E2Gather

Eat + Gather > Together

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1 Project Desription

E2Gather is a social application that interacts with Facebook to help users find one or more friends to cook and share a meal. This is done by exploring and analyzing the food each user has in his or her refrigerator. Within the system there are two roles: Host and Guest. All users input and update the food contained in their refrigerators. When a user (role: host) wants to host an event, the user inputs the ingredients and quantities for the dish that he or she wants to make and eat and then asks E2Gather which of the user's Facebook friends are the best dinner mates to invite based on the food they have in their refrigerators. A list of potential guests is returned by E2Gather and then the host chooses one or more users (role: guest) to invite to the meal. The host also inputs additional information about the meal such as the time and location. Guests can either accept or decline the invitation. The host is the only user that has privileges to change event information or the event's ingredient list. E2Gather aims to help people use the food they have already bought by bringing people together to share the cooking and eating of a meal.

1.1 System Implementation

The system implementation for E2Gather is shown in Figure 1 and the expected technological details are as follows:

- Programming Language: Ruby
- Web Framework: Rails (Ruby on Rails) [1]
- Web Server: WEBrick [2]
- Data API: Facebook Graph API [3]
- Database: MySQL [4]
- Version Control: Stash [5]

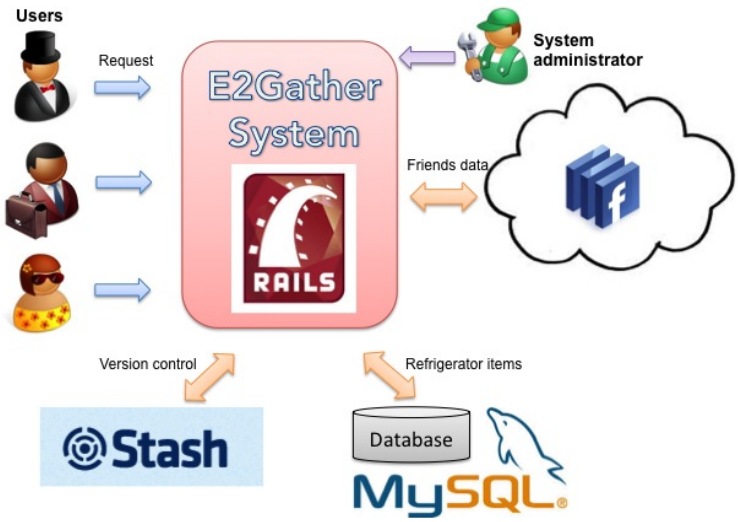

Figure 1: System Implementation

2 CRC Cards

The CRC cards for E2Gather are shown in Figures 2 - 6.

