in the system.

Acceptance Criteria:

1. Partner must be logged in into the system.

2. Update business profile form has to be available.

3. Partner is able to upload business pictures.

4. Partner is able to add multiple locations for each business.

5. Partner is able to determine a contact person per business per location.

6. Partner is able to update business profile.

Revoke Partnership

As a Partner, I want to be able to revoke my partnership agreement with HOOKUP! application, so that Mates can no longer select my business as a date location.

Acceptance Criteria:

1. Partner has to be logged in to the system

2. Revoke Partnership form has to be available.

3. Partner is able to remove their business profile, all information related to their account.

4. Partner is able to revoke the partnership.

Update Business Profile

As an Administrator, I want to be able to update a partner's business profile, so that HOOKUP! lists the most recent information for a business in the system.

Acceptance Criteria:

1. Administrator must be logged in into the system.

2. Update business profile form has to be available.

3. Administrator is able to upload business pictures.

4. Administrator is able to add multiple locations for a business.

5. Administrator is able to determine a contact person per business per location.

6. Administrator is able to update business profile.

Revoke Partnership

As an Administrator, I want to be able to revoke a partnership agreement of any Partner, so that HOOKUP! no longer lists their business.

Acceptance Criteria:

1. Administrator has to be logged in to the system

2. Revoke Partnership form has to be available.

3. Administrator is able to remove a business profile, all information related to that account.

4. Administrator is able to revoke a partnership with a business.

User Stories: Matching Subsystem

Find a Match

As a Mate, I want to be able to find another Mate and a business based on the preferences that I listed, so that I can find somebody to go on a date with and a location we could meet.

Acceptance Criteria:

1. Mate must be logged in into the system.

2. Mate is able to find a Mate that will match their preferences.

3. Mate is able to view a list of suggested Mates that correspond to their preferences.

4. Mate is able to find a business that will match the business preferences of both Mates.

5. Mate is able to view a list of suggested businesses that correspond to their preferences.

Flag Datable Match

As a Mate, I want to be able to select a Mate for a date, so that the other Mate can accept my offer and we would go on a date, or they could decline my offer.

Acceptance Criteria:

1. Mate must be logged in into the system.

2. Mate is able to click on any suggested Mate and view their complete profile.

3. Mate is able to flag a Mate as datable.

4. System must send a notification to the Mate flagged as datable by email and within the app.

Flag Undatable Match

As a Mate, I want to be able to flag a Mate as undatable, so that this Mate is no longer suggested to me by the system.

Acceptance Criteria:

1. Mate must be logged in into the system.

2. Mate is able to click on any suggested Mate and view their complete profile.

3. Mate is able to flag a Mate as undatable.

Block Mate

As a Mate, I want to be able to block a Mate, so that I no longer receive any messages or notifications from them, as well as prevent them from seeing my profile.

Acceptance Criteria:

1. Mate must be logged in into the system.

2. Mate is able to view a history of Mates that he/she was in contact.

3. Mate is able to click on any suggested Mate and view their complete profile.

4. Mate is able to block a Mate.

Unblock Mate

As a Mate, I want to be able to unblock a Mate, so that I can contact them again, as well as allow them to contact me and view my profile.

Acceptance Criteria:

1. Mate must be logged in into the system.

2. Mate must be able to see a list of blocked Mates.

3. Mate must be able to unblock a Mate.

Rate Partner

As a Mate, I want to be able to rate a partner, so that I can provide feedback to the Partner letting them know whether I liked it or not. In addition, other Mates can take this rating into account when selecting a business for their date.

Acceptance Criteria:

1. Mate must be logged in into the system.

2. Mate is able to view a list of visited Partners.

3. Mate is able to rate only Partners they picked for the date.

4. Mate is able to leave a rating on 1 to 5 scale (5 being the highest) that would illustrate their experience with the Partner.

Ignore Partner

As a Mate, I want to be able to ignore a Partner, so that it is no longer suggested to me by the system.

Acceptance Criteria:

1. Mate must be logged in into the system.

2. Mate is able to view a list of Partners.

3. Mate is able to click on any Partner and see its detailed page.

4. Mate is able to set a Partner to be ignored.

Unignore Partner

1. As a Mate, I want to be able to unignore a Partner, so that it is suggested again to me by the system.

2. Acceptance Criteria:

3. Mate must be logged in into the system.

4. Mate is able to view a list of Partners that were marked before to be ignored.

5. Mate is able to set a Partner to be unignored.

Report Partner

As a Mate, I want to be able to report a Partner, so that HOOKUP! Administrators are notified of any irregularities that happened.

Acceptance Criteria:

1. Mate must be logged in into the system.

2. Report a Partner form must be ready.

3. Mate is able to view a list of visited Partners.

4. Mate is able to report only Partners they picked for the date.

5. Mate is able to report a Partner by including a short note specifying the concern that they have.

6. Notification to Administrator must be sent.

Report Mate

As a Partner, I want to be able to report a Mate, so that HOOKUP! Administrators are notified about a Mate's failure to obey HOOKUP!'s Terms and Conditions.

Acceptance Criteria:

1. Partner must be logged in into the system.

2. Report a Mate form must be ready.

3. Partner is able to view a list of Mates that visited their location.

4. Partner is able to report only Mates that visited their location.

5. Partner is able to report a Mate by including a short note specifying the concern that they have.

6. Notification to Administrator must be sent.

The prioritized stories based on the MoSCoW rule are illustrated in the following Tables.

Story	Estimate
A User can login to the system	1
A Mate can register with HOOKUP!	2
A Mate can update the personal profile on HOOKUP!	1
A Mate can unsubscribe from system by deleting my profile and removing my account	1
An Administrator can update the personal profile of a Mate on HookUp!	1
An Administrator can unsubscribe a Mate from system	1
A Partner can apply for partnership	3
A Partner can update the business profile	2
A Partner can revoke the partnership agreement with HOOKUP!	1
An Administrator can update a partner's business profile	2
An Administrator can revoke a partnership agreement of any Partner	1
A Mate can find another Mate and a business based on the preferences listed by them	3
A Mate can select a Mate for a date	2
A Mate can flag a Mate as undatable	2
An Administrator can unsuspend a Mate	2
An Administrator can unsuspend a Partner	1
An Administrator can approve a Partner	3
An Administrator can request business information from Partner	2
An Administrator can reject a Partner	1
An Administrator can suspend a Mate	2
An Administrator can suspend a Partner	1

Table 1: The Must-Have stories for HookUp! Release.

Story	Estimate
A Mate can report a Partner	1
A Partner can report a Mate	1
A Mate can block a Mate	2
A Mate can unblock a Mate	2

Table 2: The Should-Have stories for HookUp! Release.

Story	Estimate
A Mate can rate a Partner	2
A Mate can ignore a Partner	2
A Mate can unignore a Partner	2

Table 3: The Could-Have stories for HookUp! Release.

Story
A Mate will not be able to purchase tickets through the app
A Mate will not be able to pay for date's bill through the app
A Mate will not be able to send a chat message to another Mate

Table 4: The Wont-Have stories for HookUp! Release.

2.4.2 Additional Documentation

This section includes the file name and the link for the second video from the

workshop showing how our team:

1. Brainstormed for stories and generated the low-fidelity prototype.

2. Estimated stories.

3. Prioritized stories using the MoSCoW rule.

Video 2

File Name: Video 1: HookUp! Week2.mp4 and Video 2: StoryPoints.mov

URL to the video in the shared folder:

Video 1: https://centennialcollegeedu-

my.sharepoint.com/:v:/g/personal/lparent2_my_centennialcollege_ca/EVzAJMola

M5JilTn1WDuinoBl0pFDFgaLwPxM4eNkeMmKw?e=JevkQz

Video2:

https://centennialcollegeedu.sharepoint.com/:v:/s/HookUp/EeCfyQA_FJtJtce0Hh

_35UsBL1eMn62SMKVdYEJmMwgpWQ?e=SceerW

2.4.3 Release Plan 1.0

Iteration length and the release date of Release Plan 1.0:
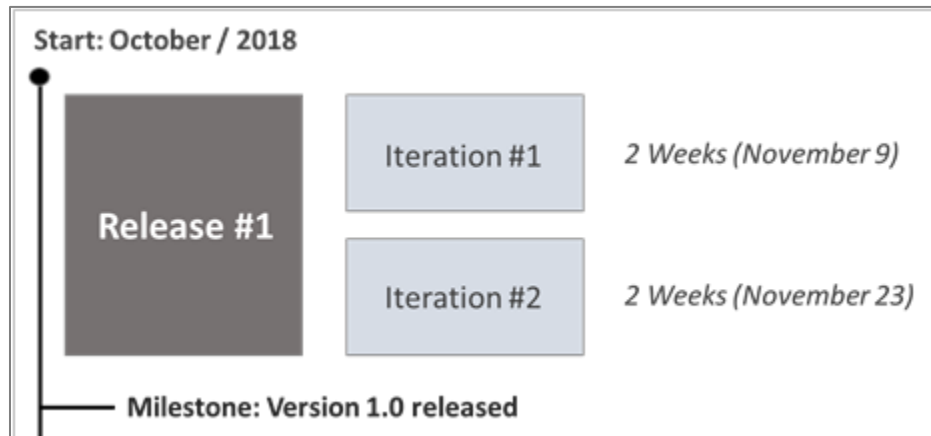
Figure 7: Iteration Length and Release Date [Release 1.0].

Release Plan was conducted based on Must-Have and Should-Have stories. The

Could-Have stories were not included either due to the time schedule. The

Won't-Have stories were not included since they are the least important among

the application's priorities.

The HookUp! release plan based on Must-Have and Should-Have stories are

shown in the table below.

Iteration 1
A User can login to the system
A Mate can register with HOOKUP!
A Mate can update the personal profile on HOOKUP!
A Mate can unsubscribe from system by deleting my profile and removing my account
A Partner can apply for partnership
A Partner can update the business profile
A Partner can revoke the partnership agreement with HOOKUP!
An Administrator can update a partner's business profile
An Administrator can revoke a partnership agreement of any Partner
A Mate can find another Mate and a business based on the preferences listed by them
A Mate can select a Mate for a date
A Mate can flag a Mate as undatable
An Administrator can unsuspend a Partner
An Administrator can approve a Partner
An Administrator can request business information from Partner
An Administrator can reject a Partner
An Administrator can suspend a Partner

Table 5: Release Plan based on Must-Have and Should- have Stories.

2.4.4 Iteration Plan (Release 1.0)

Each iteration plan was disaggregated into tasks per story, as showed in the following tables.

Story: A User can login to the system

Task	Who	Estimate	Actual
Create login page (UI)	Luiz Parente	3h	1h
Create user input validation criteria	Luiz Parente	1h	1h
Write and tune SQL query to validate user credentials	Franciele Brito	1h30min	1h
Test	Luiz Parente	1h	1h

Table 6: Disaggregated tasks per story [1].

Story: A mate can register with Hookup

Task	Who	Estimate	Actual
Create subscription page (UI)	Ana Grabari	16h	14h
Create user input validation criteria	Ana Grabari	1h	1h
Write and tune SQL query to insert new user into database	Franciele Brito	1h30min	1h
Test	Ana Grabari	1h	1h

Table 7: Disaggregated tasks per story [2].

Story: A Mate can update the personal profile on HOOKUP!

Task	Who	Estimate	Actual
Create user information page (UI)	Luiz Parente	4h	4h
Create user input validation criteria	Luiz Parente	1h	1h
Write and tune SQL query to update user data	Franciele Brito	1h30min	1h
Test	Luiz Parente	1h	1h

Table 8: Disaggregated tasks per story [3].

Story: A Mate can unsubscribe from system by deleting my profile and removing

my account

Task	Who	Estimate	Actual
Create user deletion page (UI)	Luiz Parente	2h	1h
Write and tune SQL query to delete user data	Franciele Brito	1h	1h
Test	Luiz Parente	1h	30min

Table 9: Disaggregated tasks per story [4].

Story: A Partner can apply for partnership

Task	Who	Estimate	Actual
Create partnership page (UI)	Ana Grabari	8h	9h
Write and tune scripts to communicate by email with Hookup staff.	Ana Grabari	2h	2h
Test	Ana Grabari	1h	1h

Table 10: Disaggregated tasks per story [5].

