



Bilkent University

Department of Computer Engineering

Senior Design Project

Project short-name: S0me

Analysis Report

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Progress Report

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This report is submitted to the Department of Computer Engineering of
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1. Introduction

With the emerge of Internet, our life form has been linked to online activities. Talking becomes chatting; birthday celebrations, business meetings, informal meetings, meal events are performed on a virtual environment. Concerts, theatres or movies are streamed/downloaded. By thinking of this approach, Internet generation has been getting anti - social in terms of outdoor activities. There would be lots of proposals to eliminate this problem; nevertheless we believe the best solution will be using Internet again in this case. If Internet communicates people through itself like we are used to via Facebook, Twitter and etc, it can also gather people at an outdoor activity. In other words, people will be united as they were used to. Our aim is not only increase social outdoor activities, but also manage them in an effective and enjoyable way. We want to create a social platform that changes social life experience in long term. Thereupon, this platform will run on both web site and mobile phones to reach as much as people we can.

2. Current Systems

Event Planner, Checklist & Countdown ^[1] (\$0.99, Lite version)

iPhone Screenshots



Description

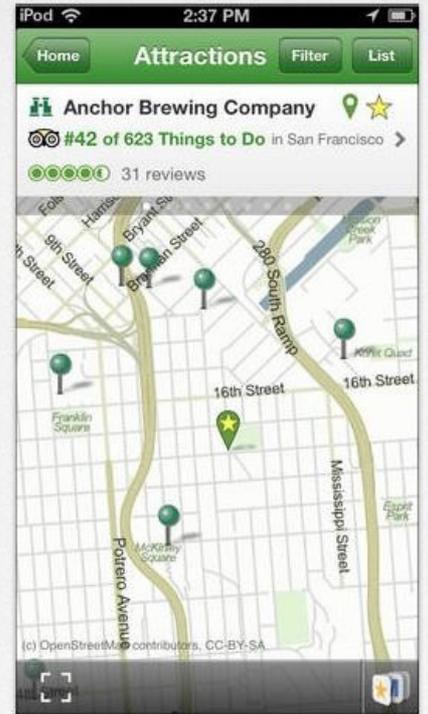
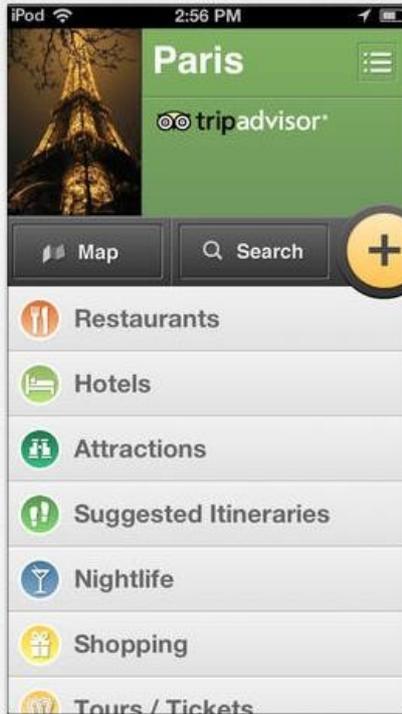
Thank you for downloading the FREE version of Event Planner, Checklist & Countdown.

LITE Version Contains:

- Store Maximum Two Events at one given time
- Allows One Location to be added...

Trip Advisor Offline City Guides ^[2] (Free)

iPhone Screenshots



Description

Traveling somewhere? Get this FREE city guide with the restaurants, attractions, hotels and reviews you love from TripAdvisor, stored in the app -- no data roaming charges!

Key reasons millions of travelers love this app:

TripAdvisor Offline

Invy - Event planner ^[3] (\$1,99)

iPhone Screenshots

The easiest way to pick a date with friends and family.



Friends respond via the Invy iPhone app OR website.



Invy - Event planner

Pick the best date and add the event to your iPhone calendar.



Description

The easiest way to pick a date with friends and family.

Find My Friends ^[4] (Free)



Description

Find My Friends allows you to easily locate your friends and family from your iPhone, iPad, or iPod touch. Install this free app on your device running iOS 5 or later and sign in with the Apple ID you use with iCloud. Adding a friend is easy — just send a request to see their location. Once your friend accepts using the Find My Friends app on their device, you will be able to see their location. And friends can request to see your location the same way.

3. Proposed System

3.1. Overview

The project to be presented will be a social platform developed as a mobile mobile application and a web application. Our goal is to develop this social platform for iOS, Android and WindowsPhone devices, hence the project will be a cross - platform application. In order to do this, we are planning to use PhoneGap to obtain deliverable versions of each OS platforms without developing in native languages. The starting point of our project is to reintegrate people, who know each other, at outdoor places like restaurants, cafes, theaters and so on. It is a fact that some social platforms limit people's outdoor social activities by making a connection between people only through Internet, and therefore we believe our project will decrease the rate of this situation. To be more concise, users can be notified by places that arrange various events and, after notification users are able to make reservations for these events. Furthermore, users can arrange such private events and manage these events over this platform.

For these reasons explained above, we want to create a brand new social outdoor activity experience for the mobile device users, and we call our project as "SOme", which is the shortening of words "social me".

In the case of places, SOme will be a great opportunity for marketing services for our business owners and advertising them as well. Moreover, reservations and events will be more organized for the places, and this advantage includes the customers as well. By thinking of marketing and advertising, in the future, places can increase the amount of customers. We believe with the emerge of SOme, there will be a strong bond between places and their customers.

3.1.1 Features

SEEme: This feature allows customers to see each other on map who are attending the same event.

NOTICEme: We designed this feature for customers who desire to use check-in functionality of

various social platforms such as Facebook, Foursquare etc with this single feature. In this case,

our purpose is preventing customers to switch to other social platform applications.

POKEme: Customers can use this functionality with the purpose of viewing notifications such

as time left for an upcoming event or special offers. Furthermore, all the event notifications will

be monitored through this feature.

SPECIALme: Customer can view popular events and offers special to customer. To illustrate

an example, the feature will show event recommendations, which are trend recently, offers or

discounts made my bussinesses to recieve attention of SOme users.

me: This feature, in fact, includes all details of the customer information, profile picture, all kind

of interests that the user entered before completing sign up. This functionality can be seen as a

profile page of applications.

3.2. Professional and Ethical Issues

- Users cannot see each other's profiles. They can only see who are attending to event.

- Users have option to show their locations. They can disable or enable this functionality.
- System prevents fake reservation by using several requirements and rate system.
- The system should use Google Maps API, Facebook API, Twitter API, Foursquare API and particular OS API.

3.3. Constraints

Economic Constraints

- Customers and business owners do not have to pay any price to get an account.
- Customers may get discounts and special offers thanks to our application.

Reliability Constraints

- The system allows only one account per user to eliminate the possibility of the fake accounts.
- Customers need a cellphone number to get a S0me account.
- Business owners need to fill an account request form. If their application is verified and accepted by S0me customer service, business account will be created. It is required to eliminate multiple and fake accounts.
- Users can only see each other's location through "SEEme" if and only if they exchange IP numbers.
- Business owners can cancel reservations, if clients cannot meet requirements. Also, system will automatically cancels reservation where less than 20 % of guests did not reserve their places via "COUNTme".

Social Constraints

- Our system aims to increase outdoor social activities and connection between people. So, it does not limit people's outdoor social activities by making a connection between people only through Internet.
- The system allows users to integrate with people using this system and who are already listed in their phone book.

Sustainability Constraints

- The system will direct users to vendors of events such as Biletix for concert events.
- Our system also supports student community and university sport hall events which has no economic concerns.
- SOme has Facebook integration, which allows getting public event information from business pages.

Technological Constraints

- The system should be a mobile and web application.
- The system should use Google Maps API for “SEEme” and particular OS API for “POKEme”.
- Internet connection is required for all operations.

3.4. Requirements

3.4.1. Functional Requirements

- Customers shall fill survey about their interests so that the system recommends such places and events that the user might subscribe or join.
- Customers shall subscribe places according to their interest.
- Customers shall look to the newsfeed of events, which are categorized as restaurants, cafes, clubs and concerts.
- Customers shall join to a public event arranged by places.
- Customers shall invite other users listed in their phone book to the public event that s/he already joined.
- Customers shall make a reservation and invite other users listed in their phone book.
- Customers shall view who are attending to an event.
- Customers shall view menus of places, if they provided.
- Customers shall rate places according to customer satisfaction.
- Customers shall notify places about their orders, in other words they shall order meal, drink etc., if places allowed online order.
- Customers shall cancel a reservation or unjoin to a public event.
- Customers shall use SEEme, NOTICEme, SPECIAL me, POKEme, me features as explained in features section.
- Business administers shall accept or reject reservation requests.
- Business administers shall view list of attendees to an upcoming event.
- Business administers shall create public events held at their places.

3.4.2. Non - Functional Requirements

Security: Customers profiles are not public so that there is no possibility of getting personal information stolen.

Performance: Customers can see events of subscribed places. Therefore, there will not be too much entry in newsfeed.

Usability: Customers will have a usable interface that they can use easily.

3.4.3.Psueodo Requirements

We will use html, javascript and Css in our project. We choose to use these languages to create a cross platform mobile application. We will use open source framework called phoneGap to create this cross platform.

