DMSLite Iteration 2 Summary

Team members

Jacob Desrochers (26919529)
Dionysios Kefallinos (27019920)
Tyler Ramsay (26948065)
Philippe Miriello (27031246)
Michael Bilinsky (26992358)
Dmitry Svoiski (26893570)
Mathieu Beauchemin (26760953)

Project summary

A conversational interface to assist users in the nonprofit space better manage their donors and donations. It must be able to create and manage donors, post donations, generate and view reports, as well and produce receipts for donors. In addition to these core features the application must be built in a way that supports easy scalability and robust extensibility for future development.

Velocity

Iteration 1

1 story was completed over 2 weeks.
Login : 3 Story Points
Included various setup activities. Key steps included linking the database to the application, and forming the database schema, as well as establishing hosting.

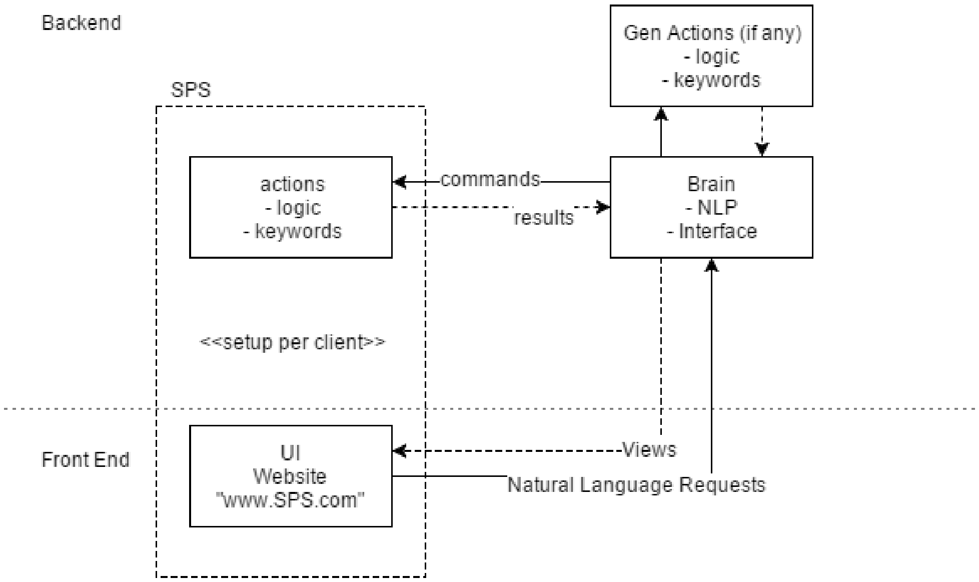
Iteration 2

1 story was completed over 2 weeks.
View Donors: 5 Story Points
Integration of api.ai into the system. Added the view donor command to display a specific donor that is pulled from information in the database.