Story: A Mate can find another Mate and a business based on the preferences

listed by them

Task	Who	Estimate	Actual
Create find match page (UI)	Luiz Parente	24h	22h
Write and tune SQL query to search mate	Franciele Brito	4h	4h
Write and tune SQL query to search business	Franciele Brito	4h	4h
Test	Luiz Parente	2h	2h

Table 11: Disaggregated tasks per story [6].

Story: A Mate can flag a Mate as undatable

Task	Who	Estimate	Actual
Create mate date page (UI)	Luiz Parente	3h	2h
Write and tune SQL query to select mate	Franciele Brito	2h	2h
Write and tune SQL query to update mate	Franciele Brito	2h	2h
Test	Luiz Parente	1h30min	1h30min

Table 12: Disaggregated tasks per story [7].

Story: Administrator can approve a Partner

Task	Who	Estimate	Actual
Create admin page (UI)	Andreus Faria	3h	2h
Write and tune SQL query to select partner	Franciele Brito	2h	2h
Write and tune SQL query to update partner	Franciele Brito	2h	2h
Test	Andreus Faria	1h30min	1h30min

Table 13: Disaggregated tasks per story [8].

Story: Administrator can reject a Partner

Task	Who	Estimate	Actual
Create admin page (UI)	Andreus Faria	3h	2h
Write and tune SQL query to select partner	Franciele Brito	2h	2h
Write and tune SQL query to update partner	Franciele Brito	2h	2h
Test	Andreus Faria	1h30min	1h30min

Table 14: Disaggregated tasks per story [9].

Story: Administrator can revoke a partnership agreement of any partner

Task	Who	Estimate	Actual
Create admin page (UI)	Andreus Faria	3h	2h
Write and tune SQL query to select partner	Franciele Brito	2h	2h
Write and tune SQL query to delete partner	Franciele Brito	2h	2h
Test	Andreus Faria	1h30min	1h30min

Table 15: Disaggregated tasks per story [10].

Story: Administrator can update a partner business profile

Task	Who	Estimate	Actual
Create admin page (UI)	Andreus Faria	3h	2h
Write and tune SQL query to select partner	Franciele Brito	2h	2h
Write and tune SQL query to update partner	Franciele Brito	2h	2h
Test	Andreus Faria	1h30min	1h30min

Table 16: Disaggregated tasks per story [11].

The team has estimated the task based on the experience and individual

schedule, and the actual time for completing each task was in overall accurate.

2.4.5   Additional Documentation

This section includes the access to the file name and the link for the third video from the Iteration Planning meeting. The video presents what is described below:

1. How HookUp! team disaggregated stories into their constituent tasks.

2. How the developers volunteer and take responsibilities for tasks.

Video 3

File Name: HookUp!_Iteration_1!.mp4

URL to the video in the shared folder: https://centennialcollegeedu-my.sharepoint.com/personal/lparent2_my_centennialcollege_ca/_layouts/15/onedrive.aspx?id=%2Fpersonal%2Flparent2_my_centennialcollege_ca%2FDocuments%2FHookUp%21%2FVideo%2FHookUp%21_Iteration_1%21%2Emp4&parent=%2Fpersonal%2Flparent2_my_centennialcollege_ca%2FDocuments%2FHookUp%21%2FVideo&slrid=c4c4ab9e-f069-7000-a79d-d0b8f6345f89

2.4.6 Progress Monitoring

The table below shows the progress during the Release 1.0. Some changes

happened, which increased the number of stories to be completed in the Iteration

2.

	Iteration 1	Iteration 2
Story points at start of iteration	29	24
Completed during iteration	11	22
Changed estimates	6	-2
Story points from new stories	0	0
Story points at end of iteration	24	0

Table 17: Progress and changes for all Iterations for Release 1.0.

2.4.7 Acceptance Tests for Release 1.0

Full description of user story	Acceptance test(s)	Name(s) of contributing Developer(s)
Story 1: A user can login to the system[1]	Launch website Localhost/ Input parameter(s): Enter email and password and expected output(s): System directs to Mate page	Luiz Parente
Story 2: A mate can register with Hookup	Launch website Localhost/ Input parameter(s): Click in Don't have an account and expected output(s): System directs to the login page. Test with input parameter(s): Click in Sign up button and expected output(s): System directs to Login page Test with input parameter(s): Fill up form First Name= "Name" Last Name= "LastName" Gender = "Female" date of birth = "1981/Dec/13" Describe yourself = "This is a test" City = "Toronto" Province or State = "On" Country = "Canada" Email = "fsilvad1@my.centennialcollege.ca" Confirm email ="fsilvad1@my.centennialcollege.ca" "fran.brito.br@gmail.com" Password = "HookUp123" Confirm password= "HookUp123" Choose File = insert a photo Click Create account button and expected output(s): System will send a confirmation in the provided email.	Luiz Parente
Story 3: A mate can update the personal profile on HookUp	Launch website Localhost/ Input parameter(s): Enter email and password and expected output(s): System directs to Mate page	Luiz Parente

---

[1] Green colour code indicates that all tests passed successfully as intended.

	Input parameter(s): Clicks in profile button and expected output(s): System directs to Profile page Input parameter(s): Edit preferences information and click in Submit button. Expected output(s): System directs to Mate page with information updated.	
Story 4: A mate can unsubscribe from system by deleting profile	Launch website Localhost/ Input parameter(s): Enter email and password and expected output(s): System directs to Mate page Input parameter(s): Clicks in profile button and expected output(s): System directs to Profile page Input parameter(s): Click in Unsubscribe button. Expected output(s): System sends a unsubscribe confirmation email.	Luiz Parente
Story 5: A Partner can apply for partnership	Launch website Localhost/ Input parameter(s): Click in Don't have an account and expected output(s): System directs to the login page. Test with input parameter(s): Click in Join up button and expected output(s): System directs to Login page Test with input parameter(s): Fills up form First Name = "Partner" Last Name = Hookup123" Company Name = "Partner" Phone Number = "416555555" Email = partner@mypartner.ca Click in Submit output(s): System will send an email to admin requesting contact.	Anna Grabari
Story 6: An Administrator can update a partner's business profile	Launch website Localhost/ Input parameter(s): Enter email and password and expected output(s): System directs to Admin page	Andreus Faria

	Input parameter(s): Clicks in update Partner Profile button and expected output(s): System directs to Partner Profile page Input parameter(s): Edit preferences information and click in Submit button. Expected output(s): System reloads Partner Profile page with information updated.	
Story 7: An Administrator can revoke a partnership agreement of any Partner	Launch website Localhost/ Input parameter(s): Enter email and password and expected output(s): System directs to Admin page Input parameter(s): Clicks in update Partner Profile button and expected output(s): System directs to Partner Profile page Input parameter(s): Click in Delete Partner button. Expected output(s): System show a Delete confirmation message.	Andreus Faria
Story 8: A Mate can find another Mate and a business based on the preferences listed by them	Launch website Localhost/ Input parameter(s): Enter email and password and expected output(s): System directs to Mate page Input parameter(s): Clicks in Date button and expected output(s): System loads the page with matched mates based on preferences. Input parameter(s): Mate clicks in the heart button expected output(s): System display the mate for the selected mate Input parameter(s): Selected mate clicks in the heart button expected output(s): System display Date page of both mates with mate information, date, time and a place.	Luiz Parente
Story 9: A Mate can flag a Mate as	Launch website Localhost/ Input parameter(s): Enter email and	Luiz Parente

undatable	password and expected output(s): System directs to Mate page Input parameter(s): Clicks in Date button and expected output(s): System loads the page with matched mates based on preferences. Input parameter(s): Mate clicks in the cross button expected output(s): System removes the mate from the date page	
Story 10: An Administrator can approve a Partner	Launch website Localhost/ Input parameter(s): Enter email and password and expected output(s): System directs to Admin page Input parameter(s): Clicks in approve Partner button and expected output(s): System directs to Partner Profile page Input parameter(s): Click do. Expected output(s): System update partner information as unblocked in the database.	Andreus Faria
Story 11: An Administrator can reject a Partner	Launch website Localhost/ Input parameter(s): Enter email and password and expected output(s): System directs to Admin page Input parameter(s): Clicks in approve Partner button and expected output(s): System directs to Partners Profile page Input parameter(s): Click Partner Name Expected output(s): System display partner information Input parameter(s): Click Reject Partner Expected output(s): System update partner application status	Andreus Faria

Table 18: Stories, acceptance tests, and contributors for Release 1.0 (Green=Accepted; Red=Rejected; Black=Not started).

2.5   Release 2.0

2.5.1 User Stories

All the user stories including the ones for Release 2.0 were created during the

first story-writing workshop described in the User Stories section 2.4.1.

2.5.2   Release Plan 2.0

Iteration length and the release date of Release Plan 2:

Figure 8: Iteration Length and Release Date [Release 2.0].

2.5.3 Iteration Plan (Release 2.0)

Release Plan was conducted based on Must-Have and Should-Have stories. The

Could-Have stories were not included either both releases due to the time

schedule. The Won't-Have stories were not included since they are the least

important among the application's priorities.

The HookUp! release plan based on Must-Have and Should-Have stories are

shown in the table below.

Iteration 2
An Administrator can update the personal profile of a Mate on HookUp!
An Administrator can unsubscribe a Mate from system
An Administrator can unsuspend a Mate
An Administrator can suspend a Mate
A Mate can report a Partner
A Partner can report a Mate
A Mate can block a Mate
A Mate can unblock a Mate

Table 19: Release Plan based on Must-Have and Should- Have Stories.

2.5.4 Progress Monitoring

The table below shows the progress during the Release 2.0. Some changes have occurred, which decreased the number of stories to be completed in the Iteration 2.

	Iteration 1	Iteration 2
Story points at start of iteration	18	14
Completed during iteration	6	4
Changed estimates	-2	-10
Story points from new stories	0	0
Story points at end of iteration	14	0

Table 20: Progress during the Release 2.0.

2.5.5 Acceptance Tests for Release 2.0

Full description of user story	Acceptance test(s)	Name(s) of contributing Developer(s)
Story 1: An Administrator can update the personal profile of a Mate on HookUp!	Launch website Localhost/ Input parameter(s): Enter email and password and expected output(s): System directs to Admin page Input parameter(s): Clicks in update User Profile button and expected output(s): System directs to User Profile page Input parameter(s): Edit preferences information and click in Submit button. Expected output(s): System reloads User Profile page with information updated.	Andreus Faria
Story 2: An Administrator can unsubscribe a Mate from system	Launch website Localhost/ Input parameter(s): Enter email and password and expected output(s): System directs to Admin page Input parameter(s): Clicks in update User Profile button and expected output(s): System directs to User Profile page Input parameter(s): Click in Unsubscribe User button. Expected output(s): System show a unsubscribe confirmation message.	Andreus Faria
Story 3: An Administrator can unsuspend a Mate	Launch website Localhost/ Input parameter(s): Enter email and password and expected output(s): System directs to Admin page Input parameter(s): Clicks in update User Profile button and expected output(s): System directs to User Profile page Input parameter(s): Click in Unsuspend User button. Expected output(s): System update mate information as unblocked in the	Andreus Faria

	database.	
Story 4: An Administrator can unsuspend a Partner	Launch website Localhost/ Input parameter(s): Enter email and password and expected output(s): System directs to Admin page Input parameter(s): Clicks in update Partner Profile button and expected output(s): System directs to Partner Profile page Input parameter(s): Click in Unsuspend Partner button. Expected output(s): System update partner information as unblocked in the database.	Andreus Farias

Table 21: Stories, acceptance tests, and contributors for Release 2.0 (Green=Accepted; Red=Rejected; Black=Not started).

3.0 CONCLUSIONS

Dating applications have become popular to start all kinds of relationships. However, none of them have fulfilled the idea of integrating people willing to date with a place based on their preferences. In order to fill up this gap, HookUp! has emerged as a medium to function as an integrator among people and a business-to-business channel. Bringing in people, HookUp! aims to offer them filtered options of matches based on their preferences and to provide security to expose as less as possible their personal information. Bringing in partners, HookUp! aims to stablish a long-term and win-win relationship. The more quantity and quality partners, the more entertainment options to present to HookUp!'s users and more media to the partner's venue.