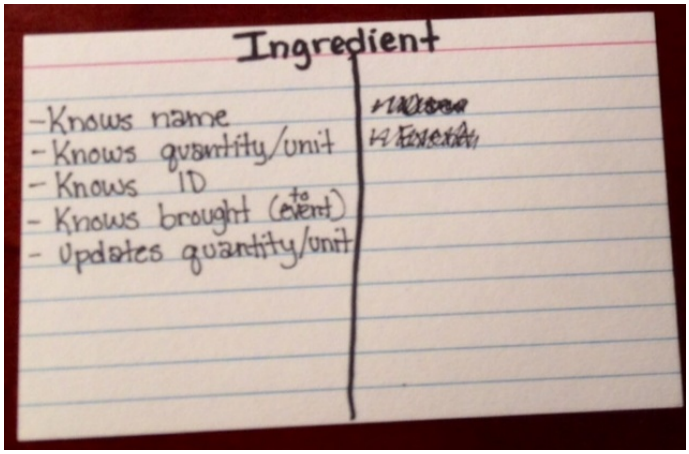

Figure 2: Ingredient CRC Card

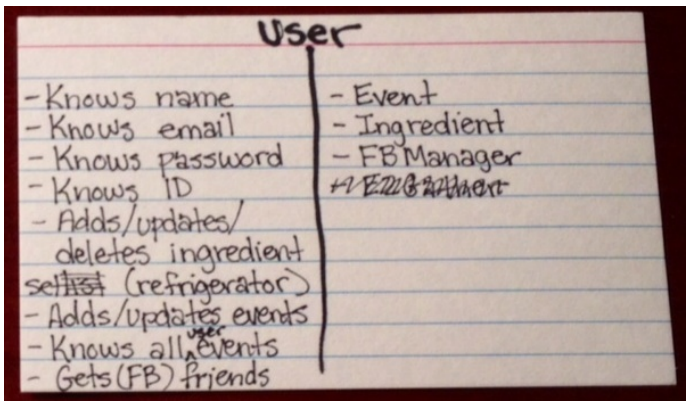

Figure 3: User CRC Card

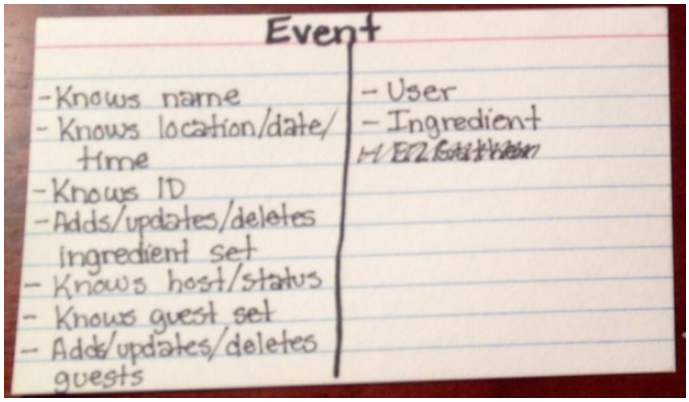

Figure 4: Event CRC Card

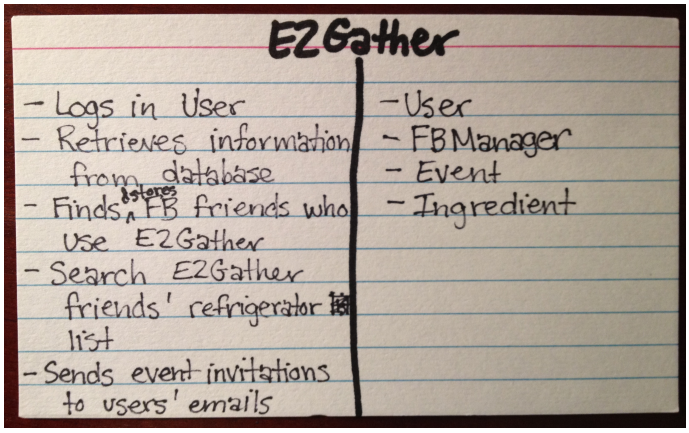

Figure 5: E2Gather CRC Card

Figure 6: Facebook Manager CRC Card

3 Class Diagram

The Class Diagrams for E2Gather are shown in Figures 7 - 12.