3.5. System Models

3.5.1.Scenairos

Use Case 1: Make Reservation	
Actors	Customer
Explanation	Customers can make reservation to places where making reservation is available
Entry Condition	Customer enters profile of the business and clicks on reserve
Main Flow of Events	When a customer enters to the reservation page, s/he has to select date and time of reservation. Then, clicks on invite friends. Phonebook is opened and then selects friends to be invited and clicks on done. After that the customer is directed back to reservation page and then clicks on make reservation.
Exit Condition	Reservation is successful

Use Case 2: Deny Reservation	
Actors	The system
Explanation	The system denies reservation if there are not enough participants
Entry Condition	The system checks remaining time
Main Flow of Events	The system first checks the remaining time. If 5 hours is left to reservation, the system checks how many participants approved reservation. If %30 of the invited people did not approve, then the system drops the reservation and notifies owner of reservation and the participants who approved the reservation.
Exit Condition	The system finishes its procedure

Use Case 3: Accept SEEme	
Actors	Customer
Explanation	Customer accepts SEEme request
Entry Condition	Another customer sends SEEme request
Main Flow of Events	Customer receives a notification that a SEEme request is received. Then, customer choses to accept it.
Exit Condition	Acceptance message is sent to other customer

Use Case 4: Create Event	
Actors	Client
Explanation	Client can create public events and when users see these events on newsfeed, they can make reservation and invite their friends from phone book.
Entry Condition	Client will open place's website
Main Flow of Events	<ol style="list-style-type: none"> 1. Client create an event 2. User can see created event 3. User can make reservation to event
Exit Condition	Client will return to the website of place.

Use Case 5: SEEme	
Actors	Customer
Explanation	Customers, who are attending the same event, are able to see each other on map, before the event starts.
Entry Condition	Customer slides the main screen and clicks on SEEme option
Main Flow of Events	Customer views the name of the event along with a brief description Customer views a list of events Customer clicks on the event for further steps Customer views a list of attendees. Customer clicks on a particular attendee Customer sends a request to retrieve his location If the request is accepted, customer views the location of the person on the map
Exit Condition	Customer exits SEEme

Use Case 6: NOTICEme	
Actors	Customer
Explanation	Customers are able to check - in via social platforms such as Facebook, Foursquare etc.
Entry Condition	Customer slides the main screen and clicks on NOTICEme option
Main Flow of Events	Customer views list of social platforms as a grid Customer clicks on one of the options The system directs customer to the relevant social platform page Customer performs check - in
Exit Condition	Customer exits NOTICEme

3.5.2. Use Case Model

Actions, which can be performed by the users using this application, are displayed in this section. Use case diagram is mainly includes two actors. One of them is user that uses application on phone and the other one is business client that arranges event and provides users to see these events thanks to this application.

When the user opens the application, if user does not have an account, she/he has to create an account filling her/his personal information such as email address and phone number. After user has an account, she/he can perform some actions such as manage profile, subscribe business client, makes reservation, noticeMe, pokeMe, SEEme and specialMe. Users fill a survey about their music, food interest and they can add photo on their profiles. Therefore, they can change these information any time. They can subscribe some restaurants, bars and concerts and these subscribed places can be seen on their profiles. When business creates an event, users can follow these events in the part of newsfeed. Therefore, if they see any interesting event, they can see event details and they can want to join event. If event is available for reservation, they can make reservation directly and invite their friends choosing from phone book. If it is not available, they can click coming button, suggest this event to their friends and this event is seen on their profiles. If users want to check in using this application, they are directed to social platforms like Facebook, foursquare or twitter with NOTICEMe feature. Before meeting, users can see each other on map to understand who is where if they want with SEEme feature. SPECIALme feature of the application, some special offers like discount can be seen by SOMe users. Finally, if users can be invited to any event, this notification is sent to user with POKEMe feature. In addition, they can see how many time left to event.

When users send to request for reservation, this request can be denied or accepted by the system automatically.

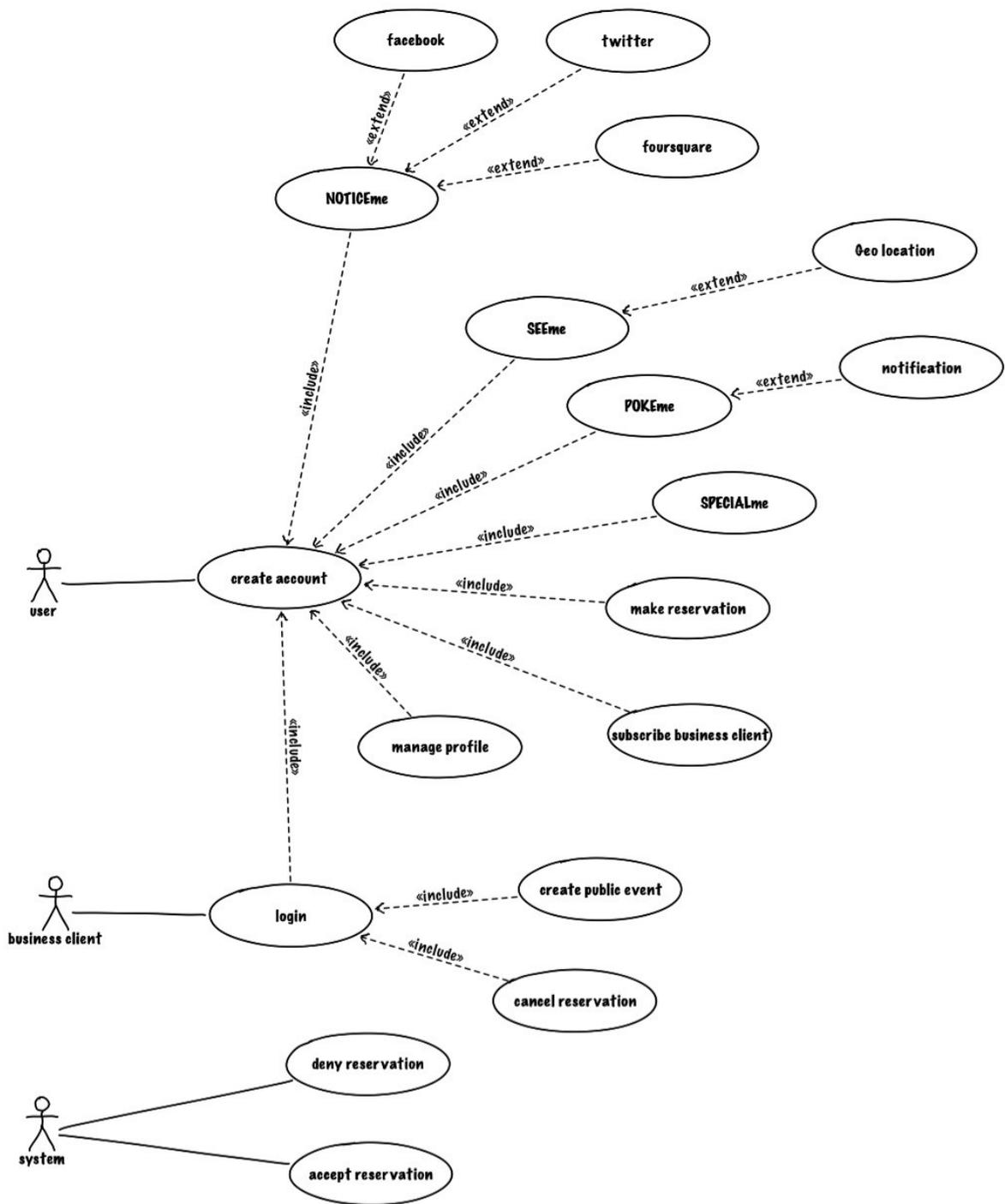


Figure : Use Case Diagram

3.5.3.Object and Class Model

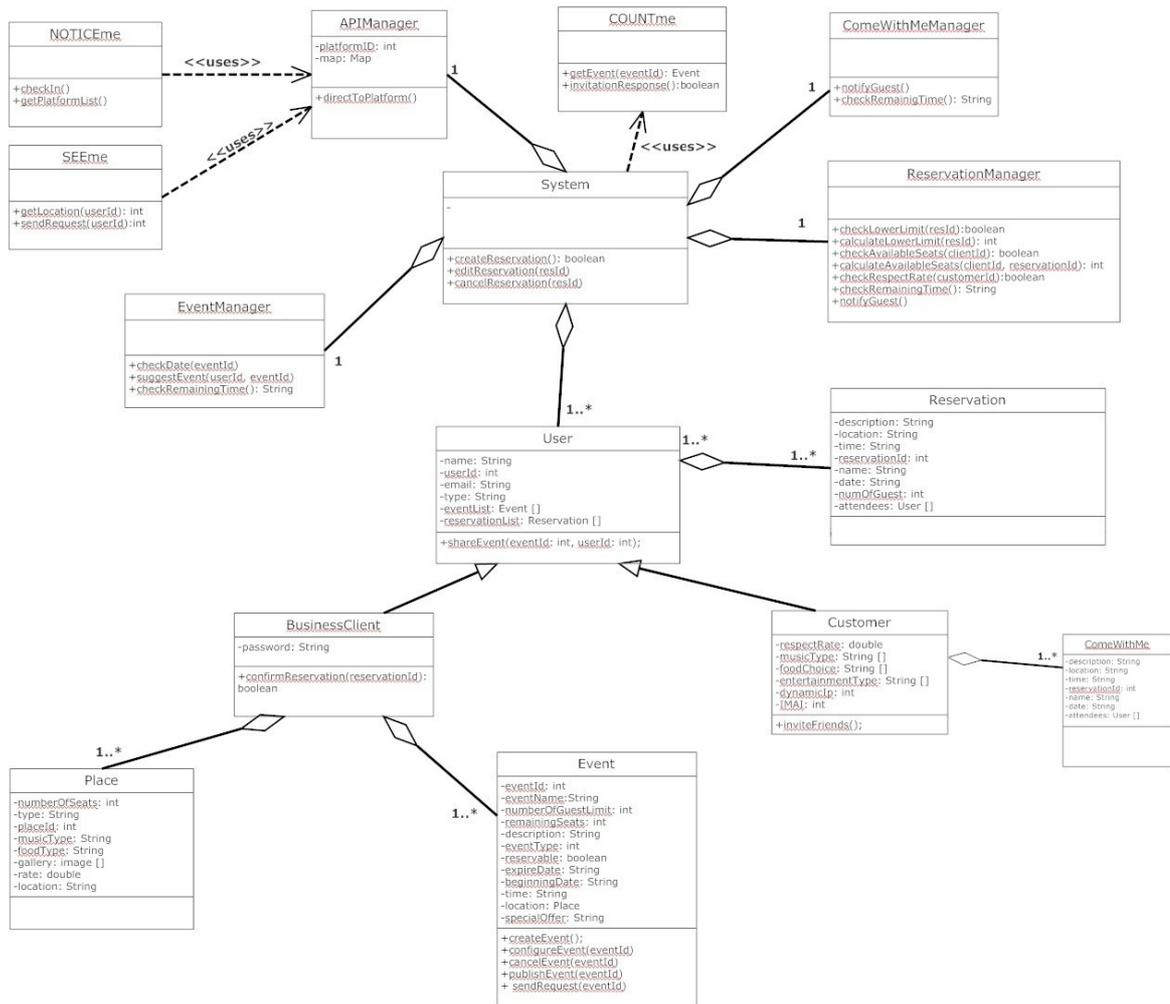


Figure : Class Diagram

Our system contains number of users which can be either business client or mobile user. All users can have number of reservations which are managed by “ReservationManager”. On the other hand, only clients can have events which are managed by “EventManager”. Events include parties or small activities arranged by businesses. Mobile user can attend to these events but cannot create one. Although users cannot create public events, they can gather with their friends without notifying the business by using “ComeWithMe” feature. This feature is very similar to reservation. However, by using this feature, users can create an event any