Even though dating application is a controversial topic and meeting someone online can be dangerous, the application was developed trying to mitigate some risks. Phone numbers, e-mails or any personal information besides name and age are exchanged throughout the app. The person only gives his or her information during the face-to-face dating, if he or she feels comfortable. Besides that, the app only offers public places, it will never suggest remote, empty or dangerous venues.

All in all, the application was designed strongly based on security and innovation pillars. These items do not make the application perfect or guarantee that all

matches will be perfect, but they offer less vulnerability about personal

information and harassment and at the same time, more accuracy to find a date

who matches with the user's preferences.

LICENSE AND REFERENCES

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APPENDIX A (DESIGN DOCUMENT)

ACTIVITY DIAGRAMS

Authentication Subsystem

Authentication Subsystem allows for any application user to login to the system. It will identify the role of the user based on the credentials the user will input and will refer them to the corresponding interface and functionality of the system.
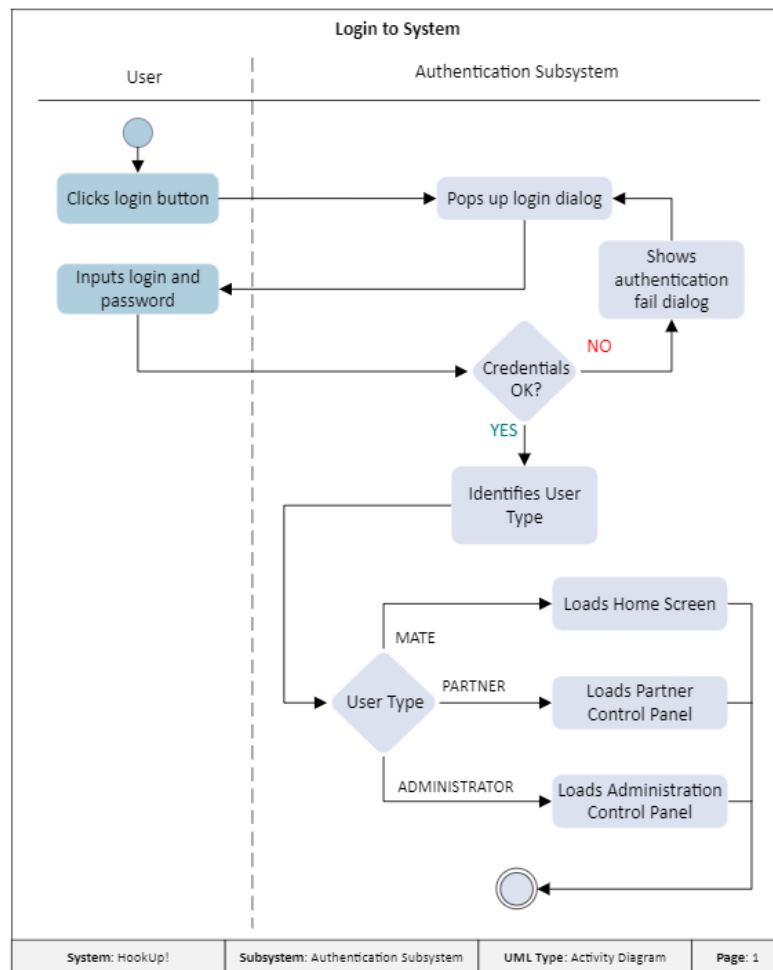
Figure 9: Activity Diagram [Authentication Subsystem]

Subscription Subsystem

The Subscription Subsystem allows a new user to register in the system

database by filling a simple form with basic personal information.
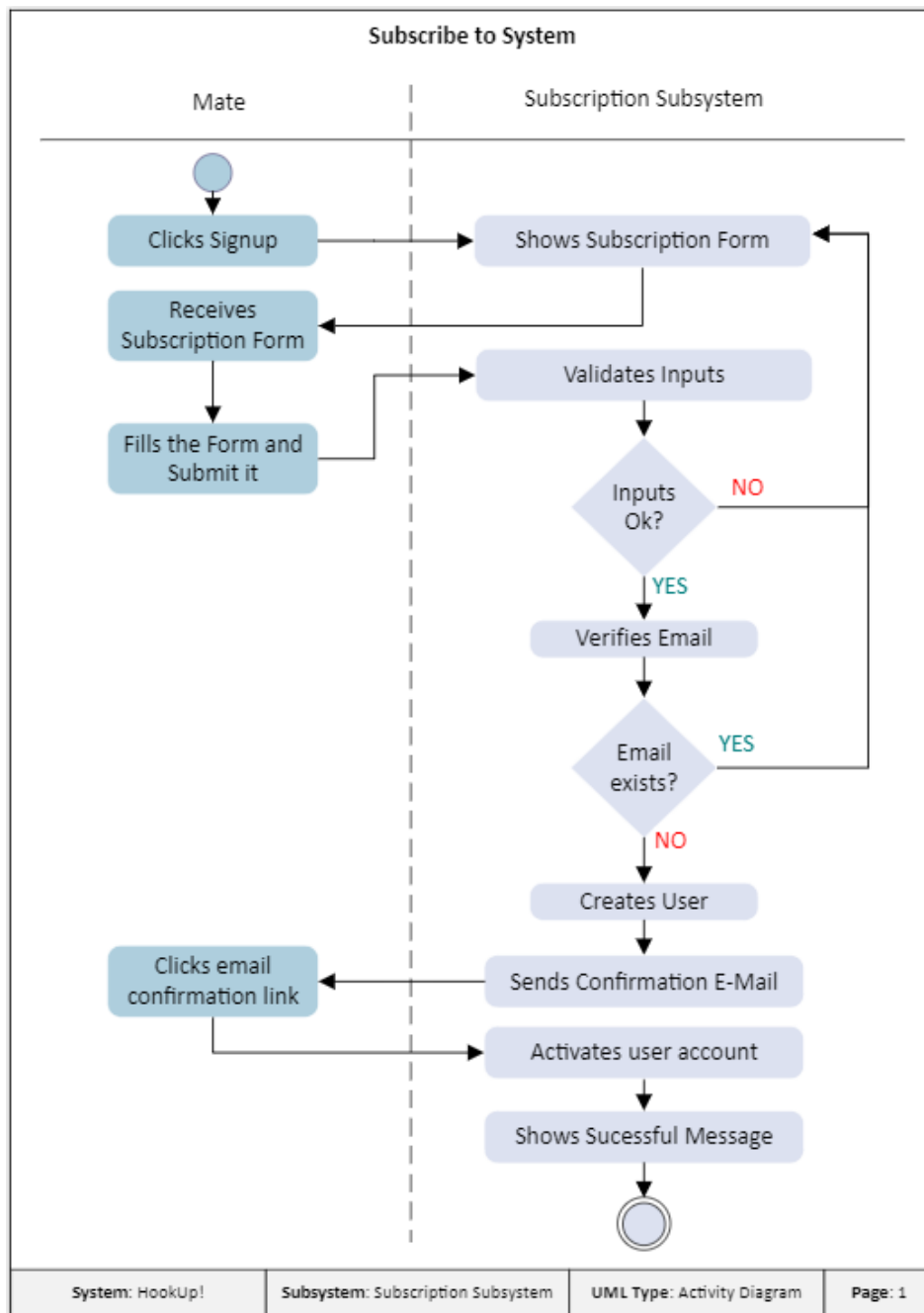
Figure 10: Activity Diagram [Subscription Subsystem]

Partnership Subsystem

Partnership Subsystem allows a potential partner to apply for partnership on HOOK UP! application by sending all required documentation. Additionally, it allows the administrator to analyze the documentation sent and either approves it or asks for additional information.
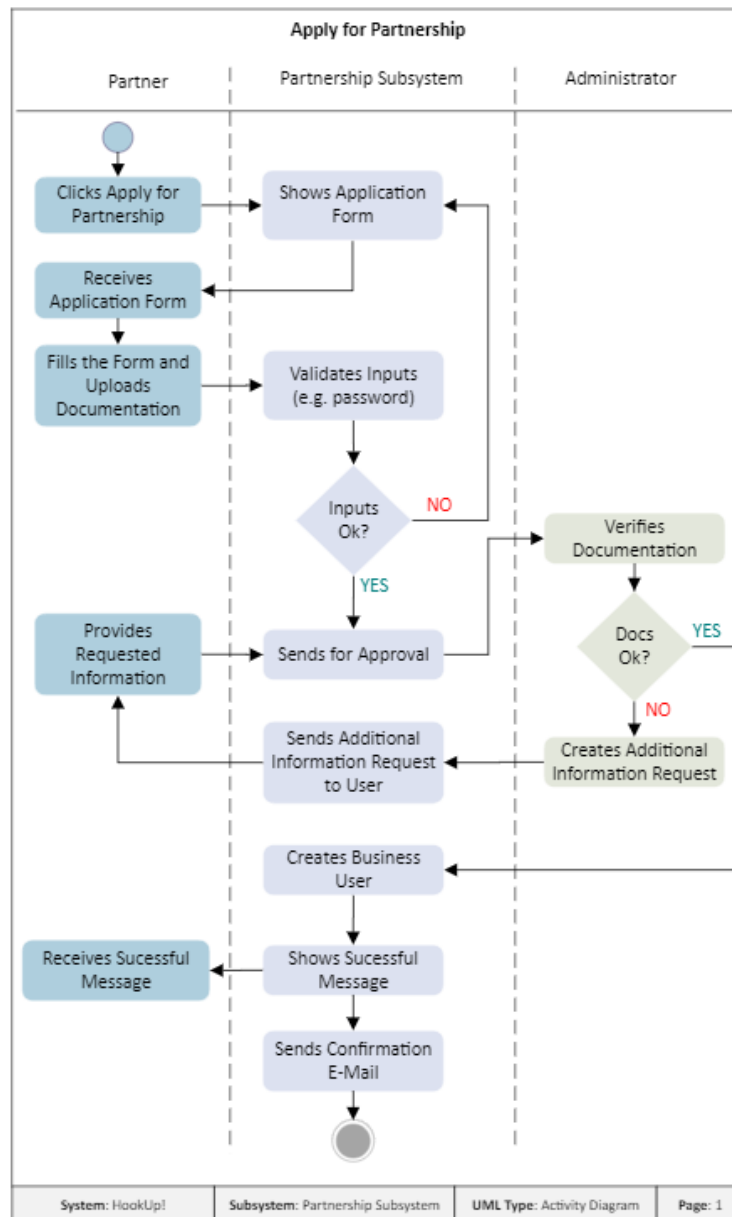
Figure 11: Activity Diagram [Partnership Subsystem]

Matching Subsystem

The Matching Subsystem allows a Mate to find another person and location for a date. The subsystem analyzes user's personal preferences and life goals and matches him or her with another mate with converging ideas. Additionally, the app assigns a place for their date to occur, based on both user's tastes for gastronomy, music and entertainment.
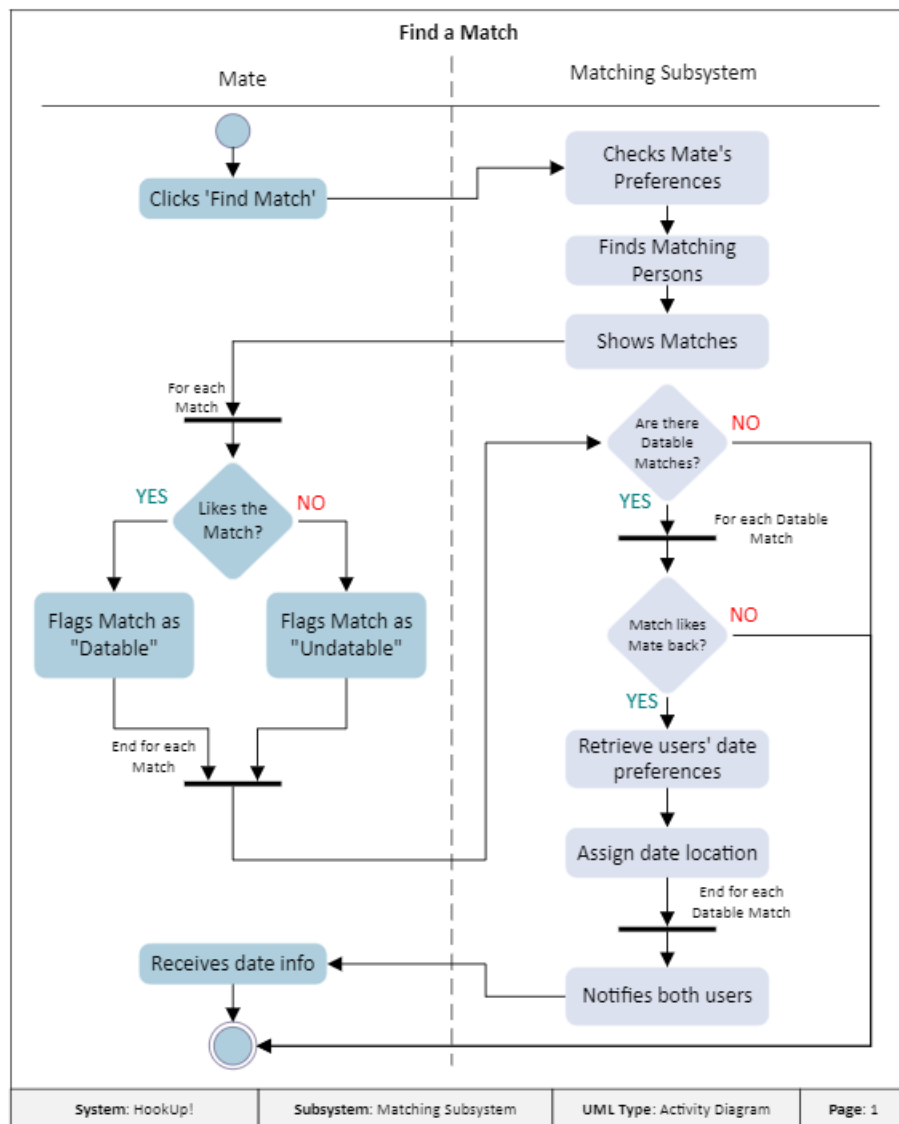
Figure 12: Activity Diagram [Matching Subsystem]