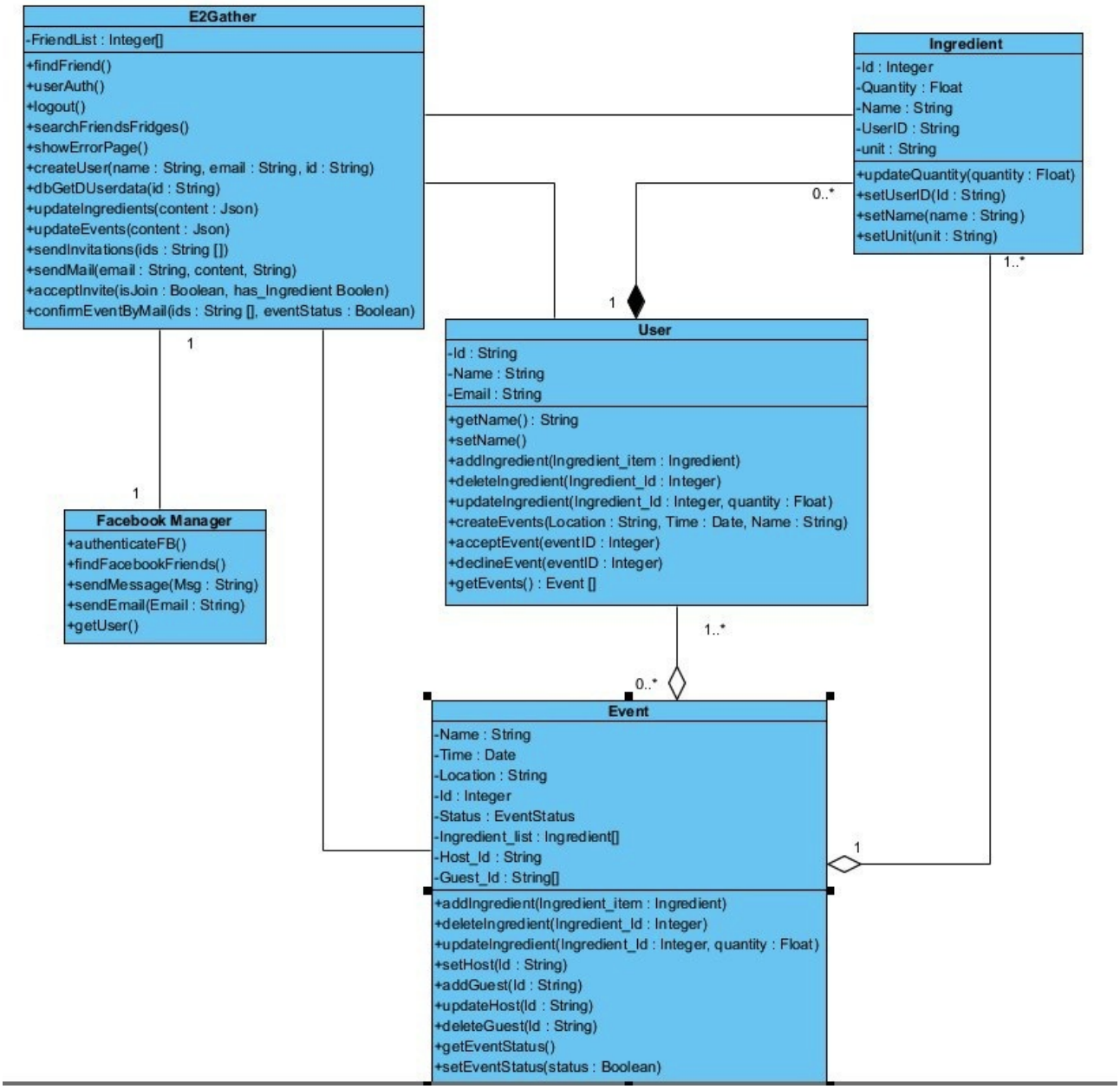

Figure 7: UML Class Diagram

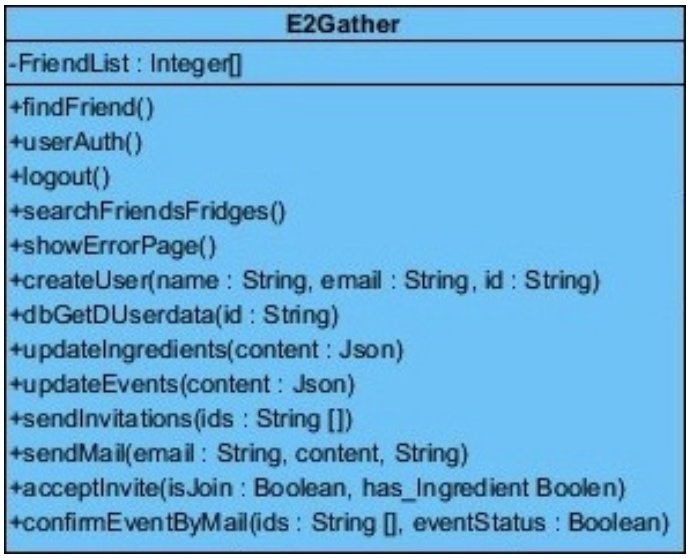

Figure 8: E2Gather Class Diagram

Figure 9: FBManager Class Diagram

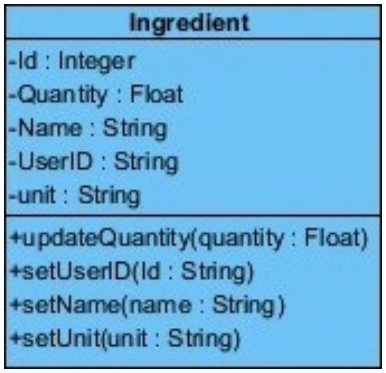

Figure 10: Ingredient Class Diagram

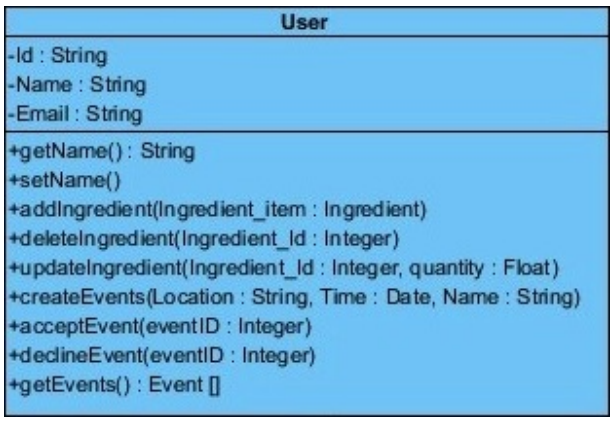

Figure 11: User Class Diagram

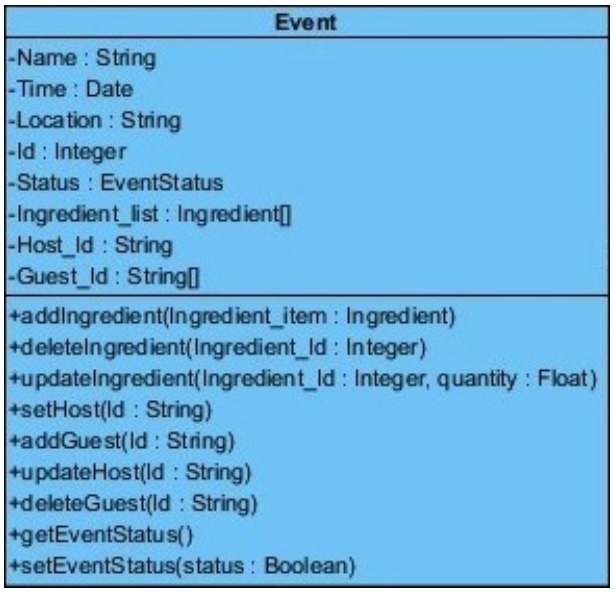

Figure 12: Event Class Diagram

4 State Diagram

The State Diagrams for E2Gather are shown in Figures 13 - 15.