location they want. This event creation does not include any communication between users and businesses.

3.5.4. Dynamic Models

3.5.4.1. Activity Diagrams

COMEWITHme

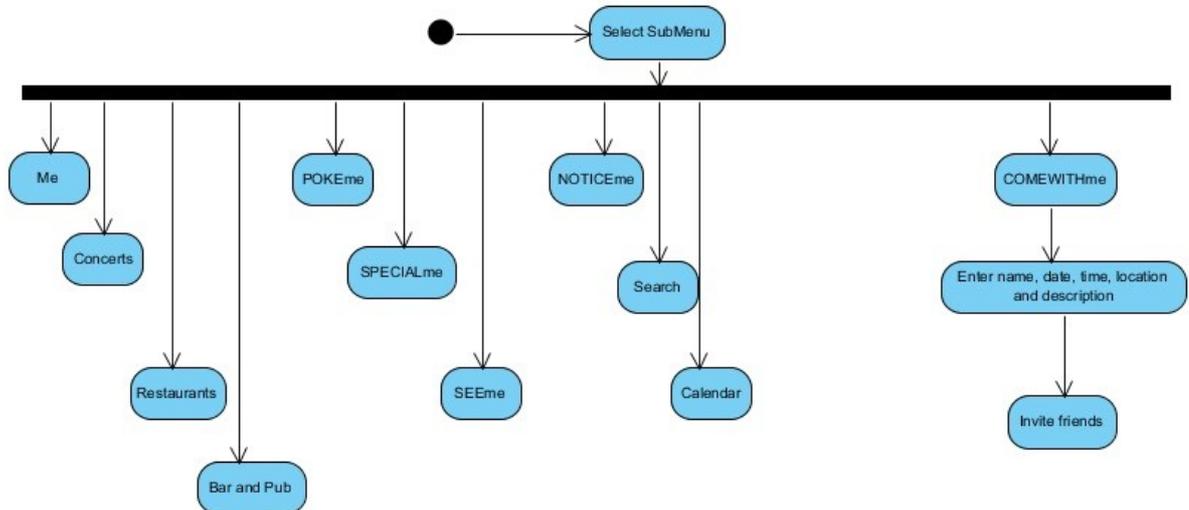


Figure : COMEWITHme Activity Diagram

In this figure, COMEWITHme functionality is visualized. The customer slides the main screen and then taps on COMEWITHme. The customer enters name, date, time, location and a brief description for COMEWITHme invitation. In the final step, the customer invites friends.

NOTICEme, Search and Calendar

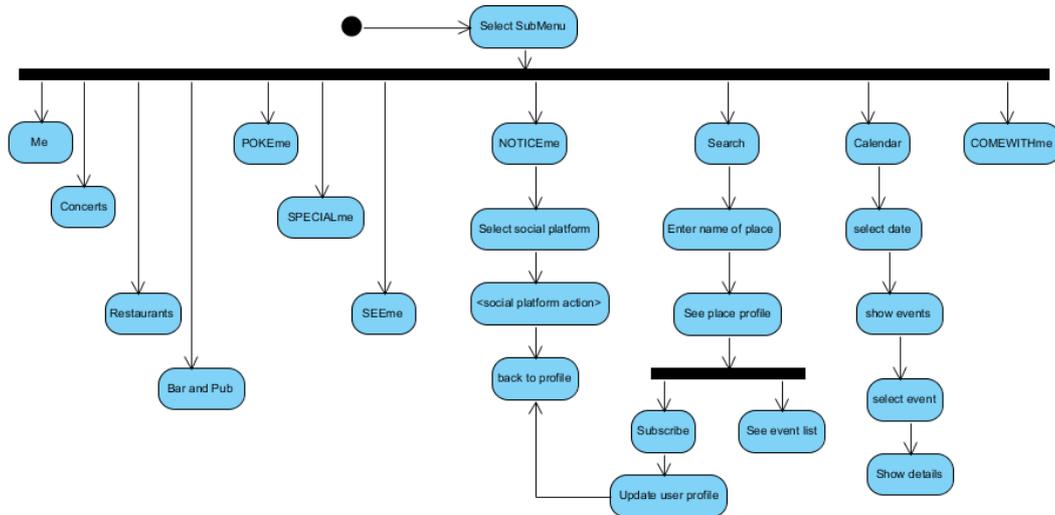


Figure : NOTICEme, Search and Calendar

In this figure, activity of NOTICEme, Search and Calendar is visualized and explained.

In the case of using NOTICEme, the customer slides main menu and taps on NOTICEme. Then he selects one of the social platforms. After the user is directed to social platform app, he is redirected to slided menu.

Search field is located on the top of main menu. The customer taps on Search and enters name of a place. Search directs customer to profile page of the place. The customer then might subscribe the place if he did not do it already, or he might view events provided by the place.

Calendar is located on slided menu, and hence the customer slides the main menu to open calendar. After it is opened, the customer selects the date to see events that will be occurred on that day. Then he might tap on a particular event to see detailed information about the event.

Newsfeeds

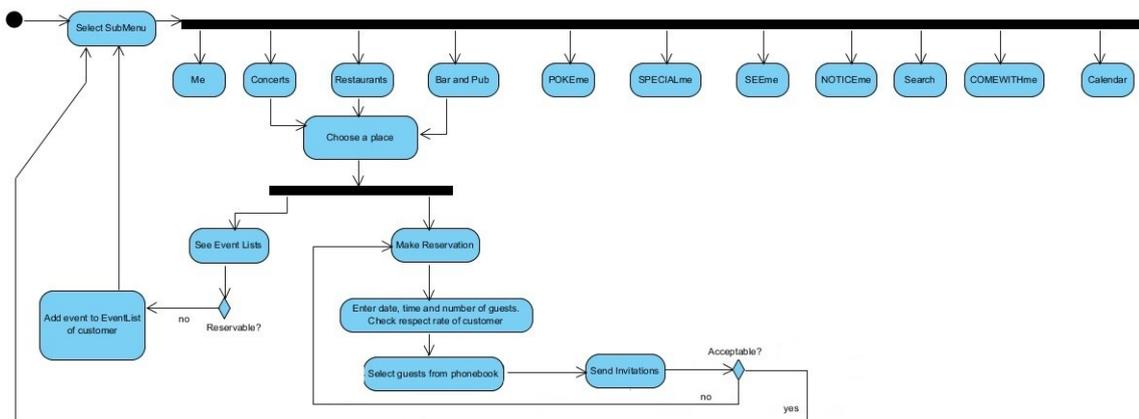


Figure : Newsfeeds Activity Diagram

In this figure, activity flow of using Newsfeeds is visualized and explained. In the main menu, categories for restaurants & cafes, bars & pubs, theatres and cinemas and concerts located. Once the customer taps one of the categories, newsfeed for this category opens. The customer selects a place among events shown on the newsfeed. The customer might make a reservation or views other events offered by the place. If the customer taps on Make Reservation, he is directed to another page. In this page, he enters date, time, number of guests, then he selects guests from phonebook. Then the system checks the respect rate of the customer, if it is acceptable the system sends invitation to guests. In the case of viewing event list, if customer joins to an event and the event is no reservable, then the system adds event to the even list of the customer.

Login

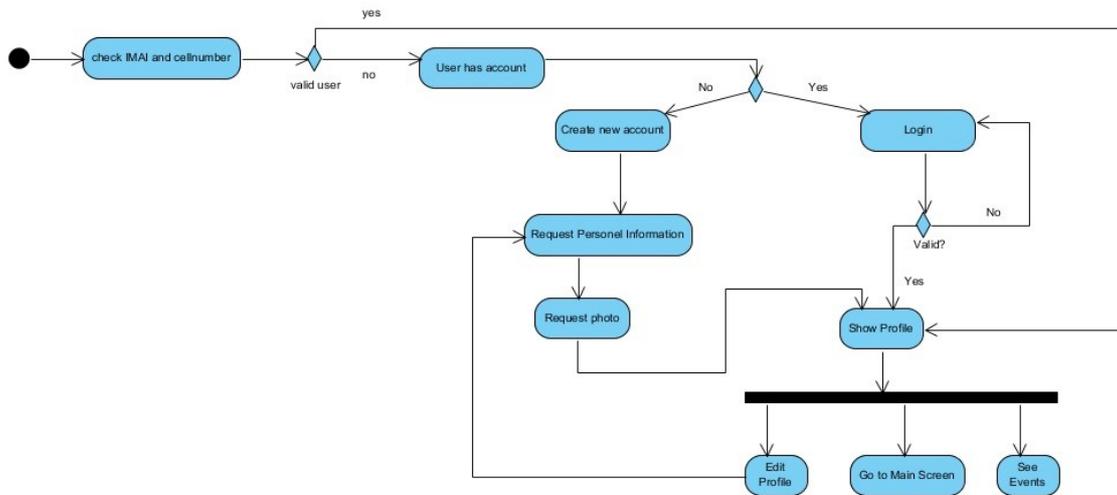


Figure : Login Activity Diagram

This part of activity diagram shows how to login to use application. When the user opens the application, IMAI number and phone number are checked. If entrance is successful, user can access his/her profile. If entrance is not successful, user could change phone as an option and he/she should log in again. As another scenario, maybe user has not been have an account before. Therefore, he/she should create an account while filling personal information and can access his/her profile.