Administration Subsystem

Administration Subsystem allows a mate to report another mate in case of misrepresentation, indecent conduct, violation of HookUp!'s guidelines, or other potentially dangerous behavior. In addition, it allows the administrator to review reported issues in detail and either lift the Mate's suspension or keep his or her account suspended.
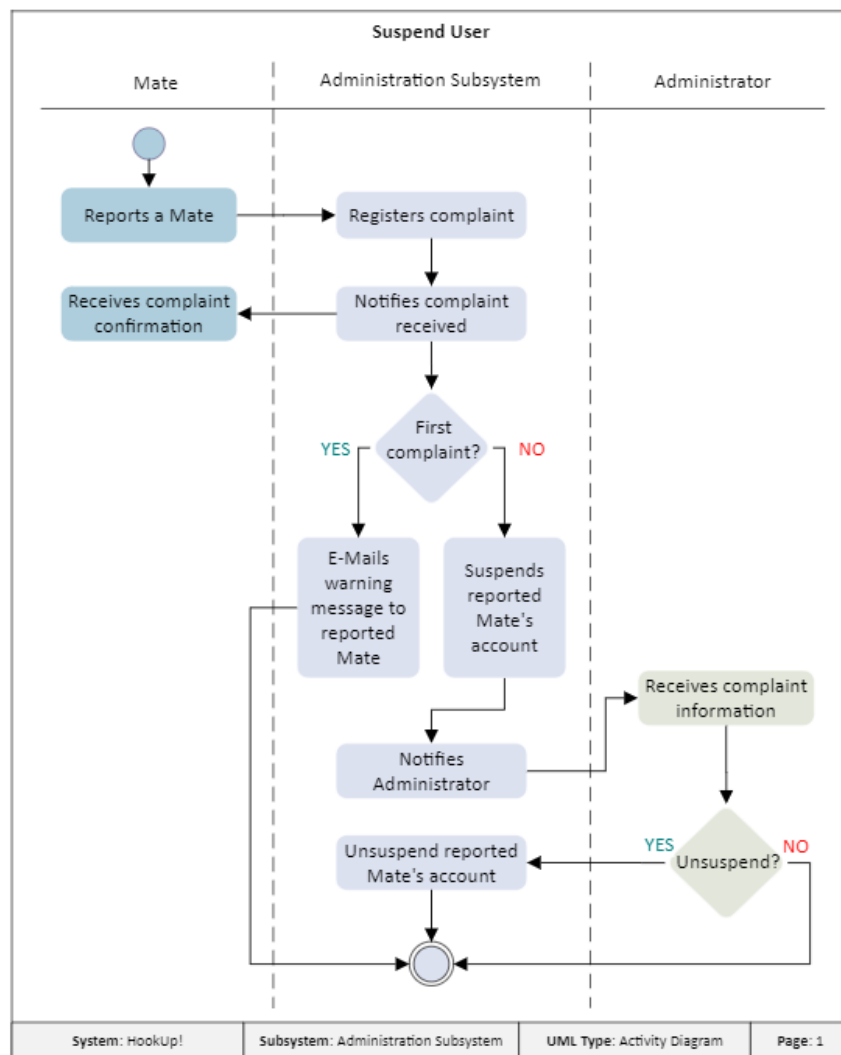
Figure 13: Activity Diagram [Administration Subsystem]

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USE CASE DIAGRAMS

Authentication Subsystem

The following use cases were identified for the Authentication Subsystem.

HookUp! Authentication Subsystem		
Use Cases	Actors	Use Case Description
Login to System	Mate, Partner, Administrator	Mate, Partner and Administrator input their credentials to sign in the system.
Logout from System	Mate, Partner, Administrator	Mate, Partner and Administrator sign out of the system.
Change Password	Mate, Partner, Administrator	Mate, Partner and Administrator are allowed to change their password, updating their credentials to access the system.

Table 22: Use Cases [Authentication Subsystem]
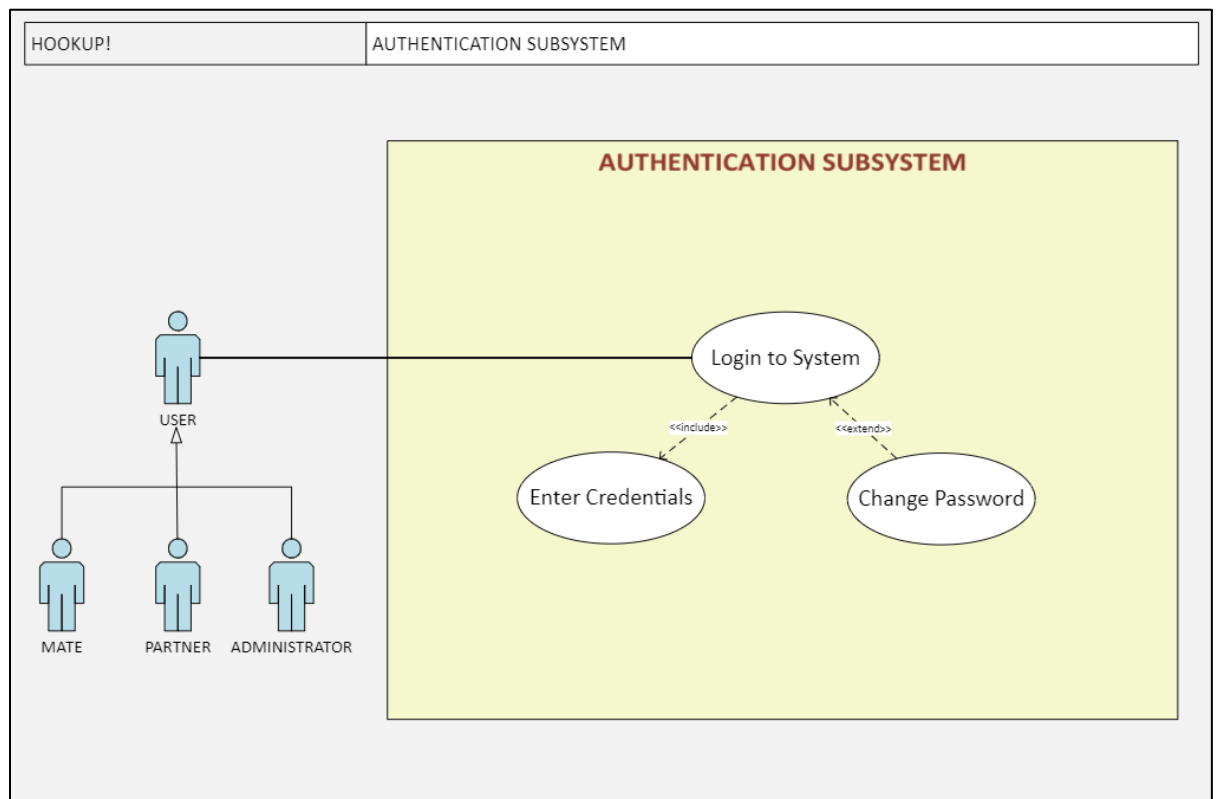
Figure 14: Use Cases [Authentication Subsystem]

Subscription Subsystem

The following use cases were identified for the Subscription Subsystem.

HookUp! Subscription Subsystem		
Use Cases	**Actors**	**Use Case Description**
Subscribe to System	Mate	Mate signs up to the platform, being provided an account that allows access for use.
Update Personal Profile	Mate, Administrator	Mate updates their public personal information in the platform. Administrator is allowed to update Mate's profile information when needed.
Unsubscribe to System	Mate, Administrator	Mate no longer desires to use the platform, and is allowed to unsubscribe. Administrator is allowed to unsubscribe a Mate from the system, revoking his or her permissions to access the platform.

Table 23: Use Cases [Subscription Subsystem]
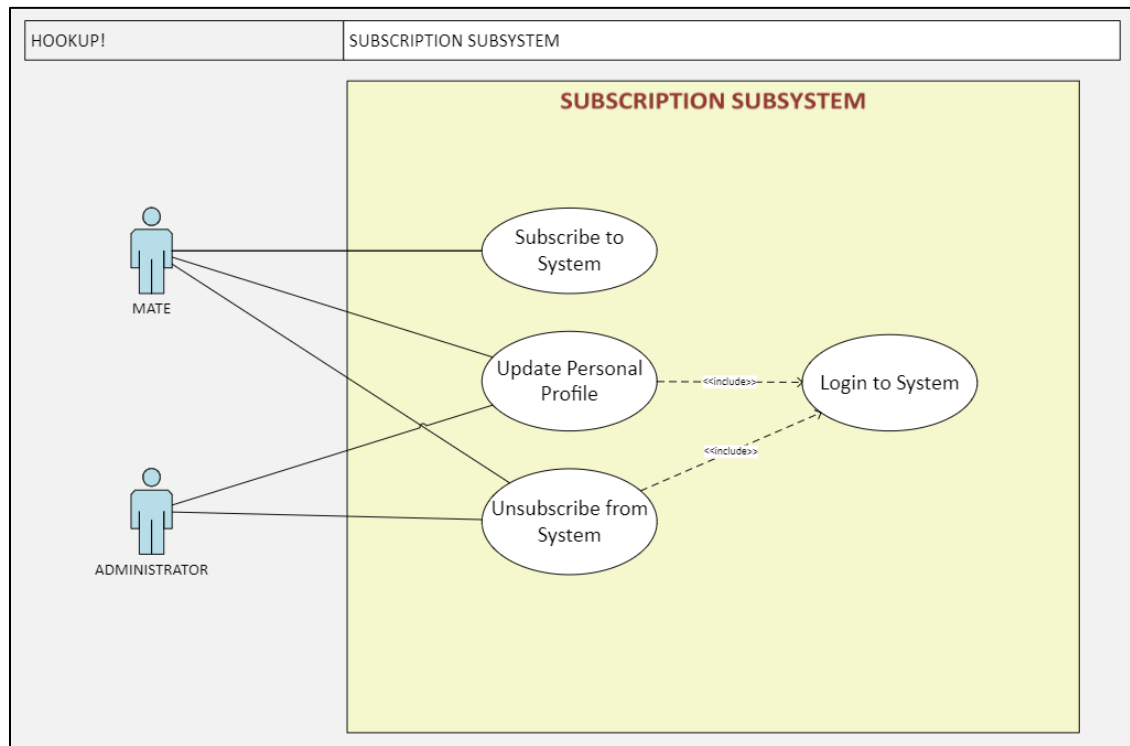
Figure 15: Use Cases [Subscription Subsystem]

Partnership Subsystem

The following use cases were identified for the Partnership Subsystem.