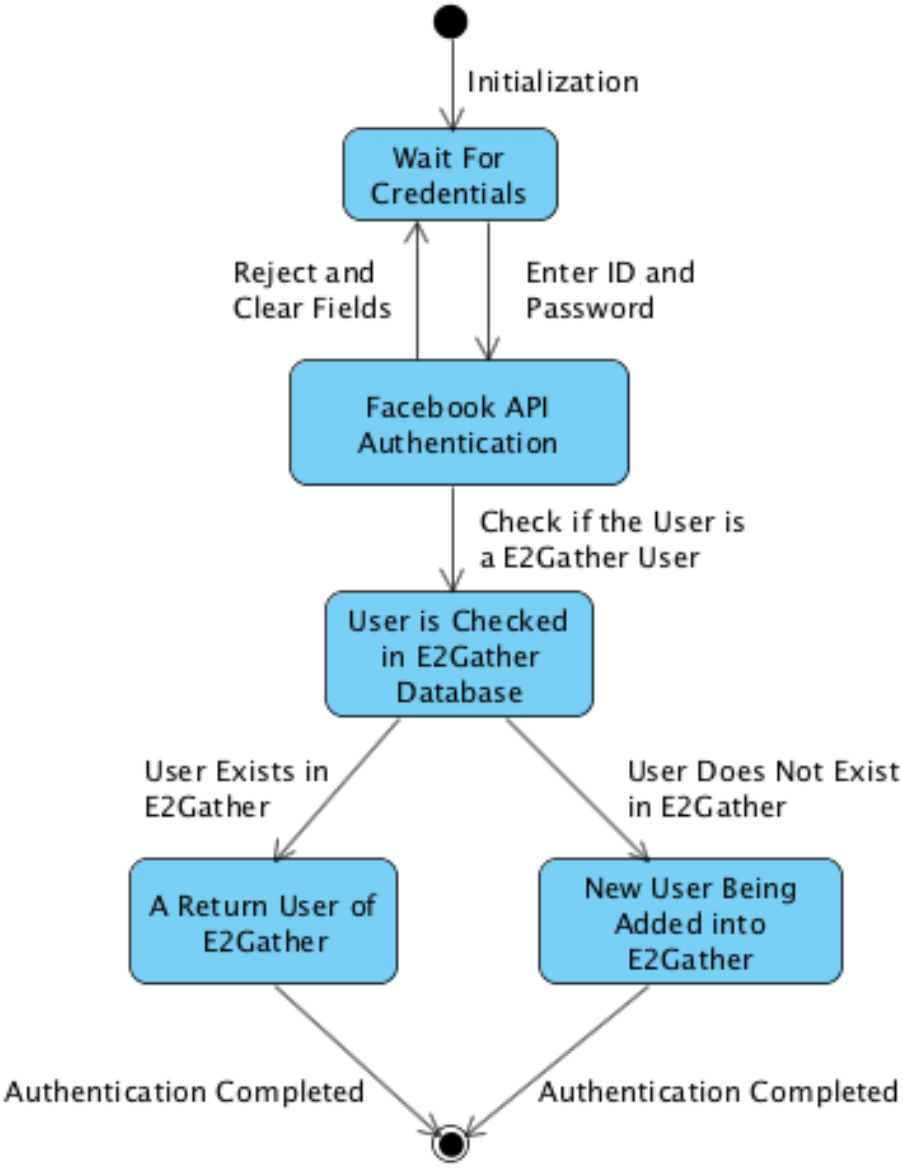

Figure 13: UML Authentication State Diagram

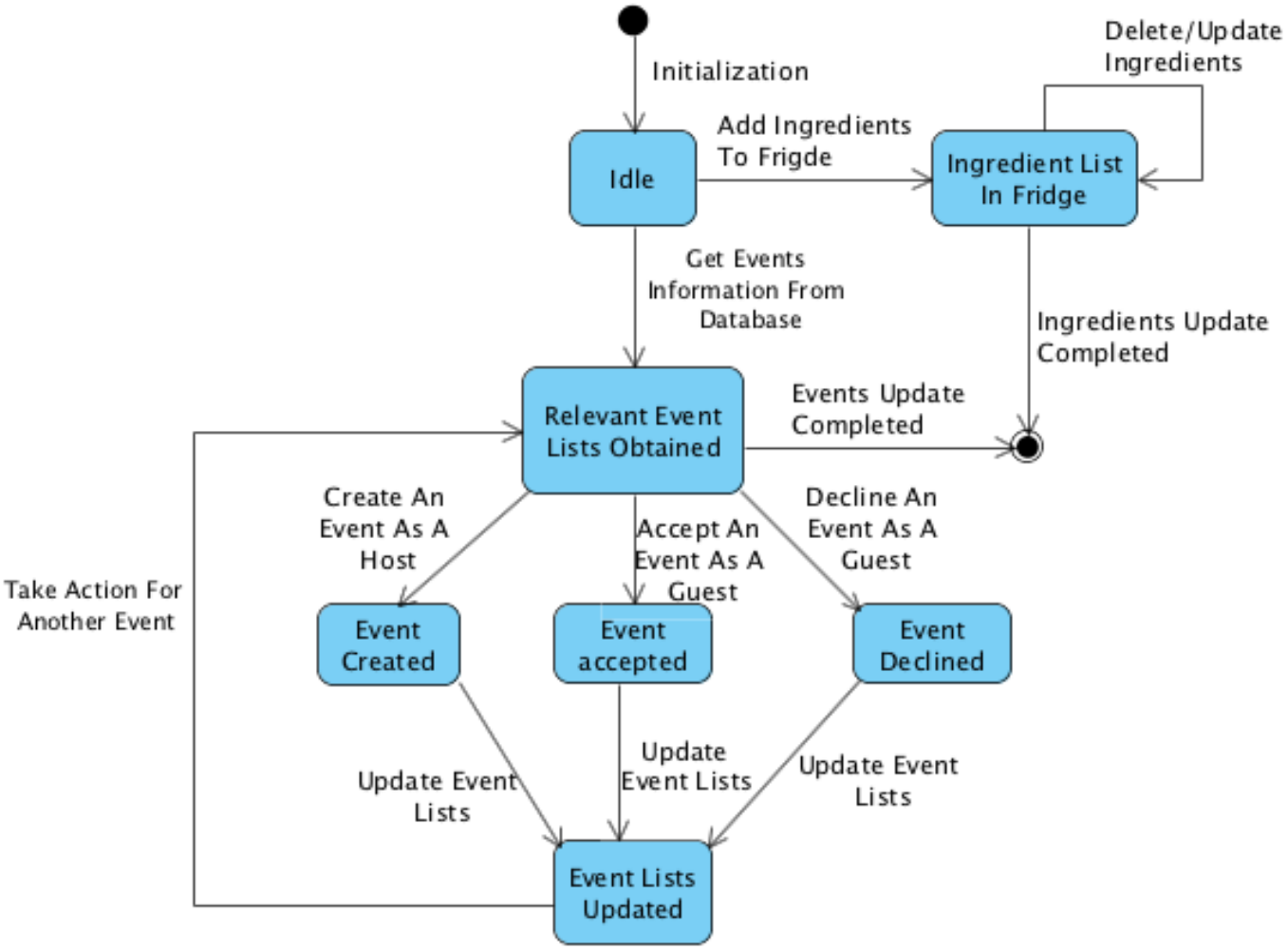

Figure 14: UML User State Diagram

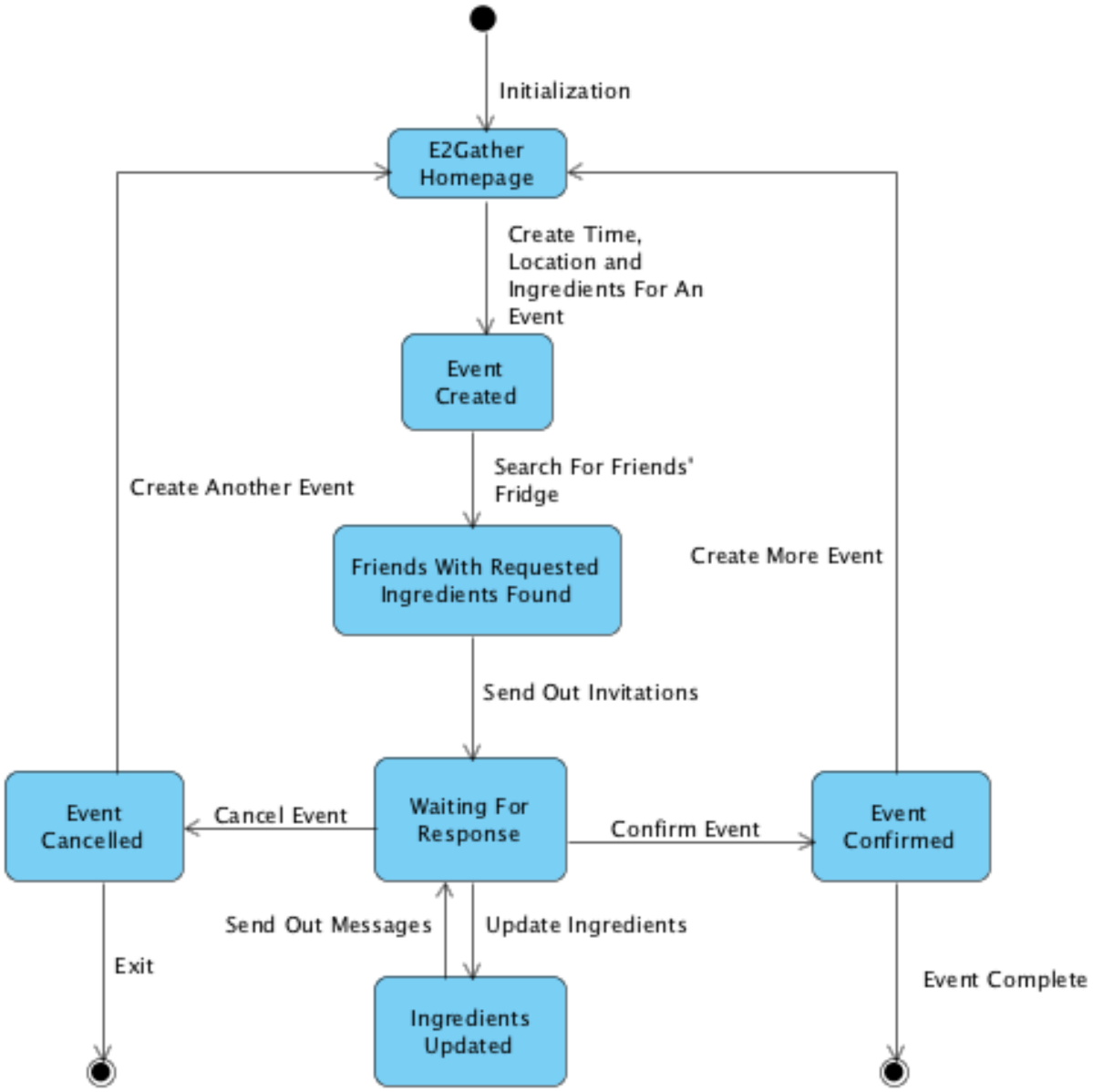

Figure 15: UML Event State Diagram

5 Sequence Diagrams

The Sequence Diagrams for E2Gather are shown in Figures 16 - 20. We were unable to remove the watermark from our main sequence diagram (Figure 20).