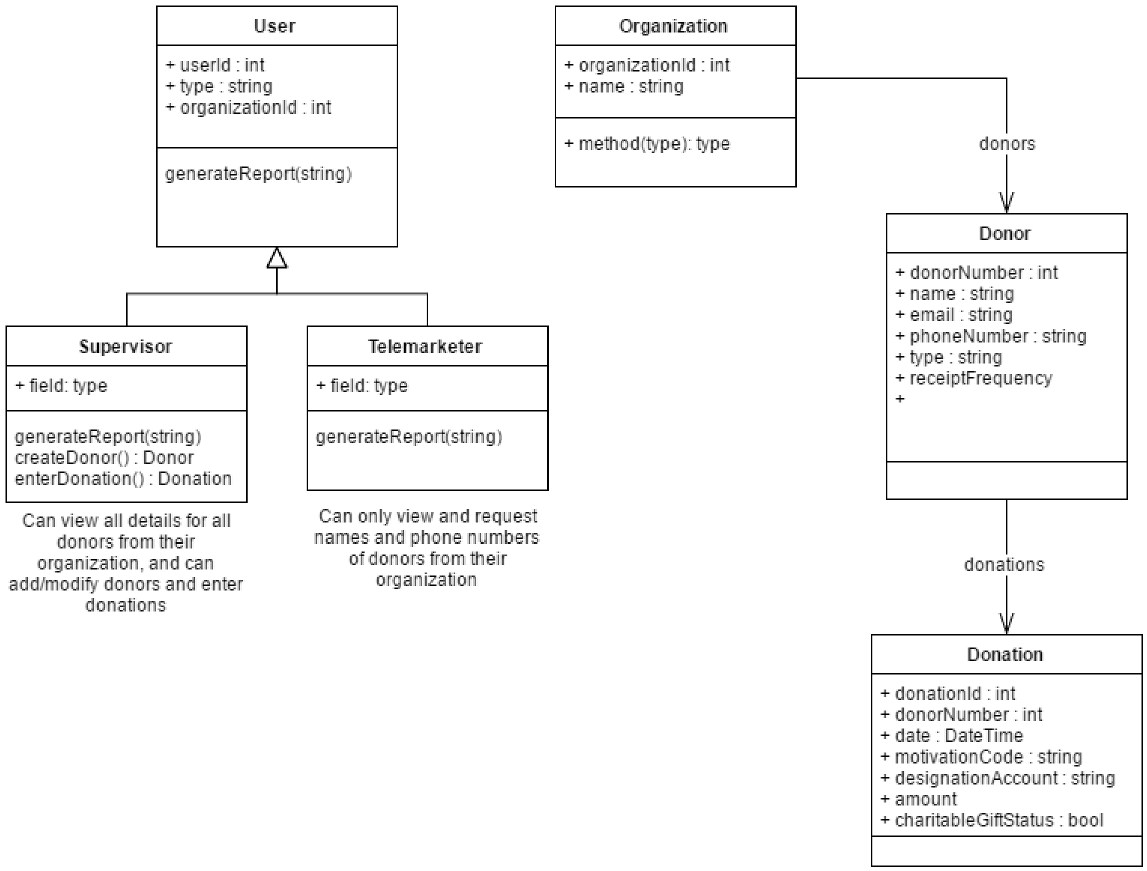
Current Velocity: 4 Story Points / Iteration

Overall Arch and Class diagram

Additional specifications found linked to Issue #1 on GitHub



Class Diagram:

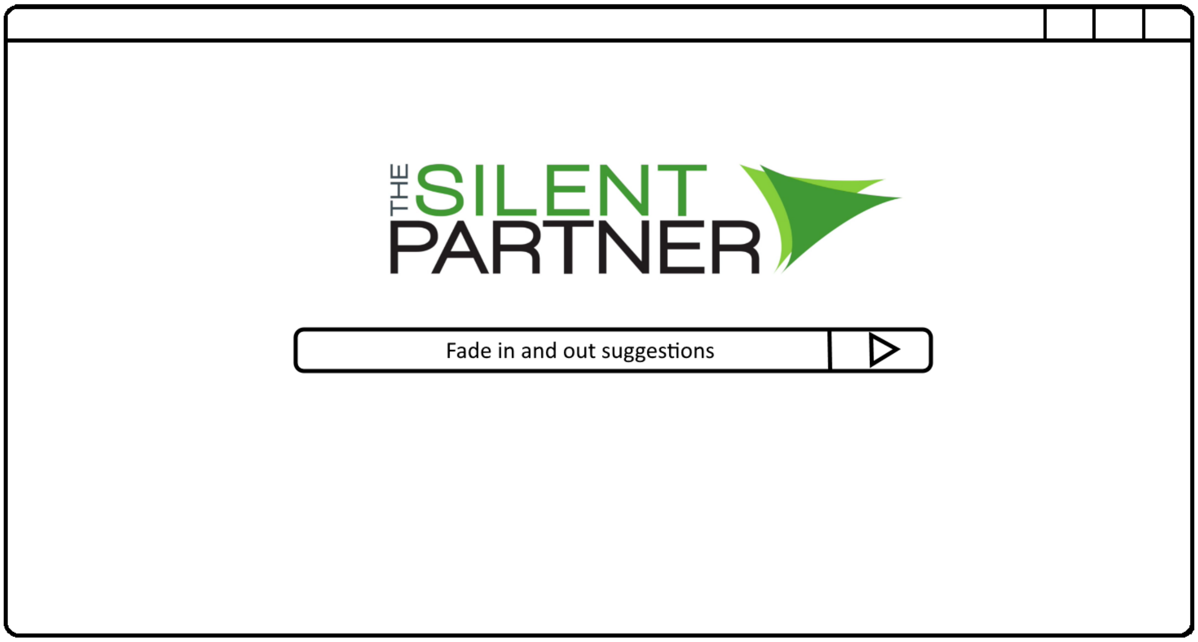


Can view all details for all donors from their organization, and can add/modify donors and enter donations