HookUp! Partnership Subsystem		
Use Cases	**Actors**	**Use Case Description**
Apply for Partnership	Partner	A business interested in becoming a Partner applies for a partnership, so that their business is included in the system.
Update Business Profile	Partner, Administrator	Partner updates their public business information in the platform. Administrator is allowed to update Partner's profile information when needed.
Revoke Partnership	Partner, Administrator	Partner no longer desires to use the platform, and is allowed to terminate the partnership. Administrator is allowed to shut-down a Partner from the system, revoking their permissions to access the platform.

Table 24: Use Cases [Partnership Subsystem]
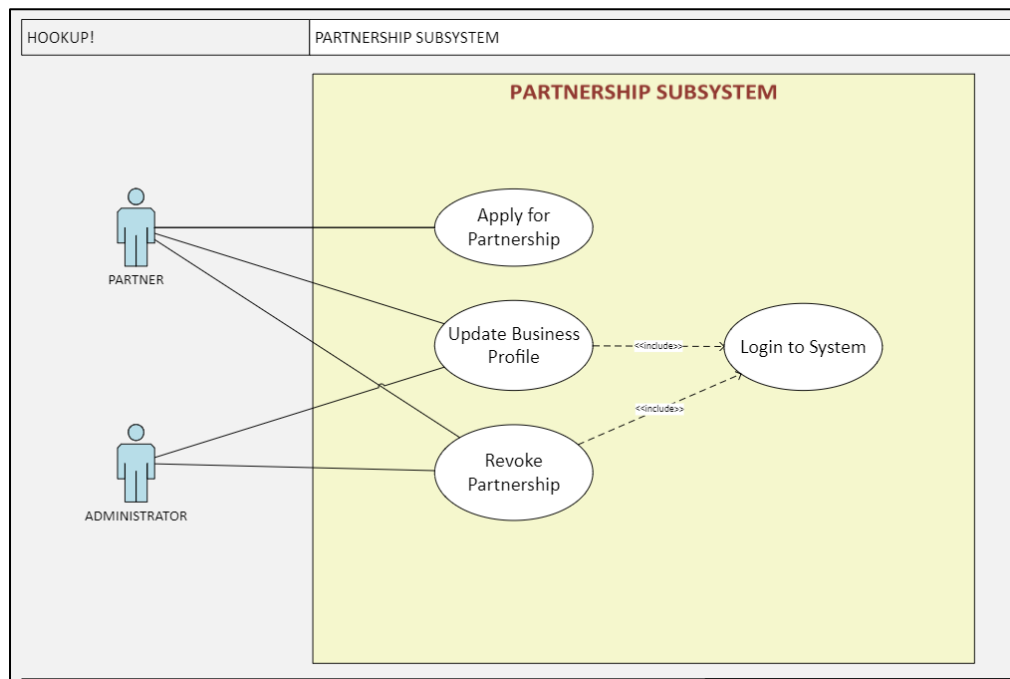
Figure 16: Use Cases [Partnership Subsystem]

Matching Subsystem

The following use cases were identified for the Matching Subsystem.

HookUp! Matching Subsystem		
Use Cases	**Actors**	**Use Case Description**
Find Match	Mate	Mate searches for possible dating candidates in the system.
Flag Datable Match	Mate	Mate registers in the system that he or she would date the displayed Match.
Flag Undatable Match	Mate	Mate registers in the system that he or she would not date the displayed Match.
Report Mate	Mate, Partner	Mate and Partner are allowed to report another user for improper behavior and/or violations in the platform's code of conduct.
Report Partner	Mate	Mate reports a Partner's business location for violations in the platform's code of conduct.
Rate Partner	Mate	Mate provides a feedback score, ranging from 0 to 5, rating his or her experience in that Partner's business location.
Block Mate	Mate	Mate blocks another Mate user, so that he or she will not be suggested again in the future and will not be able to view their profile or contact them.
Ignore Partner	Mate	Mate ignores a Partner user, so that their business location will not be suggested in the future.
Unblock Mate	Mate	Mate decides to unblock another Mate user that has been previously blocked.
Unignore Partner	Mate	Mate decides to unignore a Partner business location that has been previously ignored.

Table 25: Use Cases [Matching Subsystem]
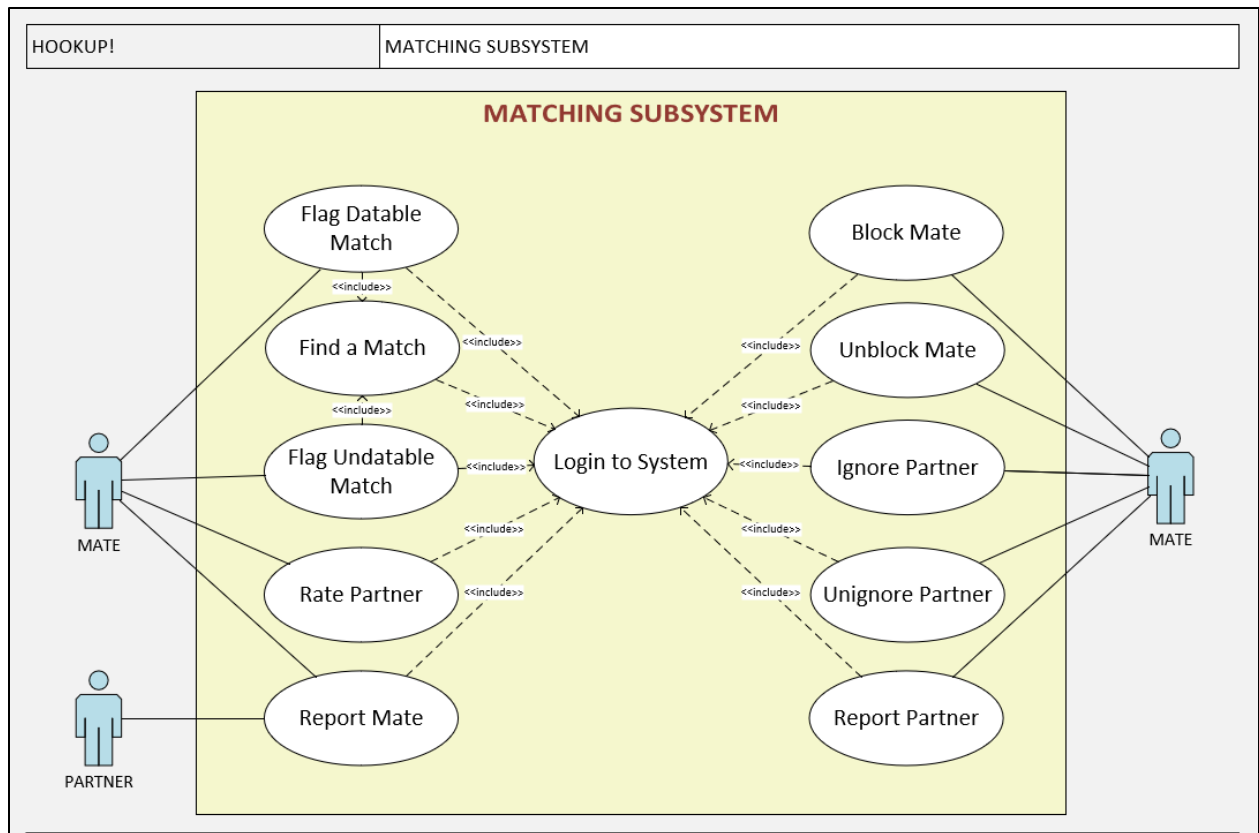
Figure 17: Use Cases [Matching Subsystem]

Administration Subsystem

The following use cases were identified for the Administration Subsystem.

HookUp! Administration Subsystem		
Use Cases	**Actors**	**Use Case Description**
Approve Partnership	Administrator	Administrator validates business authenticity and the system creates a Partner account for the applicant.
Reject Partnership	Administrator	Administrator declines a business' application, as it may not converge with HookUp!'s visions for potential business partners.
Request Business Information	Administrator	Administrator requests more information and/or documentation from the applicant in order to validate business authenticity.
Suspend Mate	Administrator	Administrator suspends a Mate's account in the system due to violations of the platform's code of conduct.
Suspend Partner	Administrator	Administrator suspends a Partner's account in the system due to violations of the platform's code of conduct.
Unsuspend Mate	Administrator	Administrator unsuspends a previously suspended Mate.
Unsuspend Partner	Administrator	Administrator unsuspends a previously suspended Partner.

Table 26: Use Cases [Administration Subsystem]
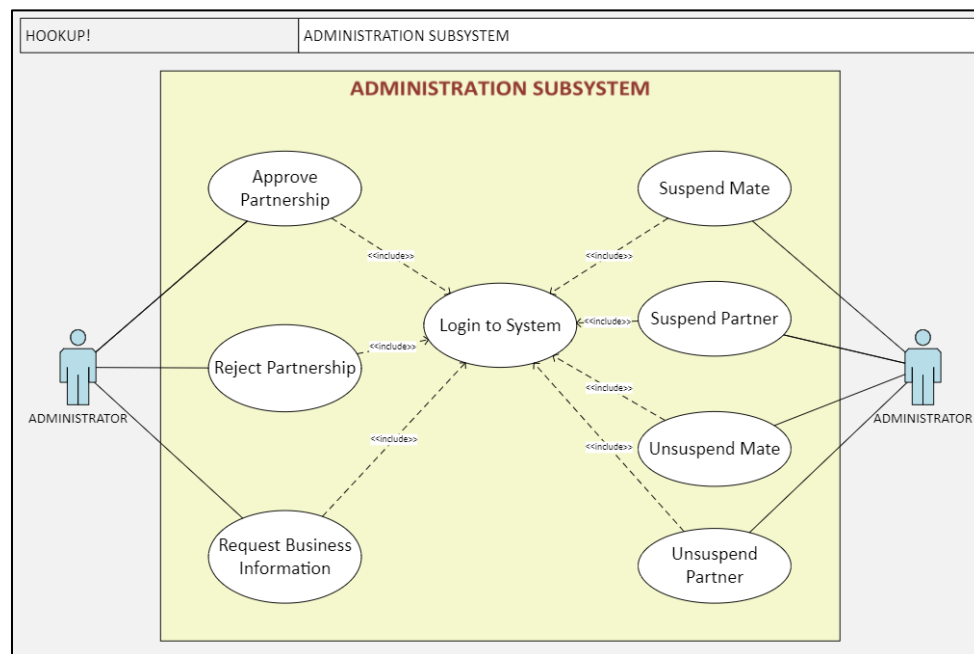
Figure 18: Use Cases [Administration Subsystem]