Main

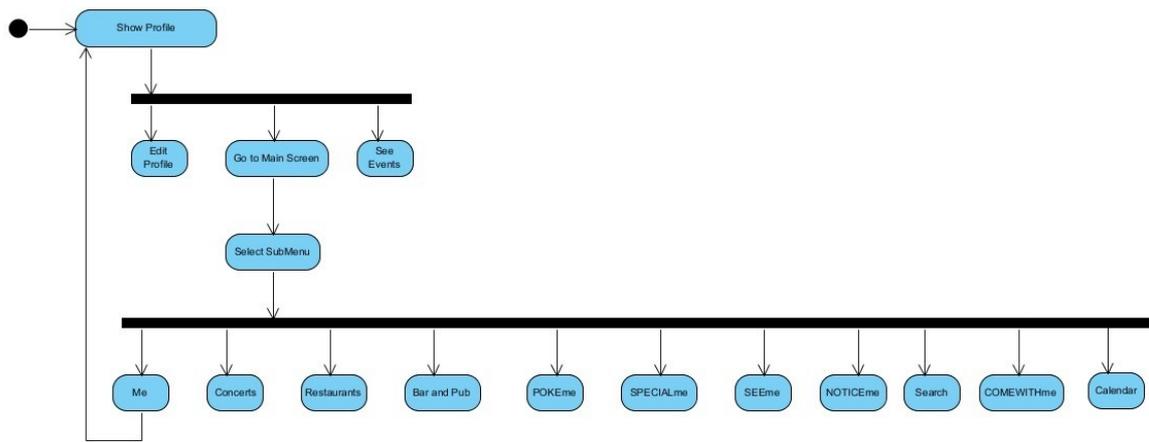


Figure : Main Activity Diagram

This activity diagram shows processes after entering profile page. When the user enters profile page, he/she can edit profile, goes to main screen that has categorized events and some features of application and sees events that will be joined. User can select any sub category from main screen page and user can return profile from me feature of application.

POKEme

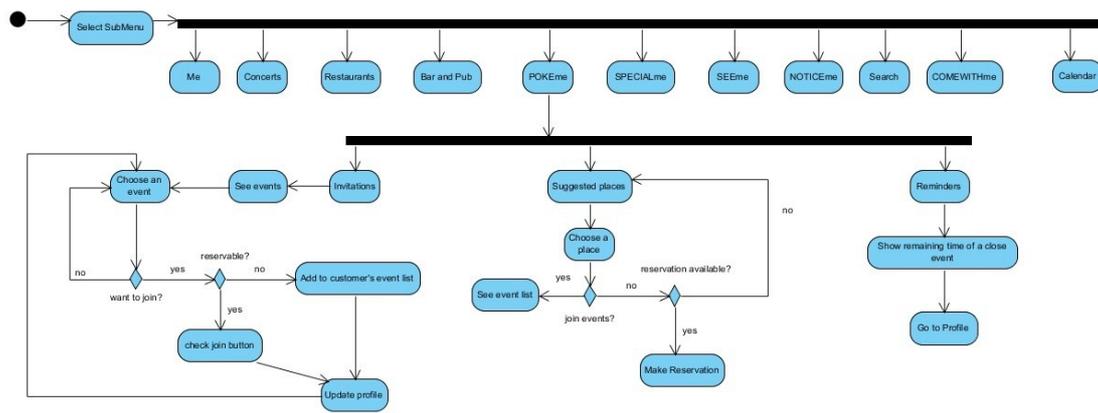


Figure : POKEme Activity Diagram

This activity diagram shows which actions can be performed in POKEme feature. Users can see invitations that come themselves from other users. Therefore, Users can choose any invitation, see details of invited event. If they want to join the event and event is available for reservation, they can check join button. If it is not available, they can see the event list on their profiles. Finally, users' profiles are updated. If users do not want to join invited event, they can look the other notifications. Users can see remaining time to coming event. When specific time remains to event, users are notified with pokeMe feature.

System can suggest any place to the users. If user wants to join event, he/she should see event list. If user does not want to join any event from list, he/she can make reservation that is not related to event. If place is not available for reservation, he/she can return suggested places list.

See Events

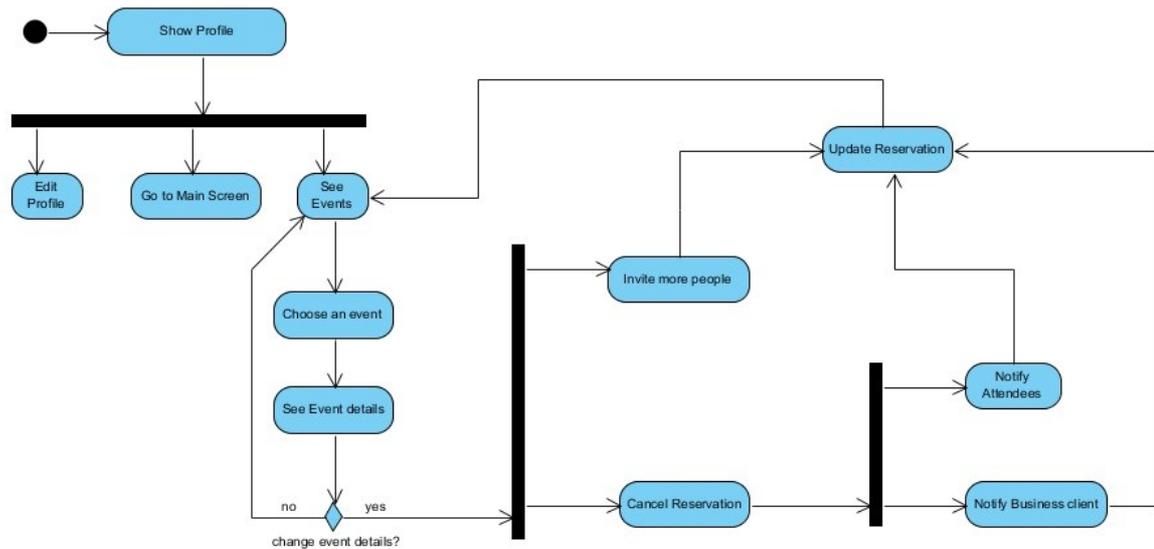


Figure : See Events Activity Diagram

This activity diagram shows processes event list that user will attend. User can choose any event from list and see details of chosen event. If user wants, he/she can invite his/her more friends and update reservation. User can want to cancel existing reservation. When the reservation is cancelled, attendees and business client should be notified about status of reservation. Reservation is updated. If user does not want to change anything about details of reservation, he/she can return event list.

SEEme & SPECIALme

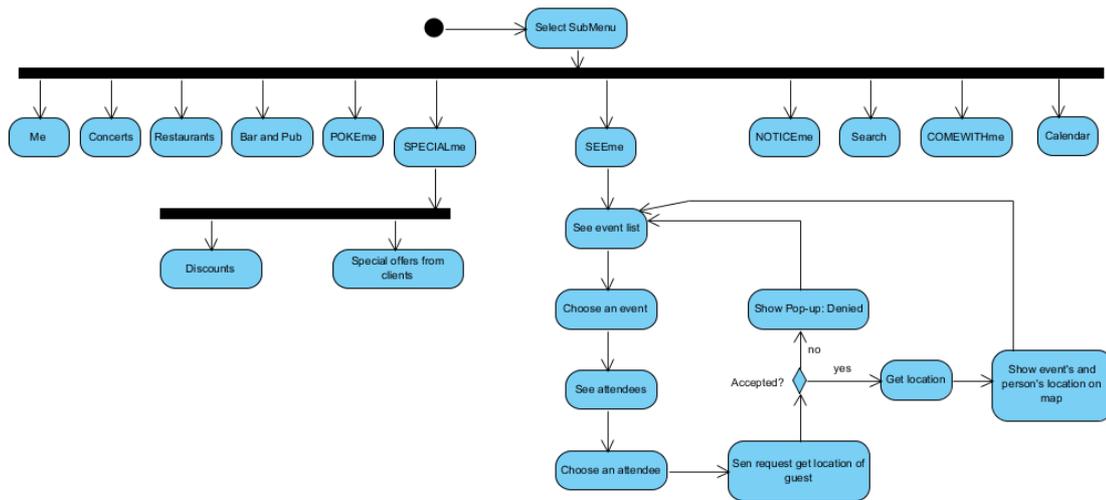
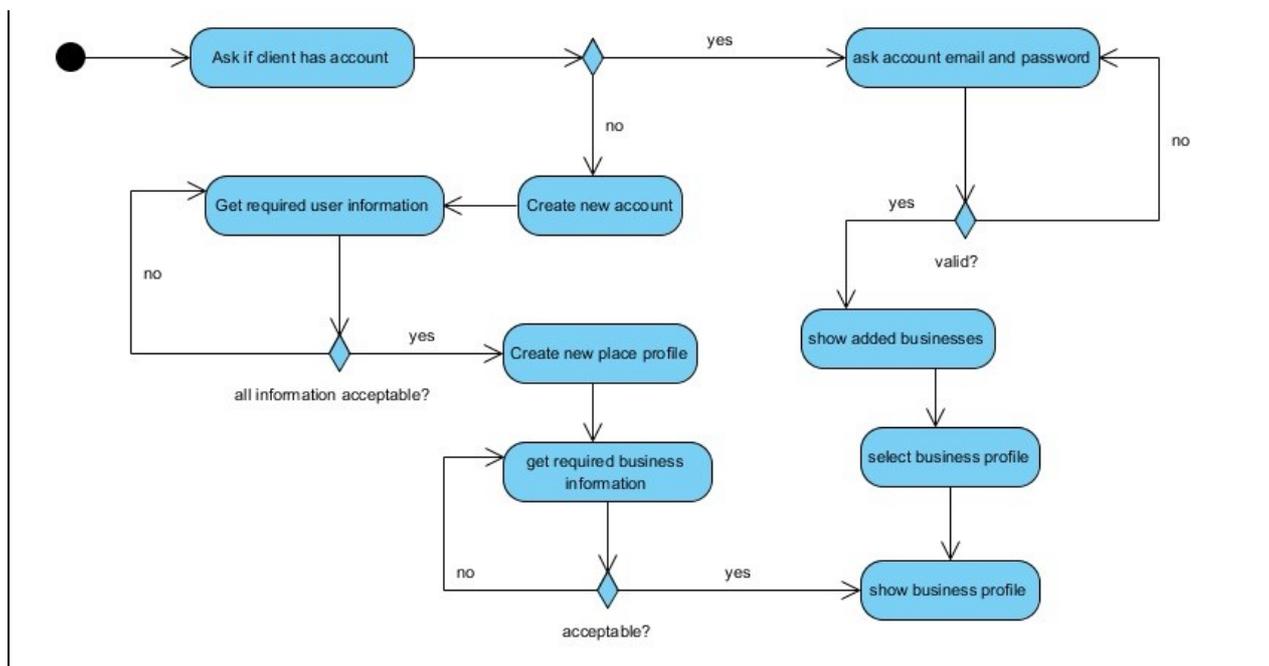