Can only view and request names and phone numbers of donors from their organization

Design Mock-up

Additional Mock-ups can be found on the GitHub linked to Issue #2



Release Planning

Iteration 3, Release 1 (10 points, 18 total points)

Infrastructure

API.ai

API.ai is the sdk used to simplify the natural language processing element of the DMS lite program. Users enter commands into the input field and it is sent to API.ai be interpreted and turned into a command.

Wit.ai was considered initially but was rejected due to its lack of proper financing plan and its acquisition by Facebook, which raised concerns regarding its stability for our stakeholder. Another considered alternative was Mycroft's Adapt parser. It was rejected due to its infancy and lack of community support.

Entity Framework

https://msdn.microsoft.com/en-us/data/ef.aspx

Entity Framework is a Microsoft-supported object-relational mapper which eases development of programs with relational databases. It is capable of creating MySQL tables based on data classes developed in Visual Studio, and vice versa: connecting to a MySQL database lets Entity Framework generate data classes with their relationships intact.

Entity Framework was chosen due to the team's existing experience with it: the most likely alternative, NHibernate, would have required more time to learn.

MVC

https://www.asp.net/mvc

The model-view-controller web development pattern is commonplace and well-documented in ASP.NET and C# projects. Models represent data from the project's database as objects. Controllers contain functions necessary for the manipulation and display of those models. Views handle the display of output generated by controllers.

This framework and pattern were selected based on the stakeholder's requirements. The stakeholder ultimately wants his team of developers to be able to work on and maintain the system, and this is their most familiar environment.

Name Conventions

C# coding and naming conventions standard

http://www.dofactory.com/reference/csharp-coding-standards

Domain Specific Naming Conventions and Definitions

Donors

A person that is stored within the system, and is linked to any donations they may have made. Donors are defined by Name, Email, Phone number, Type of Donor (Individual, Corporation, Charity, Other), Category of Donor (big donor, company, potentially big donor), and Automatically generated Donor number. As well, keep Receipt Frequency preferences (annually or each time they donate). Donors are linked to every donation they have made. Donors may also have additional information, such as notes, primary language, or other details.

Donation

A single payment to an NFP (not for profit), linked to exactly one donor, and part of exactly one batch. Donations that are part of a posted batch are closed and can no longer be modified in any way, even if they are erroneous. Donations are defined by date of payment, donor, batch, status (open or closed), office (if there is more than one office for the user), Motivation Code (why they made this donation, ex: general / newsletter), Designation Account (may not be necessary), whether it is a Charitable Gift, and donation ID.

Batch

A batch is a group of donations, which are managed and posted together. All donations in an unposted batch may be modified, while all donations in a posted batch are closed. Batches are processed individually, and post every donation within them at (roughly) the same time. Most donation operations are done through batches.

Posting

Posting batches closes all donations, and adds the total payment amount to the overall donation total, which is calculated over all posted batches. Once posted, no donation in the batch may be modified.

Report

A report details specific information requested by the user, which can involve many different parameters, and act within different contexts. This includes such things as requesting specific information about donors, or selecting various pieces of information within a criteria (such as top 10 donations).

Receipt

A receipt is a generated, fully detailed document that contains relevant information on a specific donation, and has all the details required for tax purposes.

User
A user is the basic, most common client, which makes up most of the usage of the software. They perform the work of entering donors, donations, and batches, but have no authority over the working of the internal systems, they only perform data entry.

Manager
A manager is a client which controls multiple users, supervising their actions and managing their permissions.

Admin
Admins perform setup and maintenance on the system, and control the inner workings of the system.