Milestone 3

For our database, we decided to use MongoDB instead of mySQL for various reasons. One of these reasons is that some of our team members had experience with mongo and it was very easy to integrate with node.js, the backend framework we are using.

We have two collections, which is similar to having 2 tables in mySQL. We could have split this information up into three collections but we went with two for this because adding a third would just be showing that we could make another collection linked to the first two. This would cause queries to be slower because we would have to jump around from field to field within collections to gather information that could be more quickly accessed by having it in the same collection. The name of our database is ‘lazicard’ and our two collections are titled as shown in figure 1.



Figure 1: showing the name of the database (lazicard) and the name of each collection, respectively.

Users is a collection that stores three of the users things: email address, password, and a unique key generated to identify each user. For example, here is what the users collection looks like for a single person in our group.



Figure 2: Shows the users email address along with an encrypted version of their password and unique ID.

The collection ‘Address\_Book’ is a bit more interesting. Because this address book will be used to send e-cards and physical cards to an address, we had to have fields (similar to attributes) to store this information. The only thing we store from the actual user is their email address in order to link this contact back to the correct user. This can also be done by using the unique ObjectID in Mongo but in order to have reference to the milestone guidelines, we decided to store this manually so that it can be thought of similarly to a primary key in a mySQL table. We then have to store information about the contact. We decided to store the contacts full name (first and last), their birthday, email address, physical street address, and the users preferred method of delivery. The method of delivery is something users can choose for each contact. This allows them to differentiate between sending tangible cards, a paid service, or e-cards, a free service.



Figure 3: An example of a contact in the address book

As seen in Figure 3, a user associated with the email address ‘nimo0295@colorado.edu’ created this contact. They are storing Dan’s personal information and their chosen method of delivery (m\_o\_d) is the boolean value ‘false’. This means the user who created this contact has opted to send e-cards instead of a real, tangible card. For this example we chose to leave our team members real address out for privacy, but that is their real birthday and email address so feel free to sign up for our site and send them a card!



Figure 4: Showing the amount of items in our database, by collection

In Figure 4, you can see that we currently have 10 registered users in this database along with 100 total contacts. Because we are using MongoDB instead of mySQL we figured that having 3 tables with 4 attributes and 5 rows would give a maximum of of (4 \* 5) entries per table multiplied by 3 tables which comes out to 60 singular entries. To make up for this, we populated our database with 10 users that each have 10 contacts. In terms of singular entries, this means that there are (10 \* 2) entries in the users collection and (10 \* (10 \* 7)) entries in the Address\_Book collection. There are 10 users with 10 contacts each and each individual contact has 7 fields. This gives a total of

20 + 700 = 720 total, singular, entries.