Figure : SEEme & SPECIALme Activity Diagram

This activity diagram shows processes of SEEme and SPECIALme features of application. When user clicks on SEEme button, he/she will see discounts for user and special offers from client. If users want to see where are his/her friends, he/she can choose friends from chosen event. User sends to his/her friend to get location of guest. If guest accepts this request, guest sends his/her location. Therefore, user can see his/her friends on the map and return to event list.

Client Side Sign Up and Login

Figure 11: Client side sign up and Login Activity Diagram



In our application's client side, users have to create an account with a verified e-mail , password and correct personal information. After creating his account, client adds business place to his account by entering name, location, type of his business. After adding place to his account, user can manage his business profile.

If a user has an account he just enters his e-mail and password in order to login to his account. If login information is valid, he will be directed to added businesses page where he can choose which business he wants to manage.

Client Side Logout and See today's events and reservations

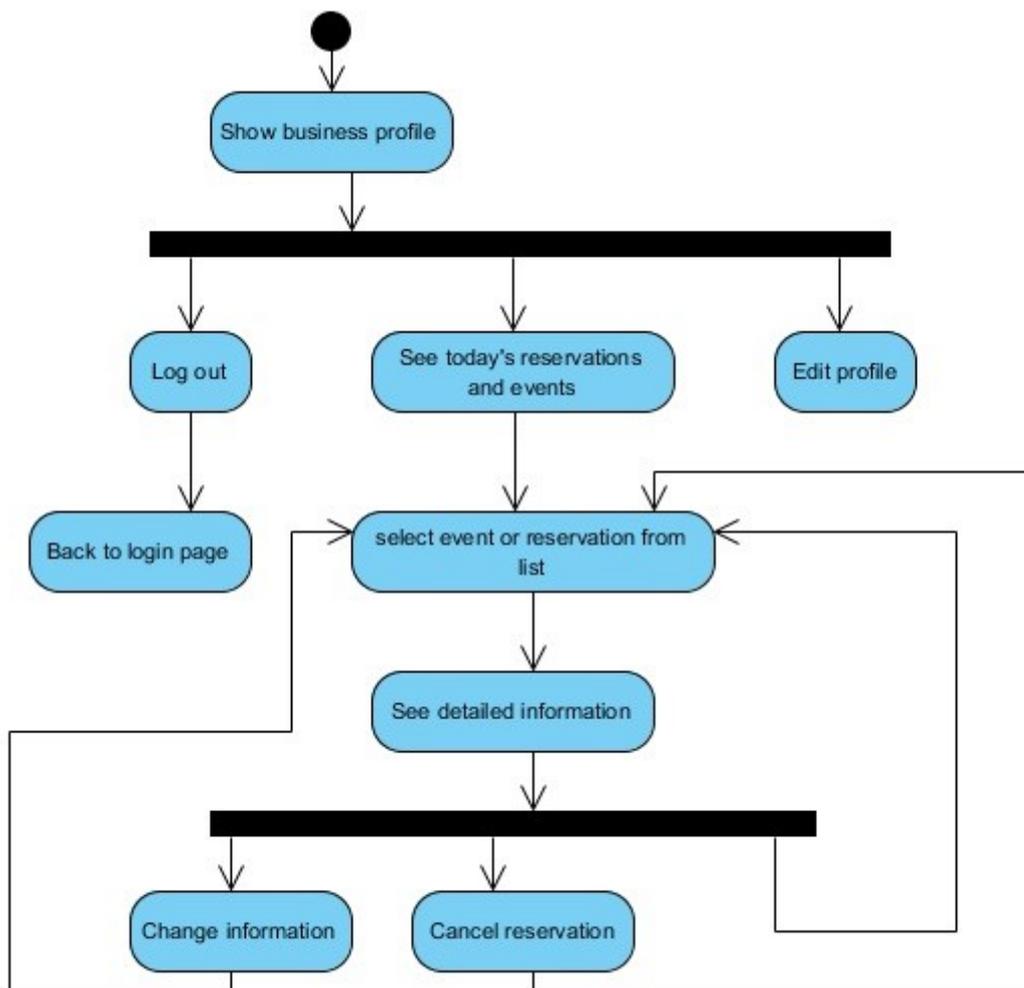


Figure 12: Client side logout, see today's events and reservations Activity Diagram

After logging in and selecting business, user can edit his business profile, logout or see today's reservations and events. When user chooses logging out, he will be directed to login page.

By choosing "See today's events and reservations" option, user can select an event or reservation. Then, he can change event information or cancel a reservation. When user completes these steps or just get detailed information about events and reservations, he will be directed to events and reservations list.

Edit Profile

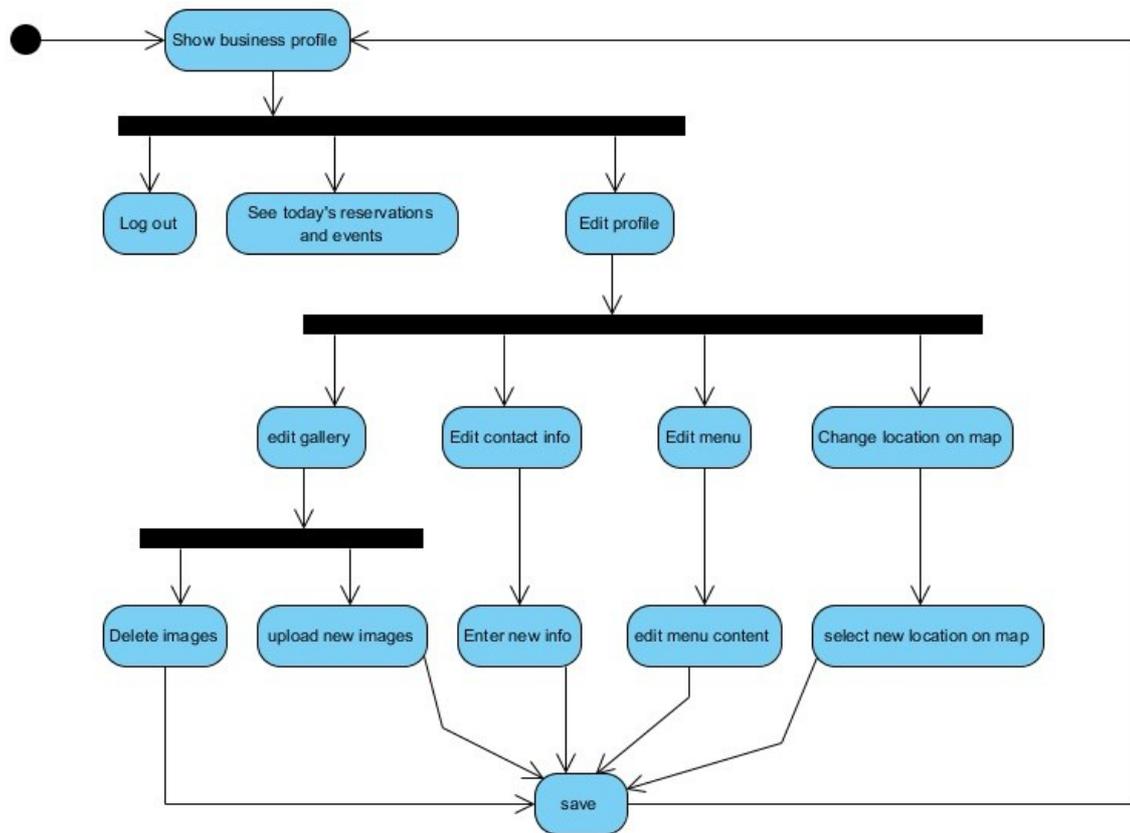


Figure 13: Edit profile Activity Diagram

User can edit his business profile by choosing edit profile option. If user selects edit profile, he can edit gallery, contact information, menu and location. In order to edit his gallery, user either deletes images or uploads new images. Changing contact information or menu requires new relative information. If user wants to change location of business on map, he needs to select a new location. After completing any of these step user will save his changes and he will be directed to his profile.