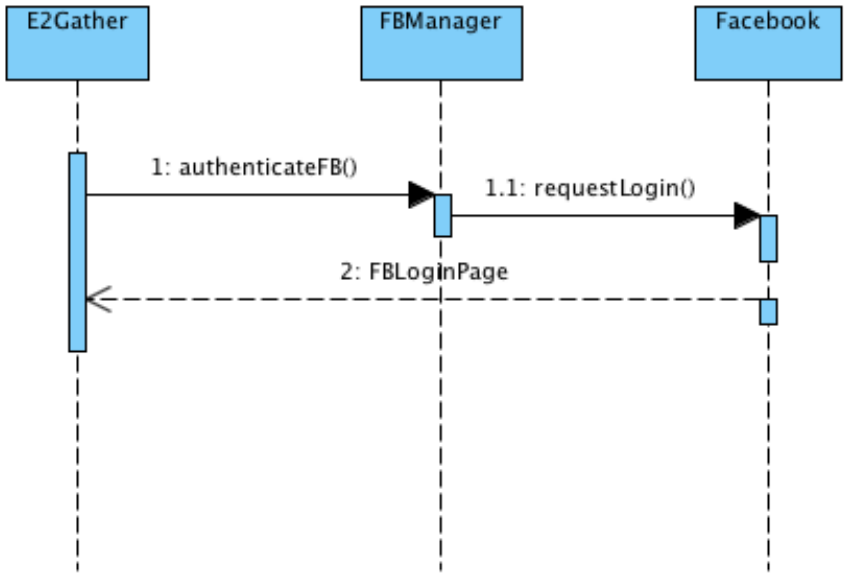

Figure 16: UML Authentication Sequence Diagram

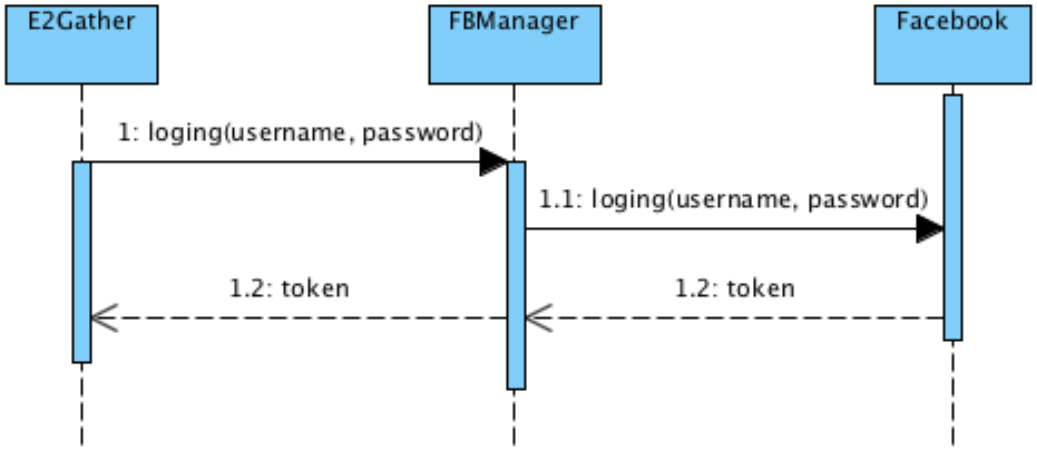

Figure 17: UML Login Sequence Diagram

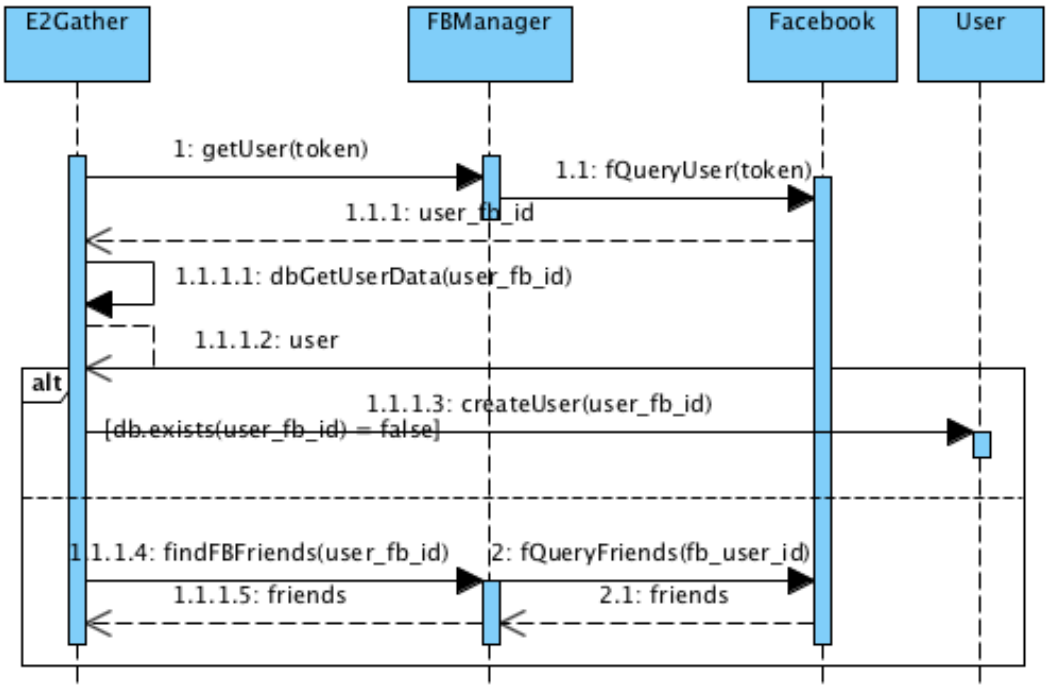

Figure 18: UML Set User Sequence Diagram

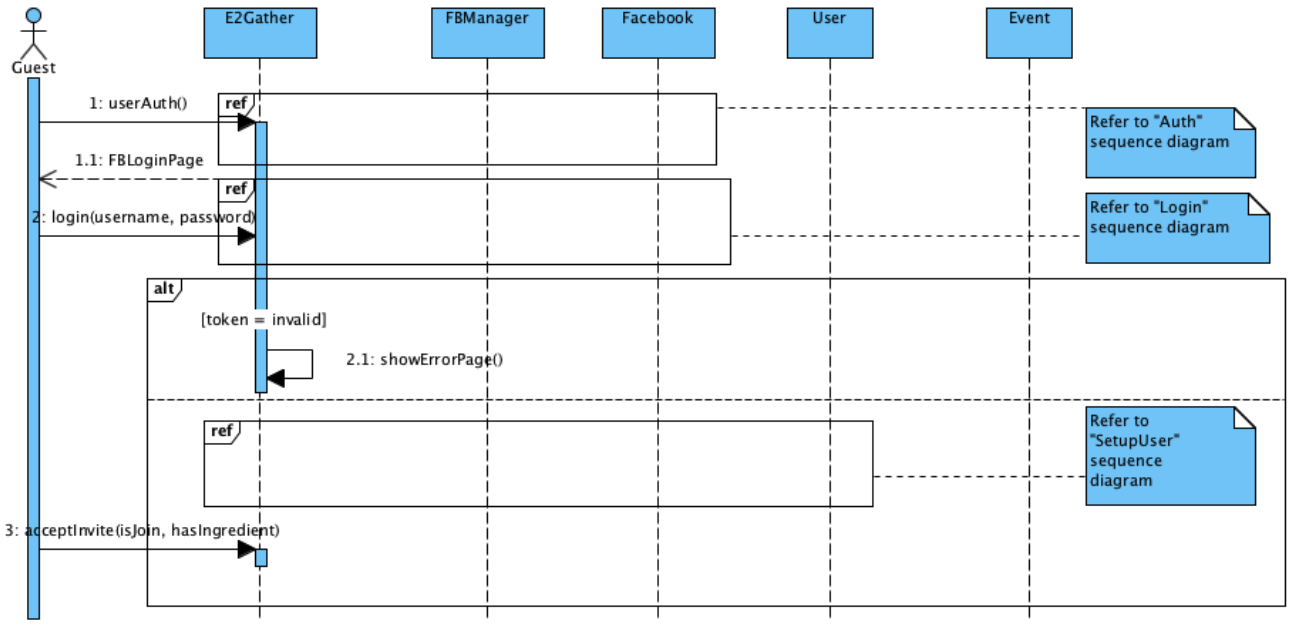

Figure 19: UML Event Guest Sequence Diagram

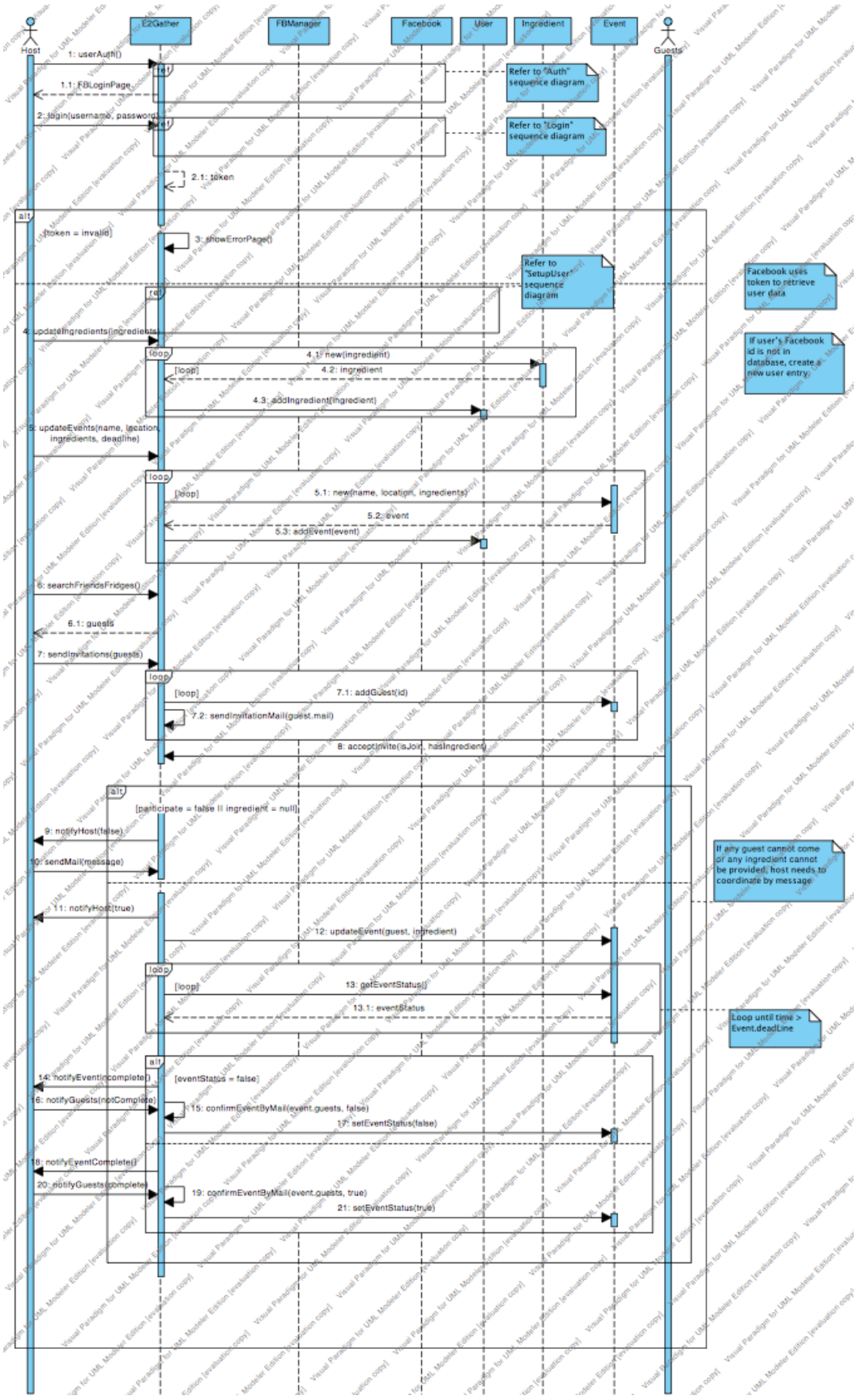

Figure 20: UML Sequence Diagram

6 Technical Tasks and Schedule

The following is our outline of technical tasks and schedule. Gray area indicates completed tasks.

Task	Due Date	Time Estimate	Assigned
Requirements/Planning Doc	03 October	4 x 02 hrs = 08 hrs	All
Background pickup	06 October	4 x 03 hrs = 12 hrs	All
Environment setup:			
Setup Ruby on Rails		2 x 04 hrs = 08 hrs	Lindsay, Wei