CROSS FUNCTIONAL DIAGRAMS

Mate
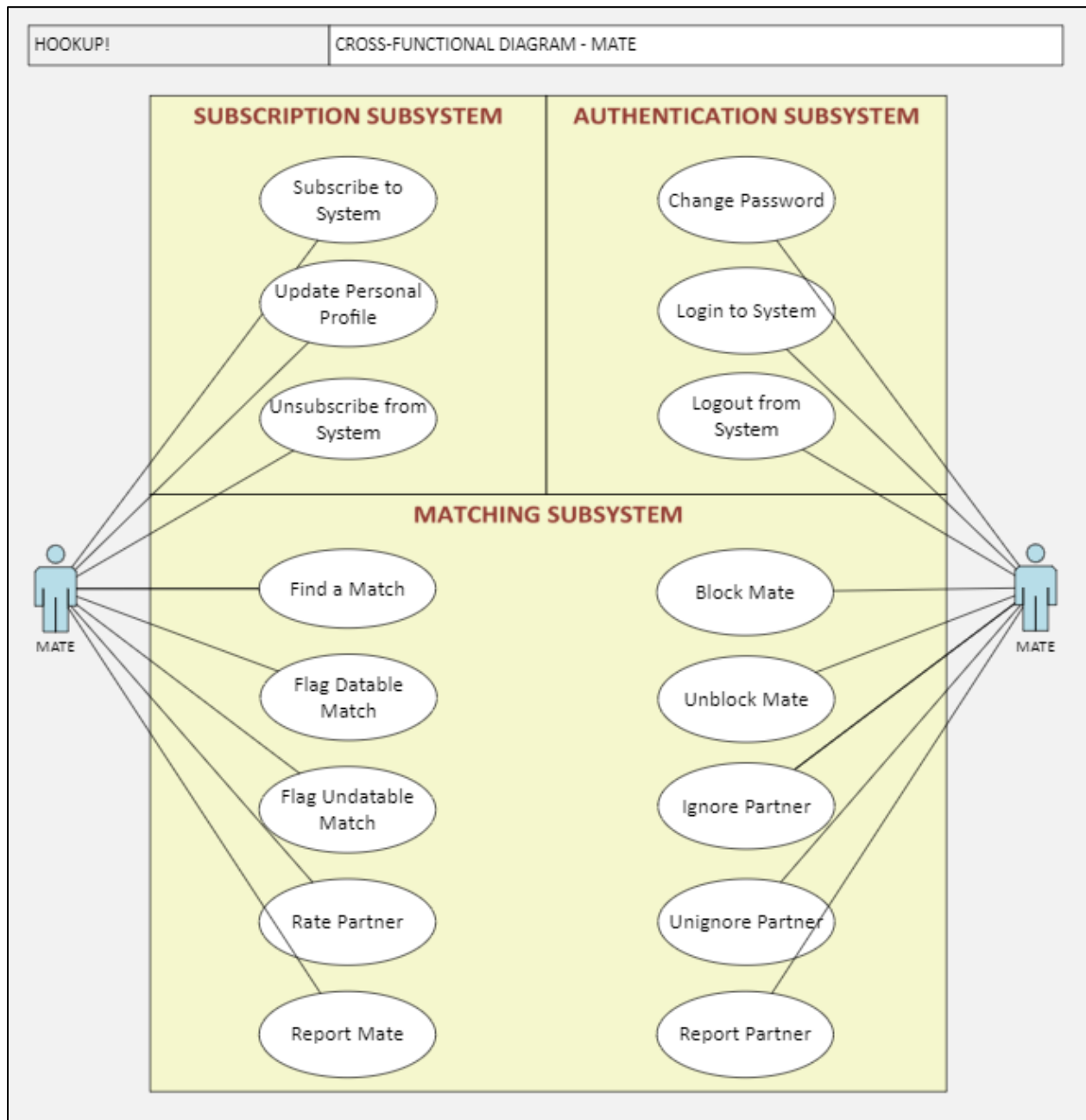
Figure 19: Cross Functional Diagram [Mate]

Partner
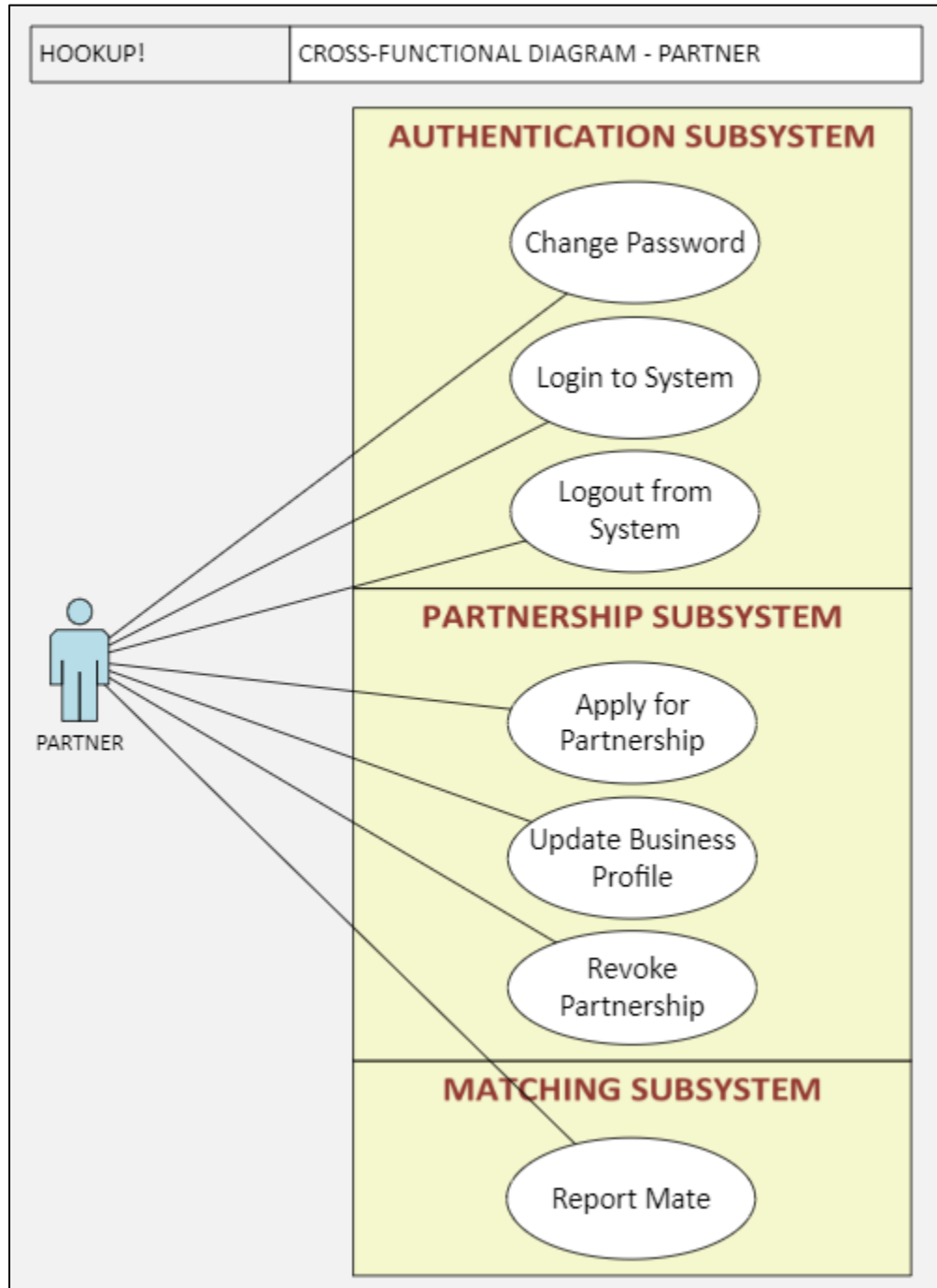
Figure 20: Cross Functional Diagram [Partner]

Administrator
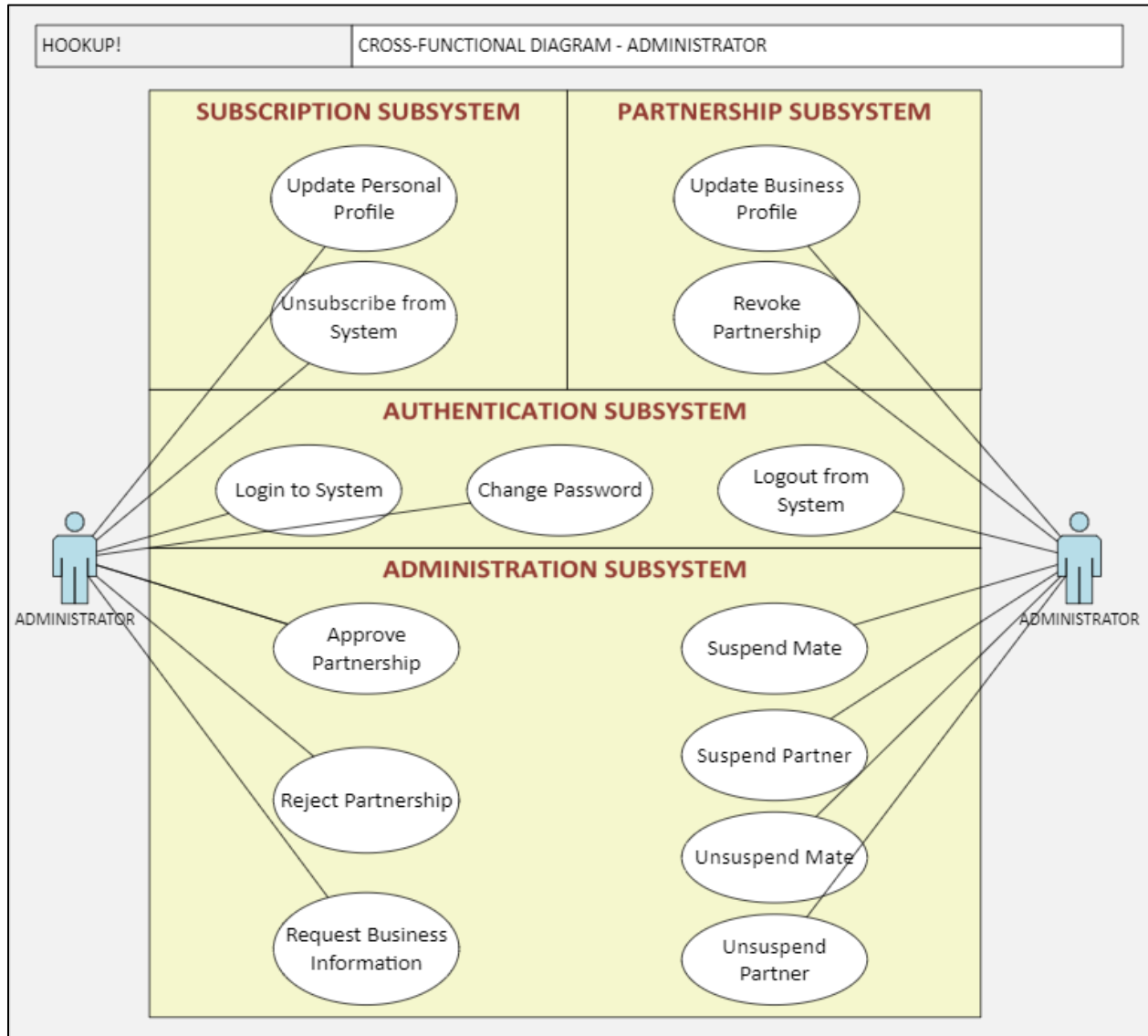
Figure 21: Cross Functional Diagram [Administrator]

DOMAIN CLASS DIAGRAM

The multiplicities in the Domain Class Diagram are:

- One Date has 2 Mates, but one Mate may have zero or many Dates.

- One Date may have zero or one Payment, but one Payment refers to one and only one Date.

- One Date has one and only one Location, but one Location may host zero or many Dates.

- One Location may have zero or many Events, but one Event is hosted at one and only one Location.