3.5.4.2. Sequence Diagrams

3.5.4.2.1. NOTICEme

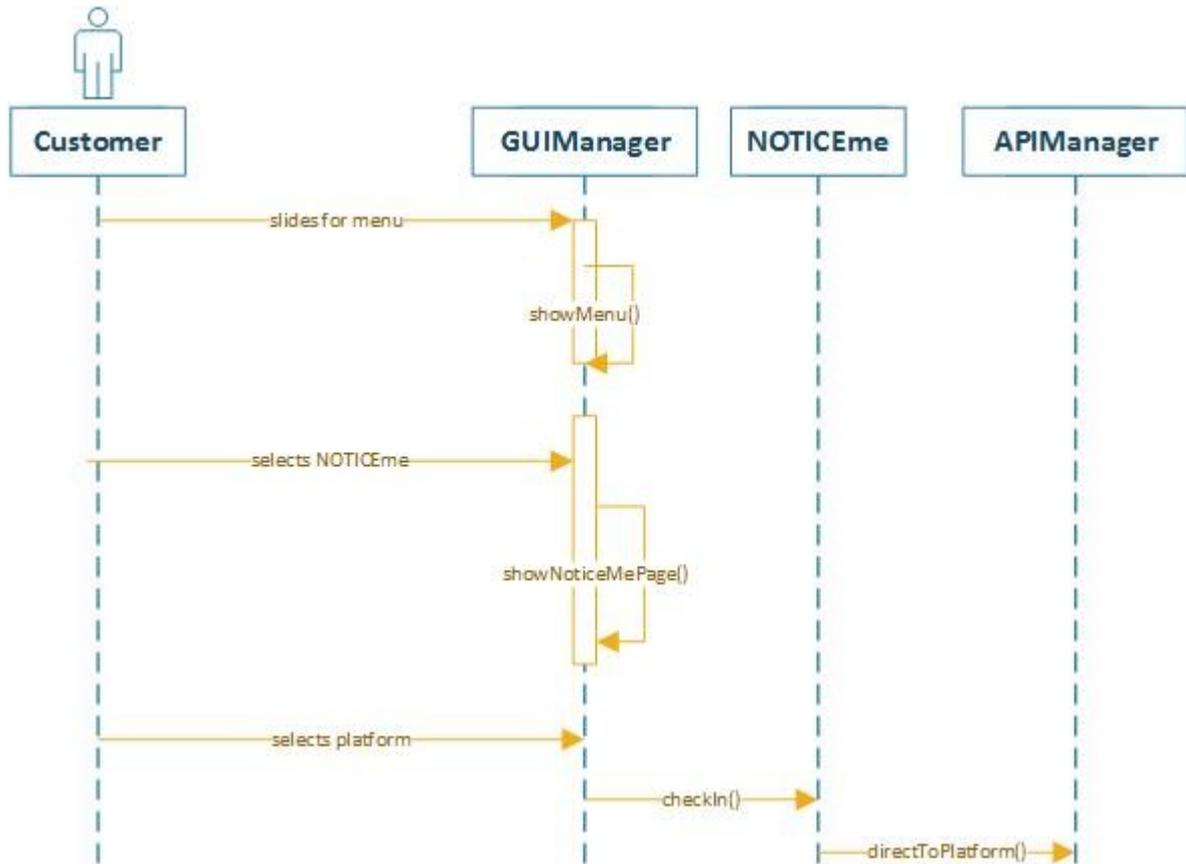


Figure 14: NOTICEme Sequence Diagram

In this figure, NOTICEme functionality is explained and drawn. The customer slides main menu, GUIManager calls showMenu() to maintain this functionality. In the second step, the customer selects NOTICEme and GUIManager opens it via showNoticeMePage(). The final step consists of selection of social platforms. The customer taps one of the platforms and APIManager directs to platform apps.

3.5.4.2.2. SEEme

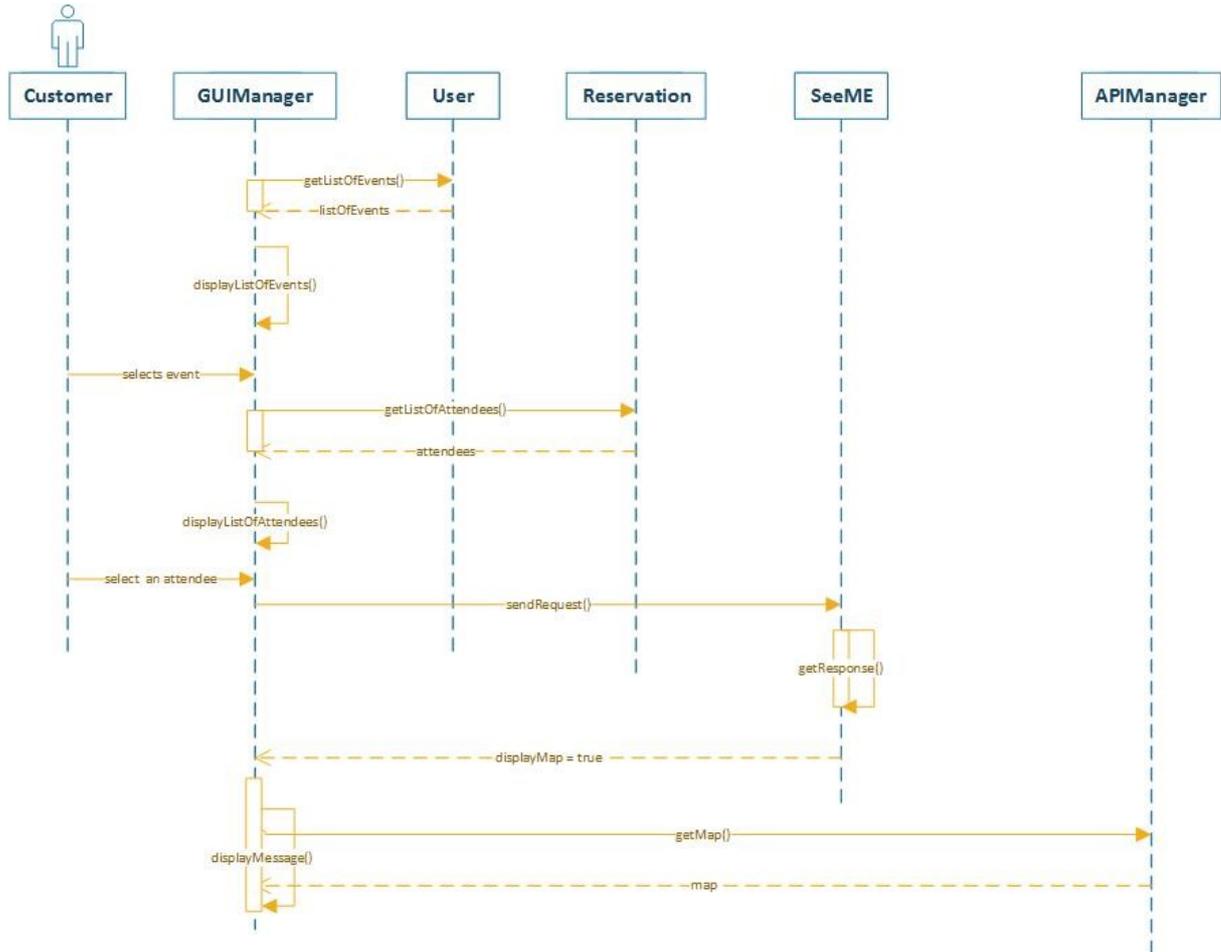


Figure 15: SEEme Sequence Diagram

In this figure, SEEme functionality is explained. When the customer successfully opens SEEme, a list of events that the customer will join will be monitored via `displayListOfEvents()`. The second step occurs with a particular event selection of the customer. The `Reservation` class retrieves a list of attendees for a particular event via `GUIManager`'s `getListOfAttendees()`, and `GUIManager` displays them all to the customer via `displayListOfAttendees()`. In the third step, the customer selects a particular attendee, and this request is sent to `SEEme` to receive the dynamic location of the attendee via `sendRequest()`. After `SEEme` confirms displaying the map (output of `getResponse()`) and location sharing between the customer and the attendee, `GUIManager` calls `getMap()` to display the location on the map.