Setup MySQL database		2 x 03 hrs = 06 hrs	Fang-hsiang, Le
Create database Schema		2 x 01 hrs = 02 hrs	Lindsay, Wei
Group Meeting	07 October	4 x 01 hrs = 04 hrs	All
Design and Requirements Documents	13 October	4 x 05 hrs = 20 hrs	All
Facebook authentication in Ruby		2 x 02 hrs = 04 hrs	Fang-hsiang, Le
Basic authentication testing		2 x 01 hrs = 02 hrs	Le, Fang-hsiang
Group Meeting	14 October	4 x 01 hrs = 04 hrs	All
Event participant search	20 October	2 x 03 hrs = 06 hrs	Lindsay, Wei
Event creation and invitation		2 x 03 hrs = 06 hrs	Lindsay, Wei
Event invitation/response		2 x 01 hrs = 02 hrs	Lindsay, Wei
Refrigerator contents creation		2 x 04 hrs = 08 hrs	Fang-hsiang, Le
Refrigerator contents update		2 x 01 hrs = 02 hrs	Fang-hsiang, Le
Basic testing of refrigerator/search		4 x 01 hrs = 04 hrs	All
Group Meeting	21 October	4 x 01 hrs = 04 hrs	All
Event messaging	27 October	2 x 10 hrs = 20 hrs	Pair 1 (TBD)
Event confirmation		2 x 03 hrs = 06 hrs	Pair 2 (TBD)
Basic testing of events		2 x 02 hrs = 04 hrs	Pair 2 (TBD)
Group Meeting	28 October	4 x 01 hrs = 04 hrs	All
Basic testing of messaging	31 October	4 x 02 hrs = 08 hrs	All

References

[1] D. H. Hansson, "Ruby on rails." http://rubyonrails.org/, 2013.

[2] I. I. P. with Ruby writers, "Webrick web server toolkit." http://ruby-doc.org/stdlib-1.9.3/libdoc/webrick/rdoc/WEBrick.html, 2013.

[3] Facebook, "Graph api," 2013.

[4] O. Corporation, "Mysql." http://www.mysql.com, 2013.

[5] Atlassian, "Stash." https://ase.cs.columbia.edu/stash, 2013.