



Software Requirements Specification (SRS) Document

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1. Preface

1.1 Document Description

This document is the software requirements specification (SRS) for our new web service and app Glimmer. Glimmer focuses on helping students by giving them more resources to pass their class. This SRS is a description of the user requirements, system requirements and functional/non-functional requirements.

1.2 Version History

Version Number	Date Published	Comments
1.0	10/27/16	First Draft of SRS Document
1.1	12/13/16	Final Draft of SRS Document

2. Introduction

2.1 Purpose

Glimmer will be a resource for all college students across the country. The application and web service will connect students to past homework's, notes and exams in their choice of class or subject. The goal for this company is to help students study and pass classes for free while obtaining these resources through our application. This can be accomplished by our two option policy. Our policy allows the users to submit 4 documents per month instead of paying the fee of 10\$. Not only will it be free for the users but the policy put in place will keep Glimmer updated monthly with new documents to view every month in any subject they can think of.

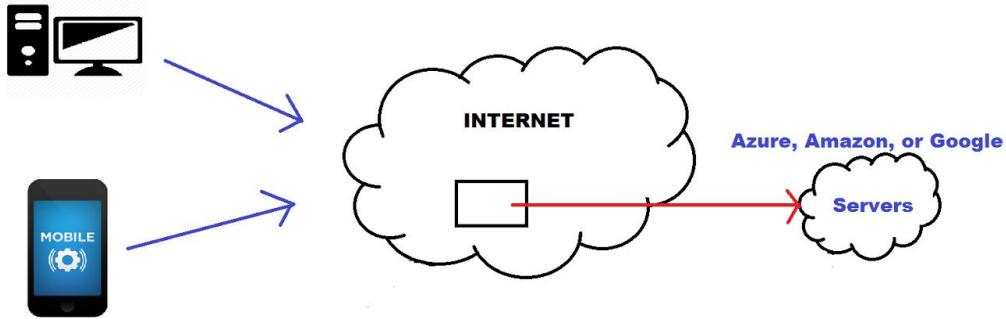
2.2 Application Overview

After downloading the application or visiting the website, the user will be prompted to create an account. While signing up, the user will be shown the rules. The user can either pay 10\$ a month or choose to upload 4 documents per month. As well there will be a user agreement and an honor code. Our service does not comply with cheating in any way. Then the user will be asked for their information. This would include email, password, name, school and classes they are in at the time. After filling out their information they will be given a free preview to the classes they have picked. Once the user has felt satisfied with their preview, the user will now have to put in their credit card information. Even if the user selected the second option, there is a policy put in place that states a user can't cancel their subscription within the first month or they will be charged the 10\$ for the month. This policy was made to avoid users making fake accounts and stealing work they did not pay for.

When the user has completed signing up, they will be prompted onto the home page. Here the user can find My Uploads, Documents, Search, Classes and Account. In my uploads, they will be able to upload anything they want and they will also be able to see previous documents they have uploaded. Documents will contain any documents they have previously saved and give the user options to rate, delete or comment on documents. In search, users can search for any sort of document they want. As well, they can search for classes or schools. In Classes, they can see what classes they are registered for and the work uploaded for those classes. Account will contain their account information along with the user agreement and honor code.

This application and web service will be a more effective way to connect students to the content they need but for free. Allowing users to upload documents instead of paying for the service will keep documents and content more up to date than any other service like ours. Classes will have large amounts of documents and something every user can use.

2.3 System Overview



Glimmer's infrastructure will be based entirely in the cloud. Mobile and desktop interfaces will connect via a web app. The web app will connect them through the internet to our web servers. The web servers, file servers, and content management will be hosted online. This will be done on a service like Azure, Amazon cloud, or Google cloud. The logon process will consult with the user database to confirm password and username. Then link them to their portal and class.

3. User Requirements

3.1 Access

- F.1: User can visit the Glimmer website.
- F.2: User can download our mobile application

3.2 Registration

- F.1: The user can create an account either on the Glimmer website or the Glimmer mobile application.
- F.2: The user needs to pick a payment option. Either \$10 a month or 4 documents uploaded per month.
- F.3: A honor code and user agreement will be presented. The user needs to agree to the honor code and user agreement to continue.

F.4: The new user will have to supply their email, password, name, school and classes.

3.3 Login

F.1: User will need to supply their email and password.

F.2: If the user has forgotten their password, they can choose the “I lost my password” option.

F.3: If the user does not have an account, they can choose the “Create an Account” option.

3.4 Forgot my password / Password recovery

F.1: If the user has misplaced their password, they will be able to receive a new temporary password after supplying their email.

F.2: If the user wants to go back to the login page, there will be a “Nevermind” option.