3.5.4.2.3. Make Reservation

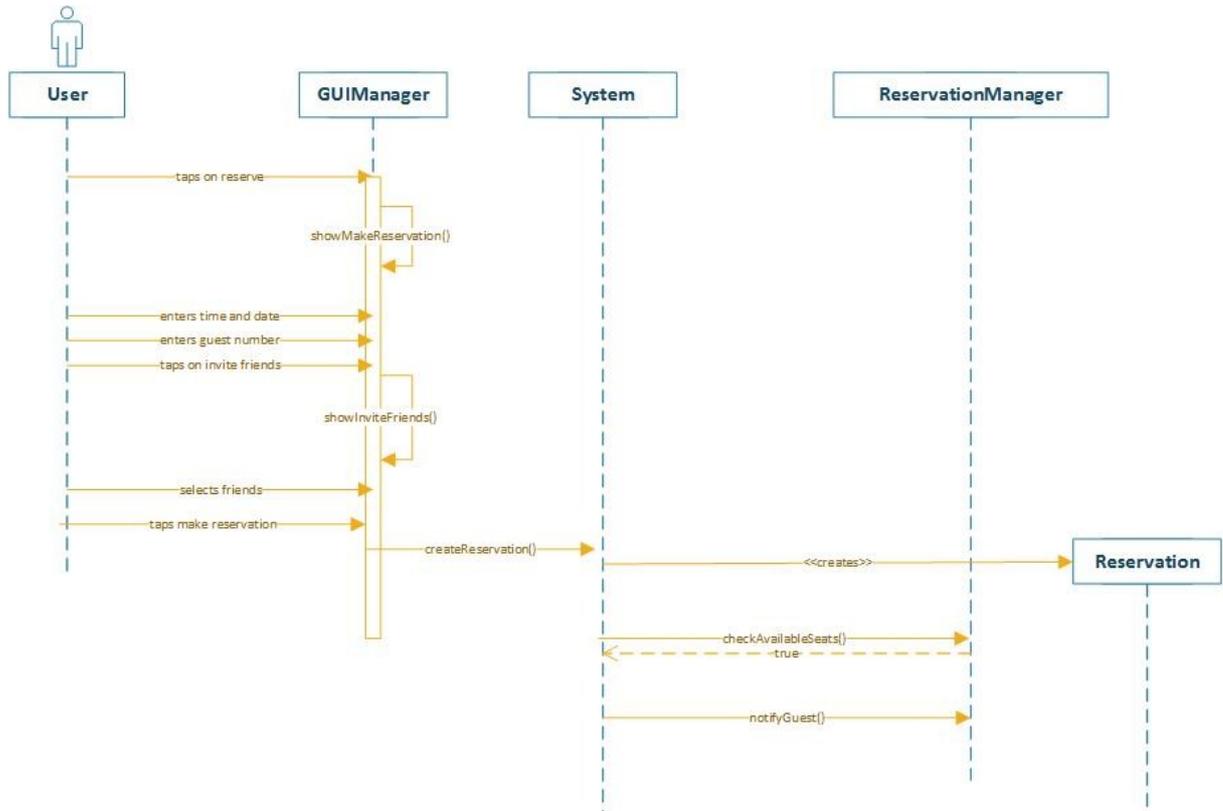


Figure 16: Make Reservation Sequence Diagram

In this figure, the how make reservation works is explained. Firstly, the user taps on Reservation button, and GUIManager calls showMakeReservation() to display Make Reservation page. After the page is displayed successfully, the user enters time and date, number of guests, and invite guests button. GUIManager then calls showInviteFriends() to display guests recorded in the users's phonebook and also recorded in S0me. In the next step, the user selects friends among the list and taps Make Reservation button to complete the process. GUIManager is directed to system via createReservation() and System creates a Reservation object. ReservationManager checks available seats in the place via scheckAvailableSeats() and returns true. After confirmation, System requests notifyGuests() with the purpose of notifying invited guests about a reservation has been made by the user.

3.5.4.2.4. Deny Reservation

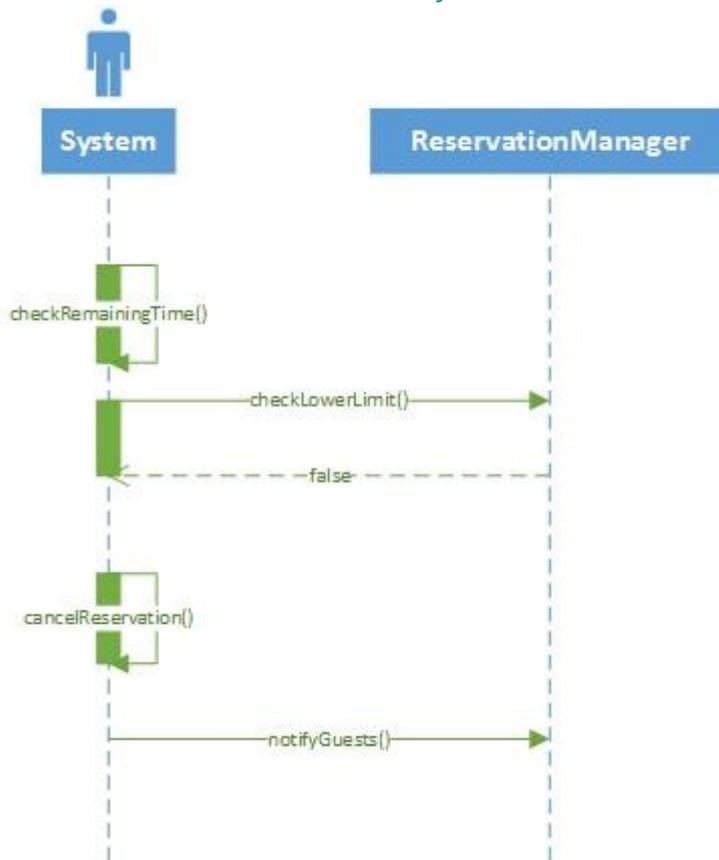


Figure 17: Deny Reservation Sequence Diagram

In this figure, cancel reservation done by the system itself is explained. If number of attendees to the upcoming reservation is below the limit, then the system cancels the reservation automatically after a certain time. Firstly, the system checks remaining time to the upcoming reservation with `checkRemainingTime()`. If the remaining time is less than or equal to `x`, then the system requests lower limit from `ReservationManager` via `checkLowerLimit()`. `ReservationManager` returns `false`, then the system calls `cancelReservation()` to cancel reservation.

3.5.4.2.5. Create Event

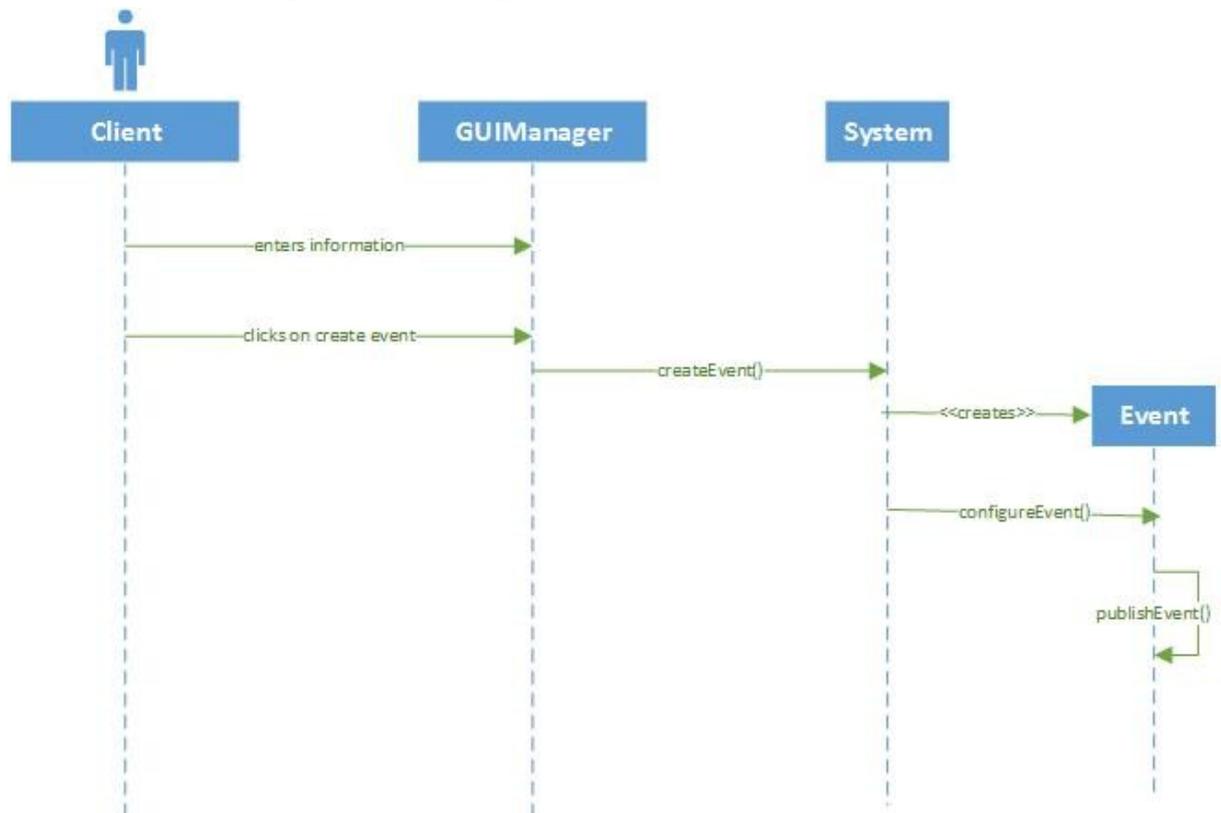


Figure 18: Create Event Sequence Diagram

In this figure, event creating is explained. The business client enters relevant information about the event and then clicks on Create Event button. Then GUIManager requests System to create the event via `createEvent()`, and System creates an Event object. System configures the event and as a final step, Event publishes event via `publishEvent()`.

