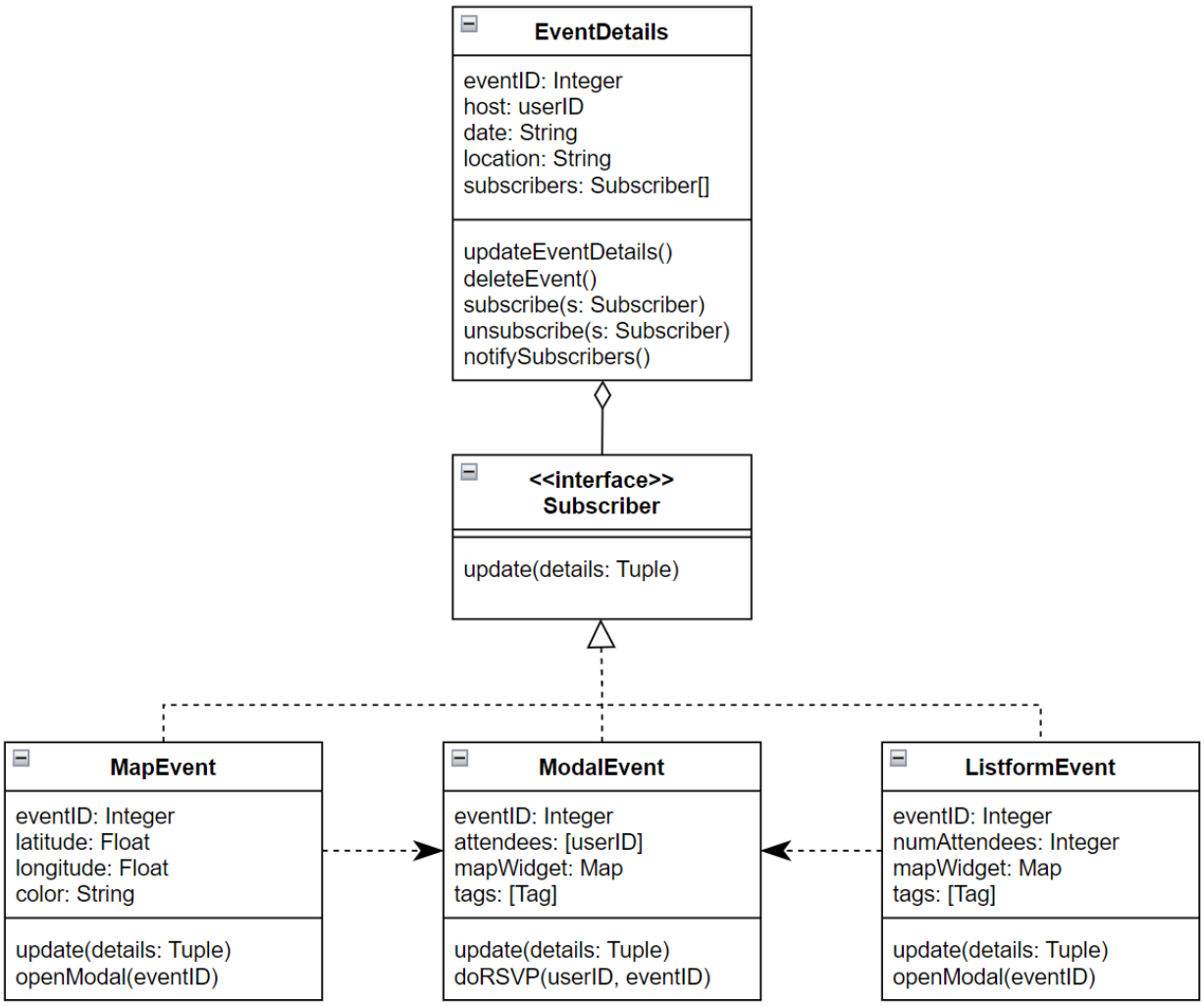
Detailed Design Document

for UMaine Connect by Maineframe (Group 2)