3.5 Home Page

F.1: Tabs include: Documents, My Uploads, Classes, Search, Account, Sign Out.

3.6 Documents

F.1: Within this tab you can have a number of saved documents obtained from Glimmer. Once saved, you can view these at any given time

F.2: Glimmer allows you to edit and comment on your saved documents for personal use and better understanding of course material

F.3: You can rate documents (thumbs up or thumbs down) for the purpose of getting rid of phony documents and useless information.

3.7 My Uploads

F.1: Upload files (either pdf, .doc, powerpoints, png, etc.,)

F.2: My Uploaded includes a list of all uploads.

F.3: There is a search feature implemented so that you can easily navigate through all of your personal uploads

3.8 Classes

- F.1: View classes - These can be filtered either alphabetically or by most recently searched
- F.2: Add classes - All classes added will directly link you to various documents pertaining to that class
- F.3: Remove classes - You can delete any classes associated with your account at any time

3.9 Search

- F.1: You have the capability of searching through the database in which you transverse through catalogs of universities, course numbers (with acronyms), class names, subjects, departments, etc.,)
- F.2: Search feature allows you to search a specific professor as well as renowned teaching assistants
- F.3: A reset function is also included to clear your search menu

3.10 Account

- F.1: User Information
- F.2: Method of Payment
- F.3: Password Recovery
- F.4: Subscription Cancellation
- F.5: User Agreement
- F.6: Honor Code

4. System Requirements

4.1 Login

Functional

4.1.1

The Initial view of the application will present the user with three options, sign-up, login, Recover Account.

4.1.2

The login option will have two text input sections for password and Email

4.1.3

Upon selecting signup the user will be presented with a paragraph on how the service works and the user agreement

4.1.4

The user will be asked to fill in list of fill in the blank text boxes for: email, password, school, major, classes, year, credit card.

4.1.5

The user will be presented with a preview of the materials available for the classes imputed with a confirm payment option.

4.1.6

Upon selecting “lost info” the user will be presented a box that will allow the input of their email.

4.1.7

The user will be told if his account exists then thanked saying an email has been sent.

4.1.8

After login the user will be brought to their portal

Non-Functional

4.1.9

The system shall check if user pass/acct info match a key in the user database.

4.1.10

The system will check validity of new user information

4.1.11

The system will search the user database for a lost password case. Generate a temporary password. And email it in a NO-reply email

4.2 Portal

Function

4.2.1

The user will have access to three tabs as a side bar swipe menu with Search, Upload, and User Profile.

4.2.1

The portal will display in the main tab current class links

4.3 Search Function

Functional

4.3.1

System shall allow all users to search the file/school databases for materials

4.3.2

System shall list files that match search query

Non-Functional

4.3.2

System will parse the search base on tags associated with files

4.3.3

System shall present files on a scroll menu based on relevance to tags searched

4.4 Upload

Functional

4.4.1

User will be able to upload files of class notes, hw, exams, quizzes.

4.4.2

User will have boxes to input the school, class, doc type and other tags

Non-Functional

4.4.3

System will verify and check that uploaded files are within the list of acceptable file types to be uploaded.

4.4.4

System will measure to make sure the uploaded file size is within reasonable limits set by the administrator.

4.4.5

Files uploaded through the portal will be externally stored at an object storage service, likely Amazon S3.

4.4.6

Files will be compressed using a compression algorithm to minimize space required to store the object.

4.4.8

Files will be distributed to data centers around the globe to ensure the fastest response time possible

4.5 Account

Functional

4.5.1

Users will be able to edit all of their account information via an edit form

4.5.2

Users will be able to change their subscription type from paid to content curation at any point

Non-Functional

4.5.3

System will allow the user to change their information and will update the database with new information

4.5.4

System will check to make sure user information is valid

4.6 User Agreement

Functional

4.6.1

The Document of user agreement for Glimmer will be shown to be read by a user at anytime

Non-Functional

4.6.2

The System will display the user agreement

4.7 Classes Portal

Functional

4.7.1

User will have a tabs to add a class, edit classes, view classes, and view saved documents

4.7.2

User will be able to see documents in a online pdf viewer. They will be locked down so that the user can not print or export the documents.