- One Location belongs to one and only one Partner, but one Partner may have zero or many Locations.
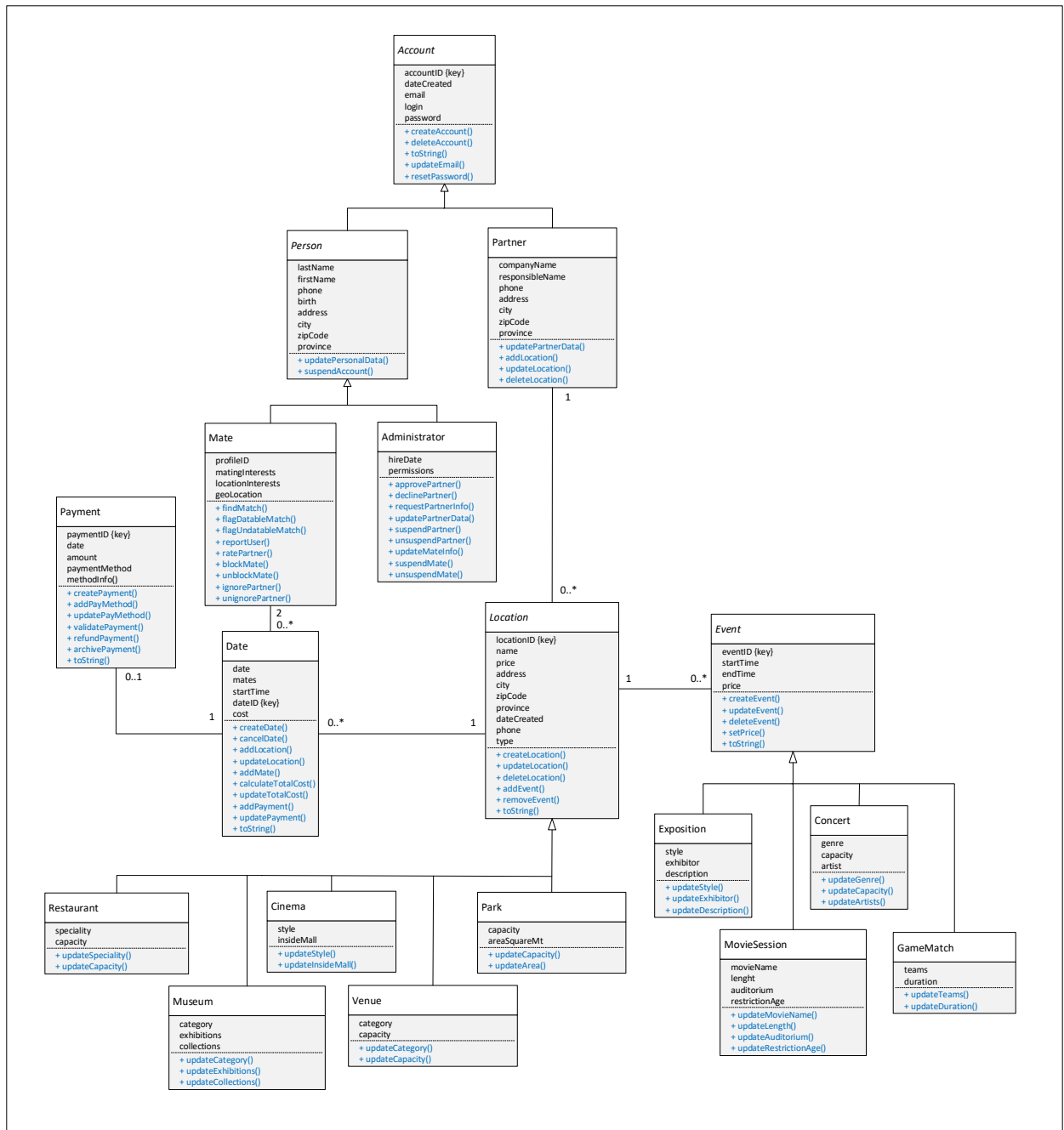
Figure 22: Domain Class Diagram

DATABASE DESIGN

Database Textual Schema

Table Name	Attributes
Account	Account_id: integer {key} Date_created: date Email: string Login: string Password: string
Account_address	Address_id: integer {key} Account_id: integer {key}
Address	Address_id: integer {key} Street_address: string Zip_code: string City: string Province: string
Administrator	Administrator_id: integer {key} Hire_date: date
Administrator_permissions	Administrator_id: integer {key} Permission_id: integer {key}
Cinema	Cinema_id: integer {key} Location_id: integer {key} Cinema_style_id: integer {key} Inside_mall: boolean
Cinema_style	Cinema_style_id: integer {key} Name: string Description: string
Concert	Concert_id: integer {key} Genre: string Capacity: integer Artist: string
Date	Date_id: integer {key} Datetime: date Start_time: string Cost: decimal
Date_payment	Date_id: integer {key} Payment_id: integer {key}
Event	Event_id: integer {key} Start_time: string End_time: string Price: decimal
Exposition	Exposition_id: integer {key} Style: string Exhibitor: string Description: string
Game_match	Game_match_id: integer {key} Occasion: string Allow_reservations: boolean
Location_address	Address_id: integer {key}

	Location_id: integer {key}
Location_phone	Location_id: integer {key}
	Phone_id: integer {key}
Mate	Mate_id: integer {key}
	Person_id: integer {key}
	Interests: string
	Geolocation: string
	Budget: decimal
Mate_date	Date_id: integer {key}
	Mate_proponent: integer {key}
	Mate_match: integer {key}
Movie_session	Movie_session_id: integer {key}
	Movie_name: string
	Length: string
	Auditorium: string
	Age_restriction: integer
Museum	Museum_id: integer {key}
	Museum_category_id: integer {key}
	Collections: string
Museum_category	Museus_category_id: integer {key}
	Name: string
	Description: string
Park	Park_id: integer {key}
	Location_id: integer {key}
	Capacity: integer
	Area_square_mt: decimal
Partner	partner_id: integer {key}
	Account_id: integer {key}
	Responsible_name: string
	Company_name: string
Partner_phone	Partner_id: integer {key}
	Phone_id: integer {key}
Partner_location	Location_id: integer {key}
	Date_created: date
	Name: string
	Price: string
	Type: string
Payment	Payment_id: integer {key}
	Amount: decimal
	Payment_type: integer {key}
Payment_type	Payment_type_id: integer {key}
	Name: string
	Description: string
Permissions	Permission_id: integer {key}
	Name: string
	Description: string
Person	Person_id: integer {key}
	Account_id: integer {key}
	First_name: string
	Last_name: string
	Birth_date: date
Person_phone	Person_id: integer {key}

	Phone_id: integer {key}
Phone	Phone_id: integer {key} Phone_type_id: integer {key} Phone_number: string
Restaurant_specialty	Restaurant_specialty_id: integer {key} Name: string Description: string
Venue	Venue_id: integer {key} Location_id: integer {key} Venue_category_id: integer {key} Capacity: integer
Venue_category	Venue_category_id: integer {key} Name: string Description: string

Table 27: Database Textual Schema

Entity Relation Diagram
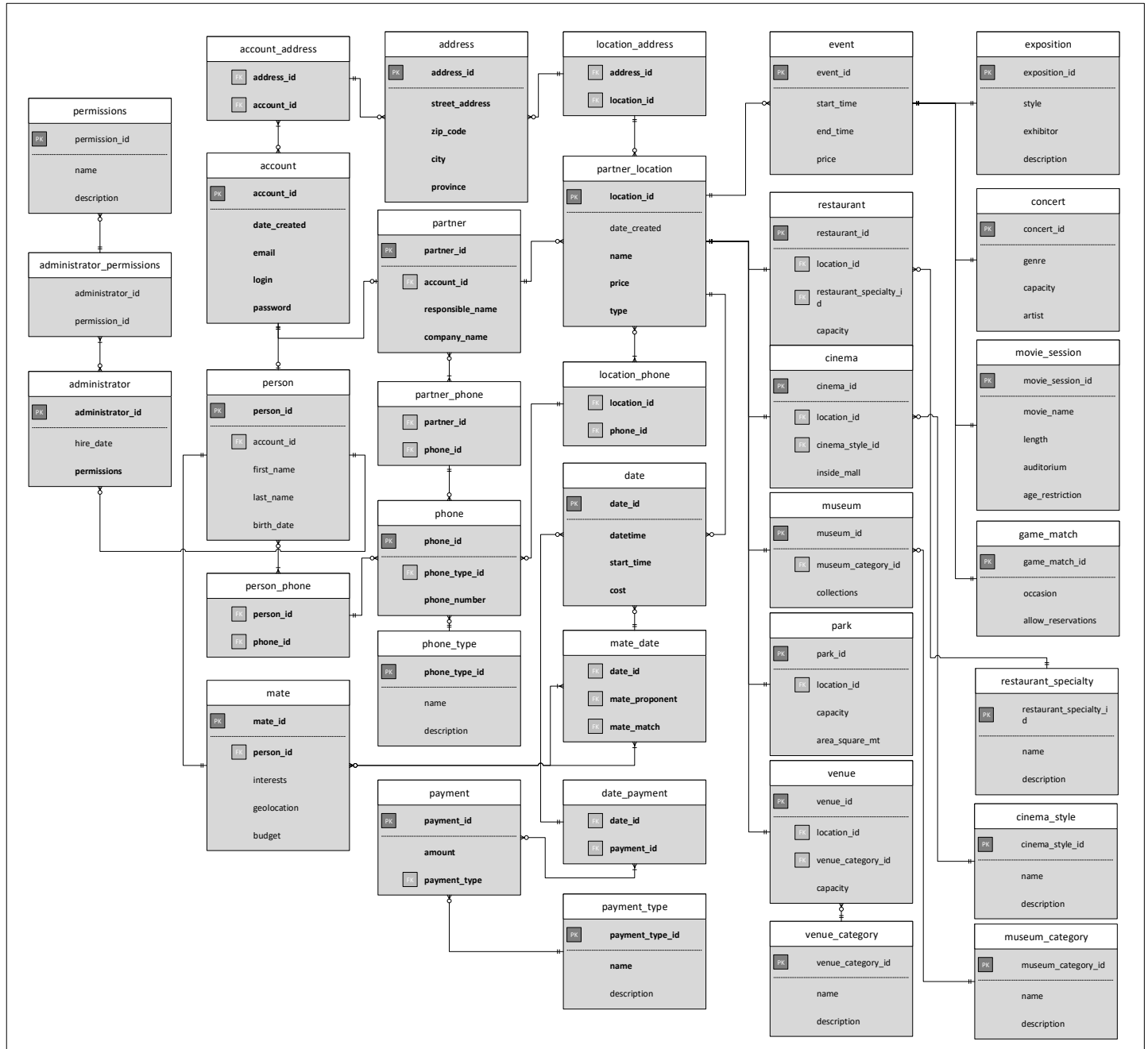
Figure 23: Entity Relation Diagram

STATE MACHINE DIAGRAMS

Mate

MATE	
State	**Transition causing exit**
Active	Not logging into the system for 6 months.
Idle	Logging into the system OR remaining "Idle" for 2 years.
Inactive	Reactivating account.
Unsubscribed	No exit transition defined.

Table 28: State Machine Diagram [Mate]
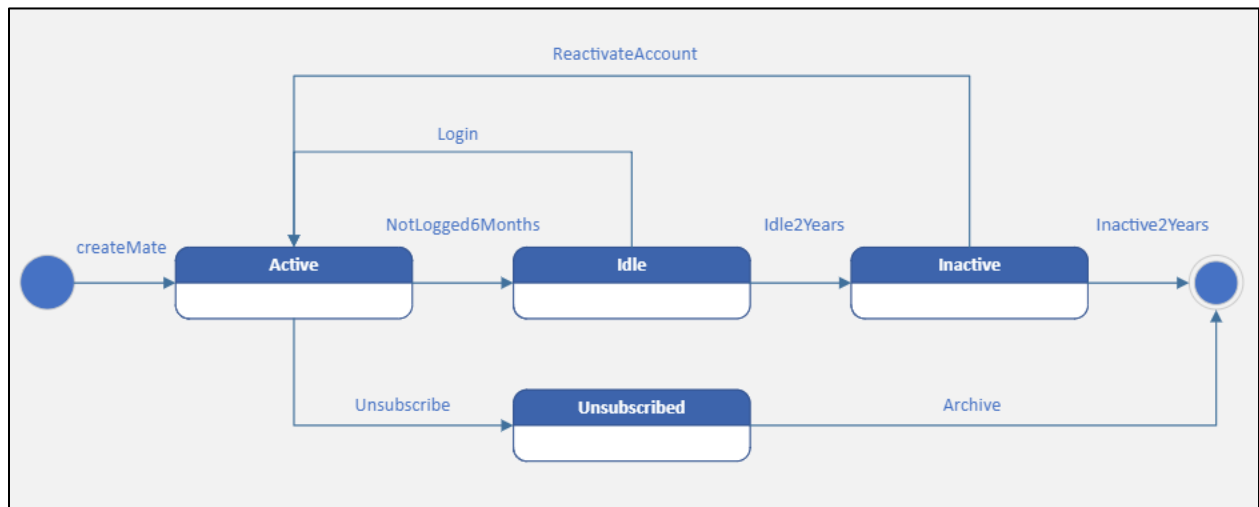
Figure 24: State Machine Diagram [Mate]

Date

DATE	
State	**Transition causing exit**
Scheduled	Event starts OR event is cancelled.
Ongoing	Even ends.
Ended	No exit transition defined.
Cancelled	No exit transition defined.