Design Patterns

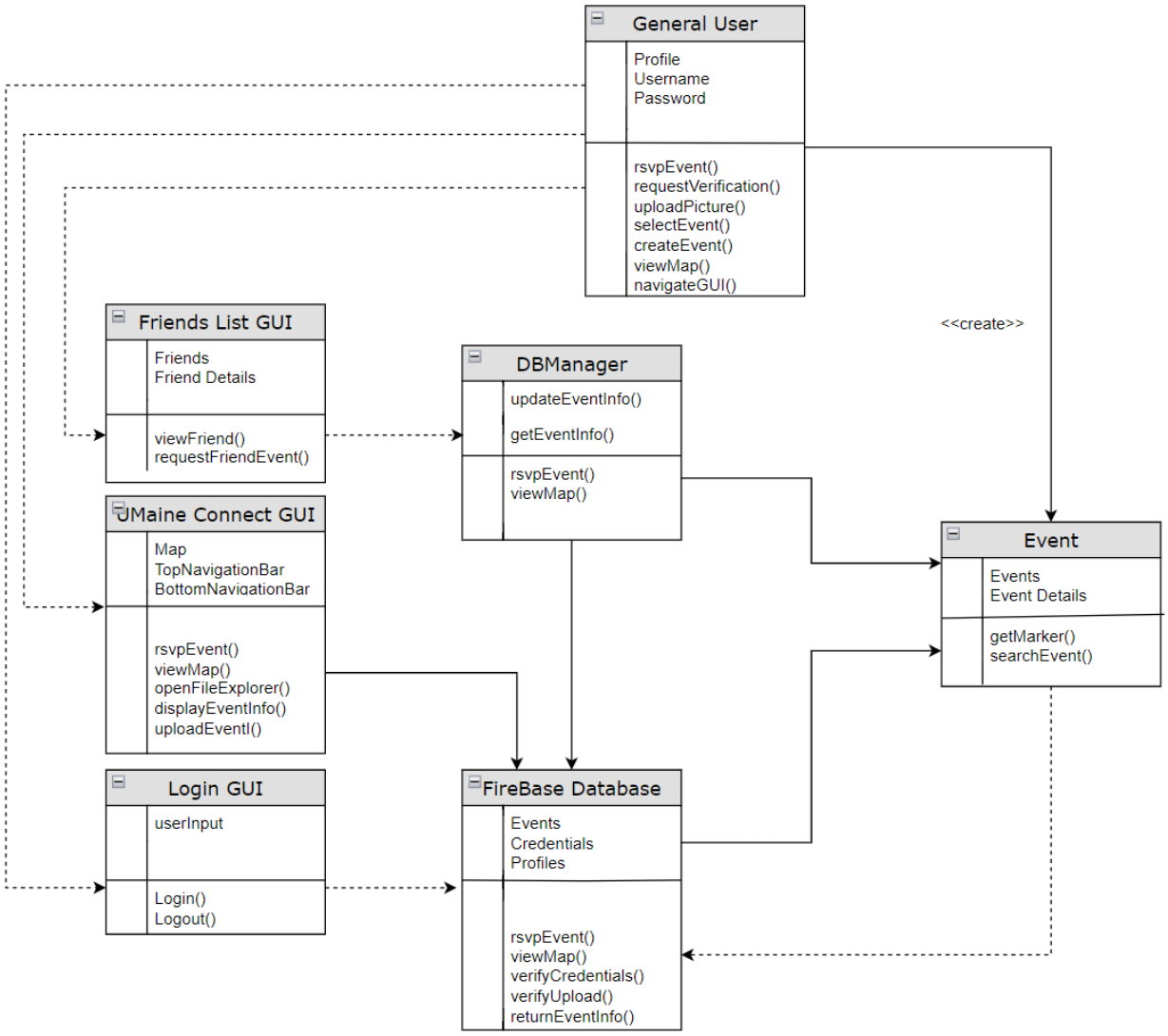
We chose the observer design pattern for UMaine Connect. The problem we sought to address with this design was the need to present events in different ways. The primary forms of events are their representation on the map, and then a representation of the event showing all of the details, such as the who, what, when, and where of the event. The map representation is the first presentation that the user will see, as pins represent events. The event listing representation is shown after the user interacts with the map representation. Whenever an event is created or altered, both representations must update.

The observer pattern will allow us to quickly and consistently update all event representations when the details of the event are added or modified, alleviating the problem of having to update multiple other objects each time one is changed. We can establish the core event details as the publisher class and have each of the event representations as subscribers to it. When the event details are modified, the publisher class will notify and update each of its subscribers, ensuring that the changes are propagated to all of the event representation objects.



Class diagram for the observer design pattern as used in the application

Overview Design



Overview design class diagram for the application