Non-Functional

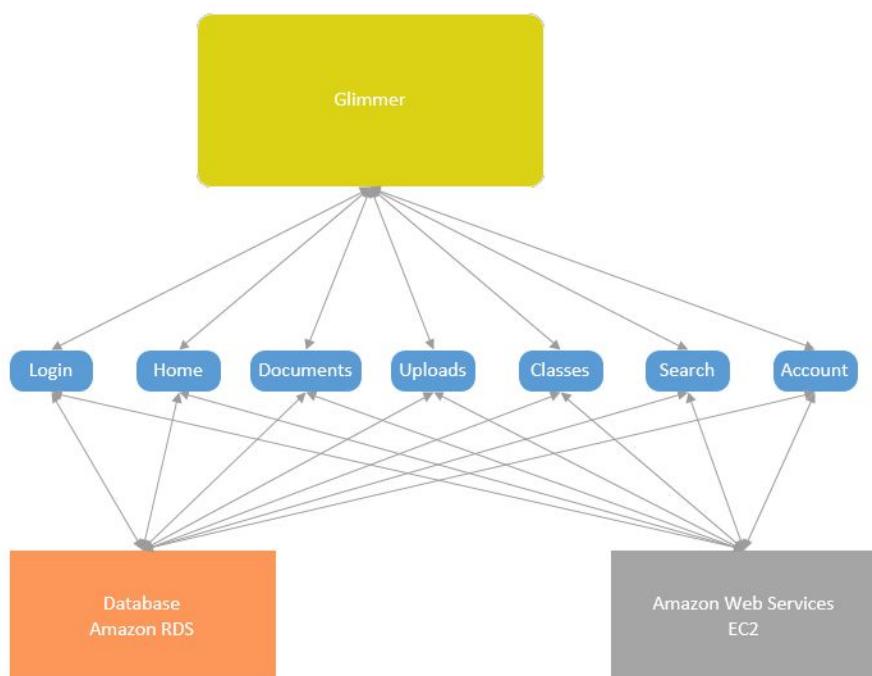
4.7.3

System will access the document database to display the correct documents

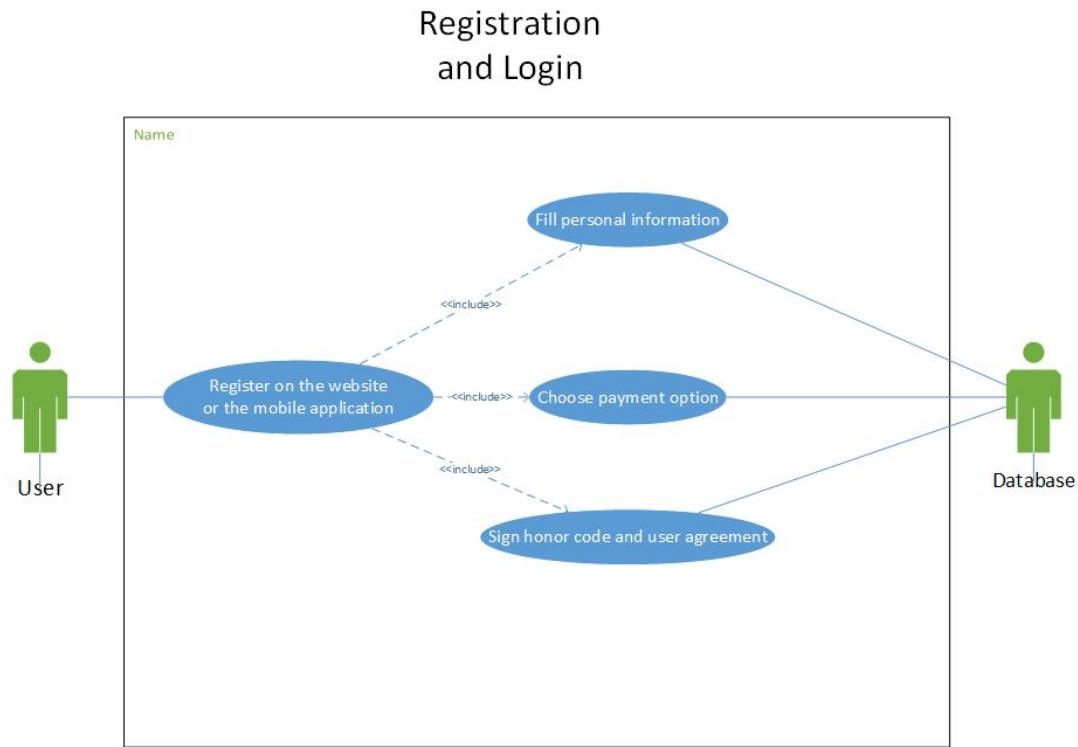
4.7.4

System will allow the user to view documents in their classes and the rating of the document