Table 29: State Machine Diagram [Date]
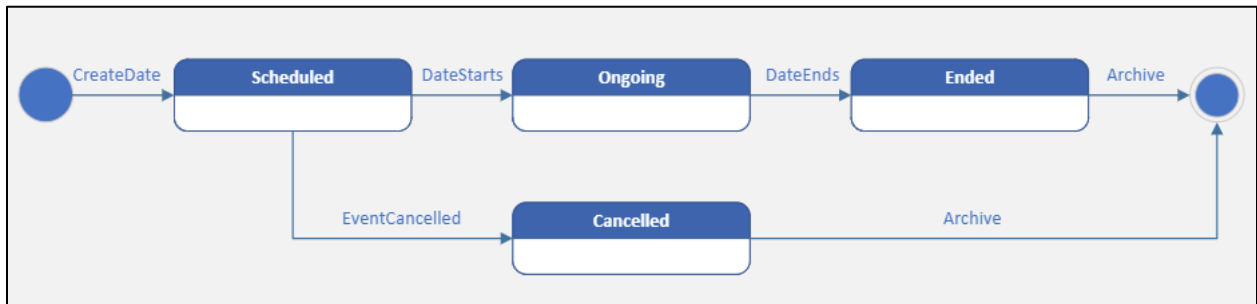
Figure 25: State Machine Diagram [Date]

CLASS-RESPONSIBILITY-COLABORATION CARDS

Account	
Sub Classes: Person, Partner	
Description: Person and Partner are types of Account that can be created on HookUp!	
Attributes:	

Name	Description
accountID	Unique ID assigned to each Person or Partner account
dateCreated	Date that the Person's or Partner's account was created
email	Person's or Partner's email
login	Person's or Partner's login
password	Person's or Partner's pawwsord

Responsibilities:	

Name	Collaborator
Create account	
Delete account	
Update email	
Reset password	

Figure 26: CRC [Account]

Administrator	
Super Classes: Person	
Description: Administrator is a type of Person who is able to approve a partner, request business information to a partner, reject a partner, update mate information and suspend/ unsuspend a mate/partner	
Attributes:	

Name	Description
hireDate	Date that the administrator was hired
permissions	Administrator's permissions on the system

Responsibilities:	

Name	Collaborator
Approve partner	Partner
Decline partner	Partner
Request partner info	Partner
Update partner data	Partner
Suspend partner	Partner
Unsuspend partner	Partner
Update mate info	Mate
Suspend mate	Mate
Unsuspend mate	Mate

Figure 27: CRC [Administrator]

Cinema

Super Classes: Location

Description: Cinema is a type of Location where the date can occur

Attributes:

Name	Description
style	Cinema's style
insideMall	Place where the cinema is located

Responsibilities:

Name	Collaborator
Update style	
Update inside mall	

Figure 28: CRC [Cinema]

Concert

Super Classes: Event

Description: Concert is a type of an event in which a date can occur

Attributes:

Name	Description
genre	Concert's style
capacity	Number of people who can be seated in the concert
artist	Artist that is going to perform

Responsibilities:

Name	Collaborator
Update genre	
Update capacity	
Update artists	

Figure 29: CRC [Concert]

Date

Description: Date describes the schedule based on mates' preferences and budget

Attributes:

Name	Description
date	Date when the mates are meeting
mates	Matched mates
startTime	Time that the meeting is going to happen
dateID	Unique ID assigned to date
cost	How much is going to cost

Responsibilities:

Name	Collaborator
Create date	Mate, Location
Cancel date	Mate, Location
Add location	Location
Update location	Location
Add mate	Mate
Calculate total cost	Location
Update total cost	Location
Add payment	Payment
Update payment	Payment

Figure 30: CRC [Date]

Event

Sub Classes: Exposition, Concert, MovieSession, GameMatch

Description: Event is the social occasion that happens in a specific location

Attributes:

Name	Description
eventID	Unique event ID assigned to an event
startTime	Time that the event starts
endTime	Time that the event ends
price	Price charged on the event

Responsibilities:

Name	Collaborator
Create event	Partner, Location
Update event	Partner, Location
Delete event	Location
Set price	Location

Figure 31: CRC [Event]

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Exposition	
Super Classes: Event	
Description: Exposition is a type of an event in which a date can occur	
Attributes:	

Name	Description
style	Exposition's style
exhibitor	The responsible for organize the exposition
description	Exposition's description

Responsibilities:	

Name	Collaborator
Update style	
Update exhibitor	
Update description	

Figure 32: CRC [Exposition]

GameMatch	
Super Classes: Event	
Description: Game match is a type of an event in which a date can occur	
Attributes:	

Name	Description
teams	The teams that are playing
duration	The duration of the match

Responsibilities:	

Name	Collaborator
Update teams	
Update duration	

Figure 33: CRC [GameMatch]

Location	
Description: Location is the place where mates can have a date	

Attributes:

Name	Description
locationID	Unique location ID assigned to a location
name	Location's name
price	Price charged on the location
address	Location's address
city	Location's city
zipCode	Location's zip code
province	Location's province
dateCreated	Date that the location was inserted in the system
phone	Location's phone number
type	Type of entertainment that the location provides

Responsibilities:

Name	Collaborator
Create location	Partner
Update location	Partner
Delete location	
Add event	Event
Remove event	

Figure 34: CRC [Location]

Mate	
Super Classes: Person	
Description: Mate is a type of Person who wants to find a match	

Attributes:

Name	Description
profileID	Unique profile ID assigned to a Mate
matingInterests	Mate's personal interests and life goals
locationInterests	Mate's interests for gastronomy, music and entertainment
geoLocation	Mate's geolocation

Responsibilities:

Name	Collaborator
Find match	Mate
Flag datable match	Mate
Flag undatable match	Mate
Report user	Administrator
Rate partner	Partner
Block mate	Mate
Unblock mate	Mate
Ignore partner	Partner
Unignore partner	Partner

Figure 35: CRC [Mate]

MovieSession

Super Classes: Event

Description: Movie session is a type of an event in which a date can occur

Attributes:

Name	Description
movieName	The name of the movie
length	The duration of the movie
auditorium	The place where the movie is projected
restrictionAge	The age restriction of the movie

Responsibilities:

Name	Collaborator
Update movie name	
Update length	
Update auditorium	
Update restriction age	

Figure 36: CRC [MovieSession]

Museum

Super Classes: Location

Description: Museum is a type of Location where the date can occur

Attributes:

Name	Description
category	Subject or field that the museum concentrate its efforts
exhibitions	Exhibitions offered by the museum
collections	Collection types in a museum

Responsibilities:

Name	Collaborator
Update category	
Update exhibitions	
Update collections	

Figure 37: CRC [Museum]

Park

Super Classes: Location

Description: Park is a type of Location where the date can occur

Attributes:

Name	Description
capacity	Number of people that can be placed in the park
areaSquareMt	Park's area

Responsibilities:

Name	Collaborator
Update capacity	
Update area	

Figure 38: CRC [Park]

Partner

Super Classes: Account

Description: Partner is a type of Account destinated for business entities

Attributes:

Name	Description
companyName	Company's name
responsibleName	Name of the responsible for the HookUp! Account in the company
phone	Partner's phone number
address	Partner's address
city	Partner's city
zipCode	Partner's zip code
province	Partner's province

Responsibilities:

Name	Collaborator
Update partner data	
Add location	Location
Update location	Location
Delete location	

Figure 39: CRC [Partner]

Payment

Description: Payment is related to the amount and payment method involved on a date

Attributes:

Name	Description
paymentID	Unique ID assigned to each payment
date	Date related to the payment
amount	Amount due for the date
paymentMethod	Payment's method
methodInfo	Information related to the payment

Responsibilities:

Name	Collaborator
Create payment	Date
Add pay method	
Update pay method	
Validate payment	
Refund payment	Date, Mate
Archive payment	

Figure 40: CRC [Payment]

Restaurant

Super Classes: Location

Description: Restaurant is a type of Location where the date can occur

Attributes:

Name	Description
specialty	Meal that the restaurant is known for making
capacity	Number of people that can be seated in the location

Responsibilities:

Name	Collaborator
Update specialty	
Update capacity	

Figure 41: CRC [Restaurant]

Venue

Super Classes: Location

Description: Venue is a type of Location where the date can occur

Attributes:

Name	Description
category	Venue's category
capacity	Number of people that can be placed in the venue

Responsibilities:

Name	Collaborator
Update category	
Update capacity	

Figure 42: CRC [Venue]

Person

Super Classes: Account

Sub Classes: Mate, Administrator

Description: Person is a type of Account that can be created for a Mate or Administrator

Attributes:

Name	Description
lastName	Person's last name
firstName	Person's first name
phone	Person's phone number
birth	Person's date of birthday
address	Person's address
city	Person's city
zipCode	Person's zip code
province	Person's province

Responsibilities:

Name	Collaborator
Update personal data	
Suspend account	

Figure 43: CRC [Person]

PAPER PROTOTYPE

Welcome Page

Mate Browsing Page

HookUp!

Sign In   Register

#Spicy #Reading #GymForLife

Flag Mate

Time Choosing

Jake

Report anonymously

Show Profile

Block

Cancel

Jake

2018 OCTOBER

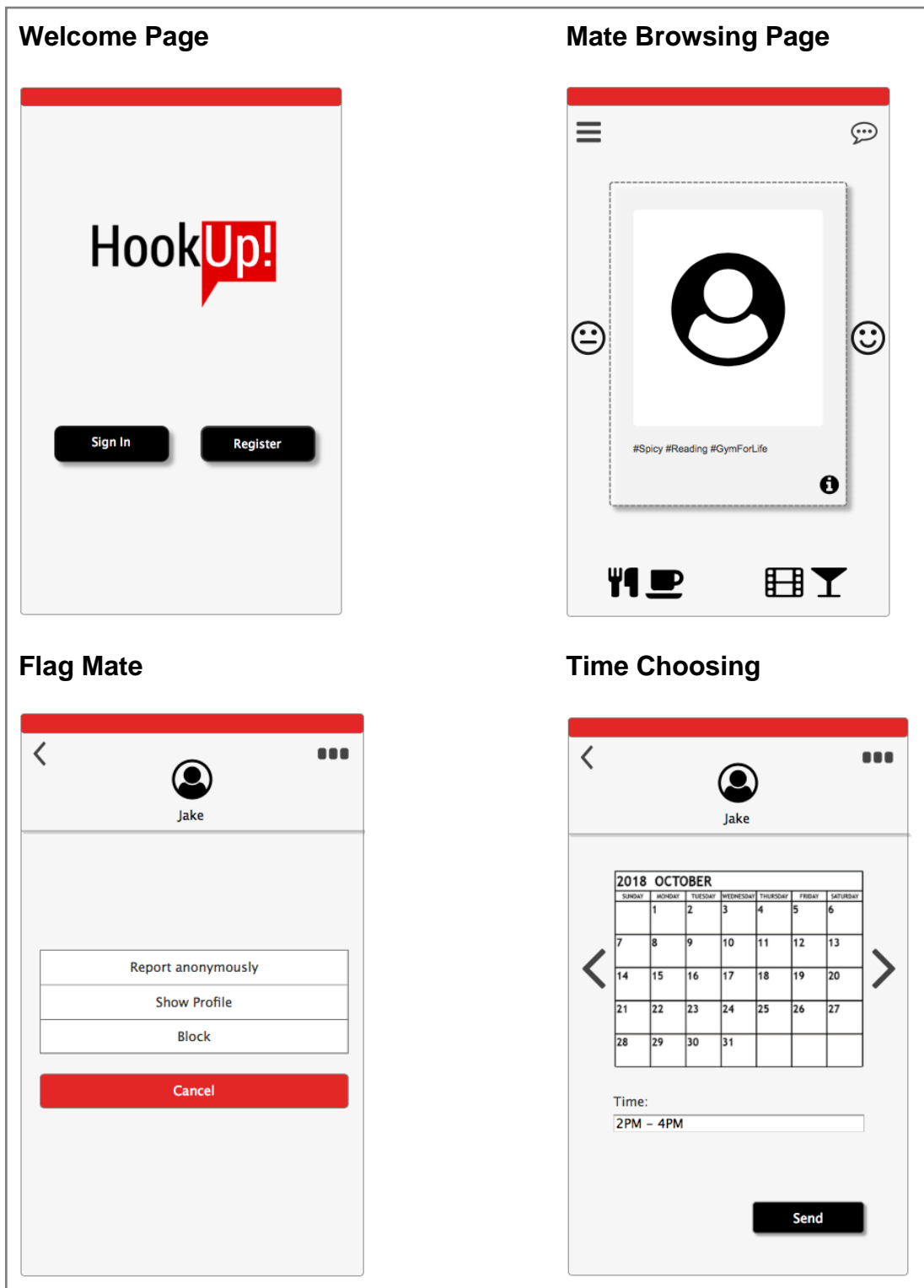| SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

Time:

2PM – 4PM

Send

Figure 44: Paper Prototype