3.5.4.2.6. Accept SEEme

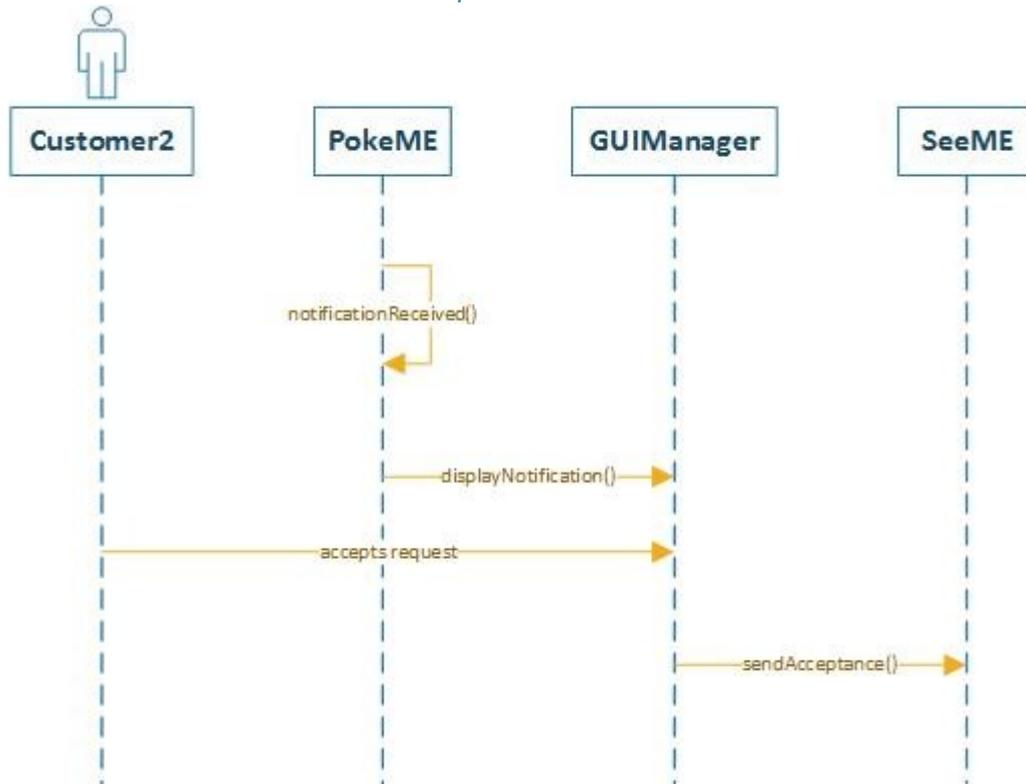
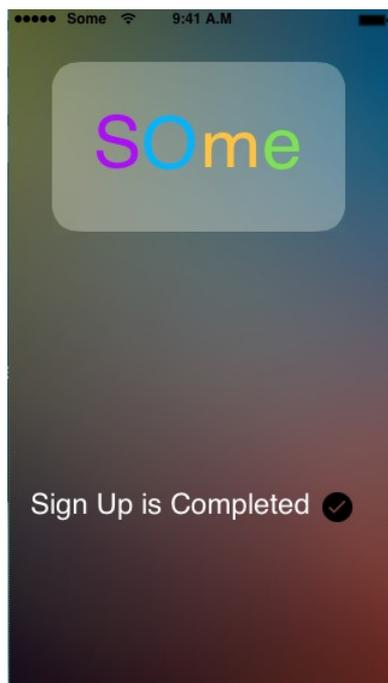
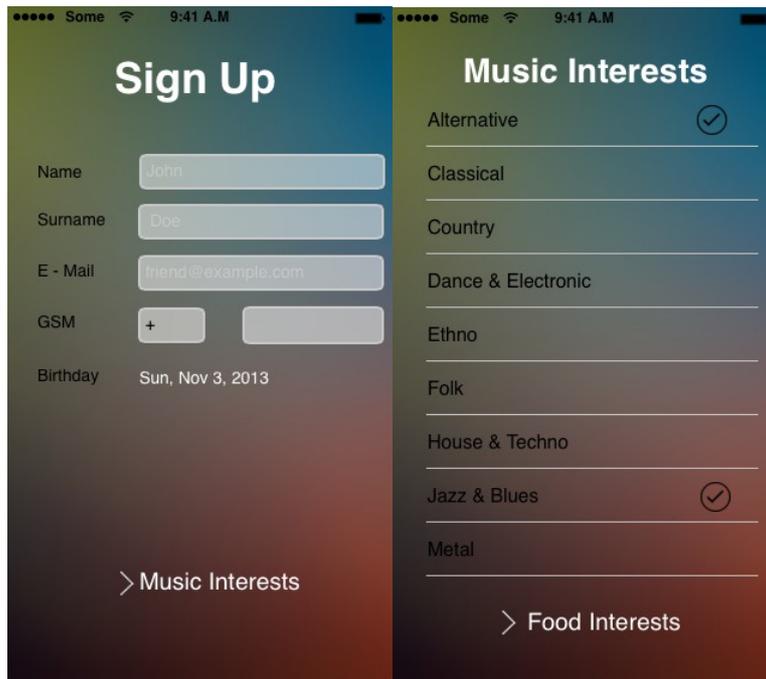


Figure 19: Accept SEEme Sequence Diagram

In this figure, Attendee side of SEEme functionality is explained. As you are informed in SEEme, the customer sends a request to a particular attendee to see his location. In this part, acceptance of the attendee is drawn and explained. Firstly Customer 2 is notified with POKEme. POKEme calls notificationReceived(), and requests GUIManager to display notification via displayNotification(). After Customer 2 sees the notification and taps on it, SEEme opens. Customer 2 accepts the request, and GUIManager sends this signal to SEEme via sendAcceptance().

3.5.5. User Interface

Sign Up



Main Menu





Berksu Aladağ
★★★★★

Alternative, Jazz & Blues,
Pop, R&B & Soul, Classical,
Dance & Electronic
Italian, Fast Food, Turkish,
Tapas, Chinese

Sözeri at 14:00, Tadım
Pizza at 19:30
Halloween Party at 21:00,
Karaoke Party at 23:00,
More...

Bomonti Brasserie,
Retrox, Kebap49, Sözeri,
Cinebonus Ankuva,
Congresium, Akün
Sahnesi, More...

Newsfeed

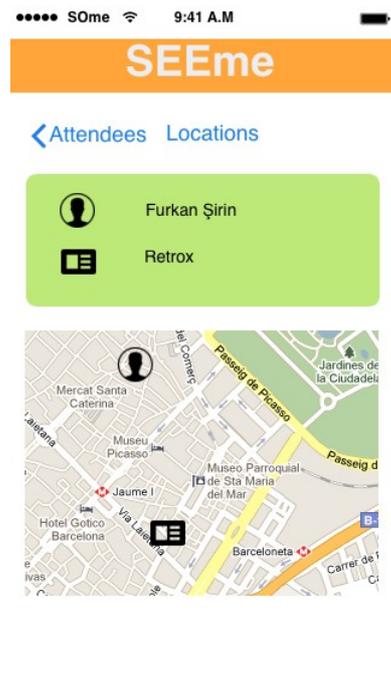
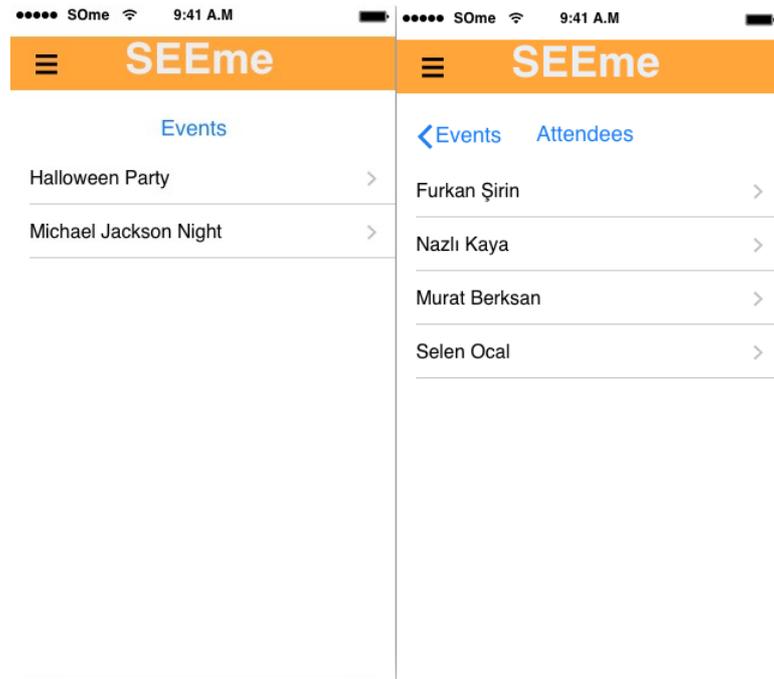


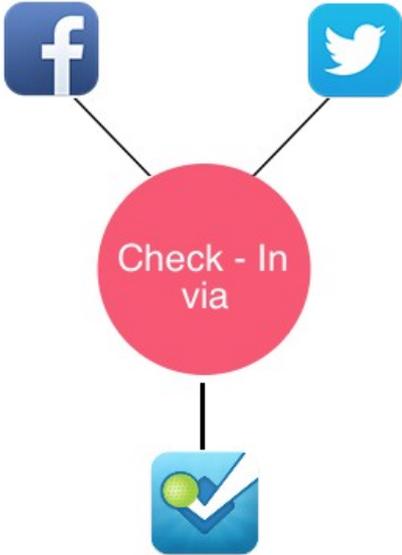
Place Profile



Event Profile







Make Reservation

●●●● S0me 9:41 A.M



[Place Profile](#)

Reservation



Today, November 3 ,2013



10:00



2 guests



Invite Friends



Make Reservation

4. Glossary

Android: Linux-based and open source mobile operating system, which is being developed for mobile devices and cell phones.[5]

iOS: Mobile operating system that is originally developed by Apple for the iPhone, but later used for the iPod Touch and iPad.[6]

SEEme: You can see details of this function in features function in page 8-9.

NOTICEme: You can see details of this function in features function in page 8-9.

COUNTme: You can see details of this function in features function in page 8-9.

SPECIALme: You can see details of this function in features function in page 8-9..

POKEme: You can see details of this function in features function in page 8-9.

me: You can see details of this function in features function in page 8-9.

5. References

[1]: <https://itunes.apple.com/us/app/find-my-friends/id466122094?mt=8>

[2]: <https://itunes.apple.com/us/app/invy-event-planner/id511271654?mt=8>

[3]:
<https://itunes.apple.com/us/app/tripadvisor-offline-city-guides/id480066121?mt=8>

[4]:
<https://itunes.apple.com/us/app/event-planner-checklist-countdown/id400016276?mt=8>

[5]: <http://tr.wikipedia.org/wiki/%C4%B0OS>

[6]: [http://tr.wikipedia.org/wiki/Android_\(i%C5%9Fletim_sistemi\)](http://tr.wikipedia.org/wiki/Android_(i%C5%9Fletim_sistemi))