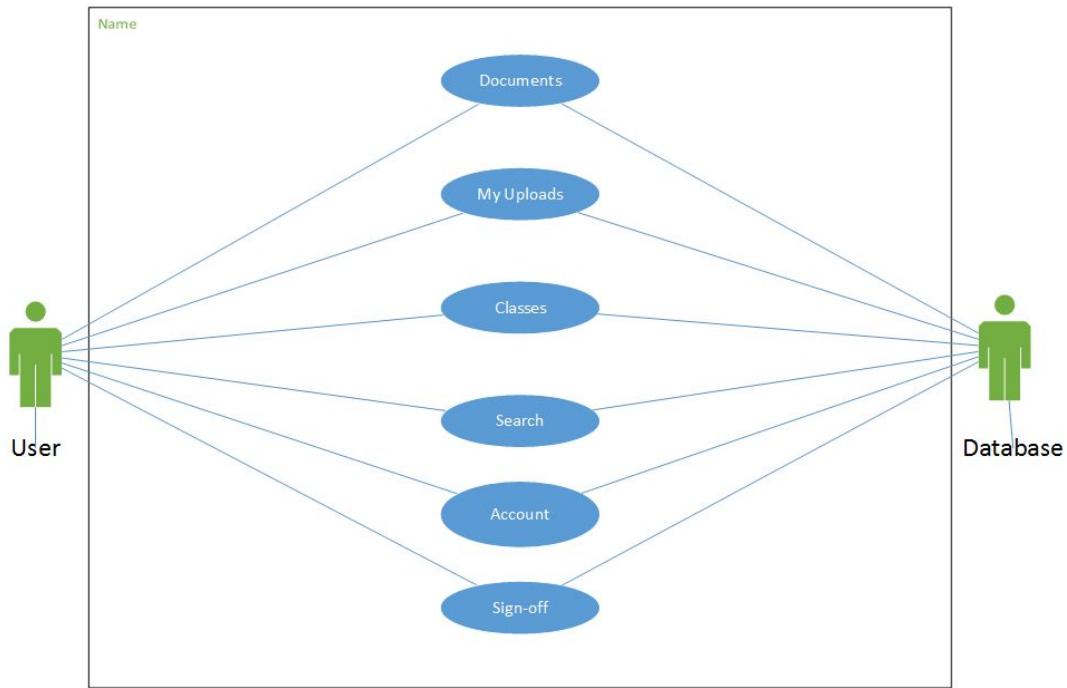
System Architecture



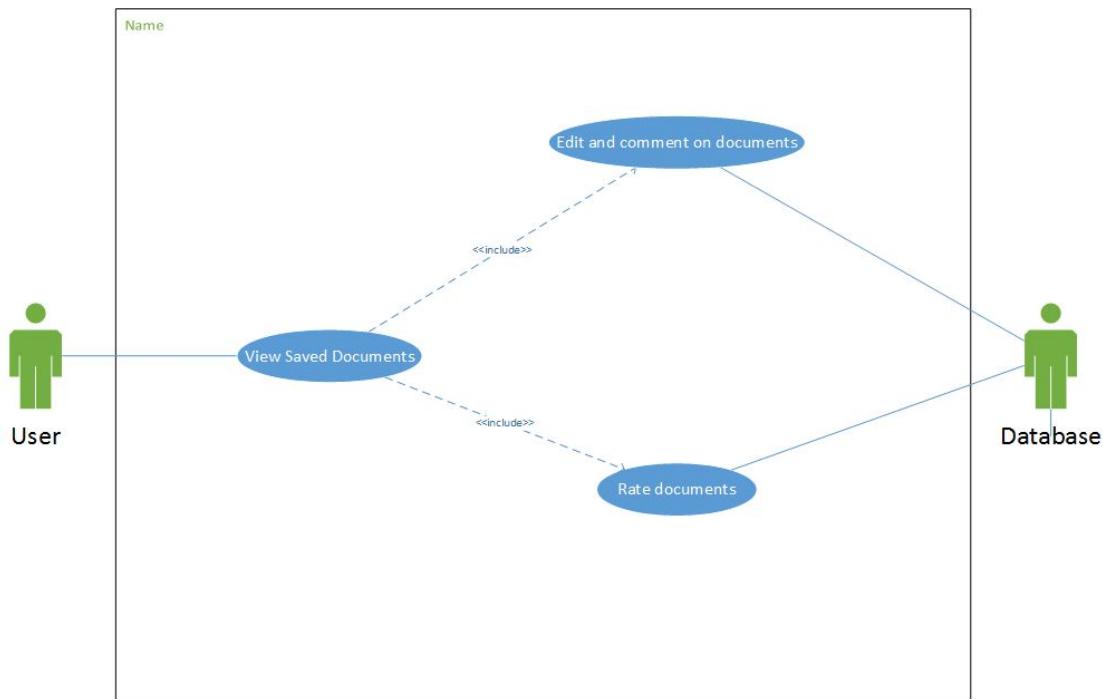
Use-Case Diagrams



Home Page



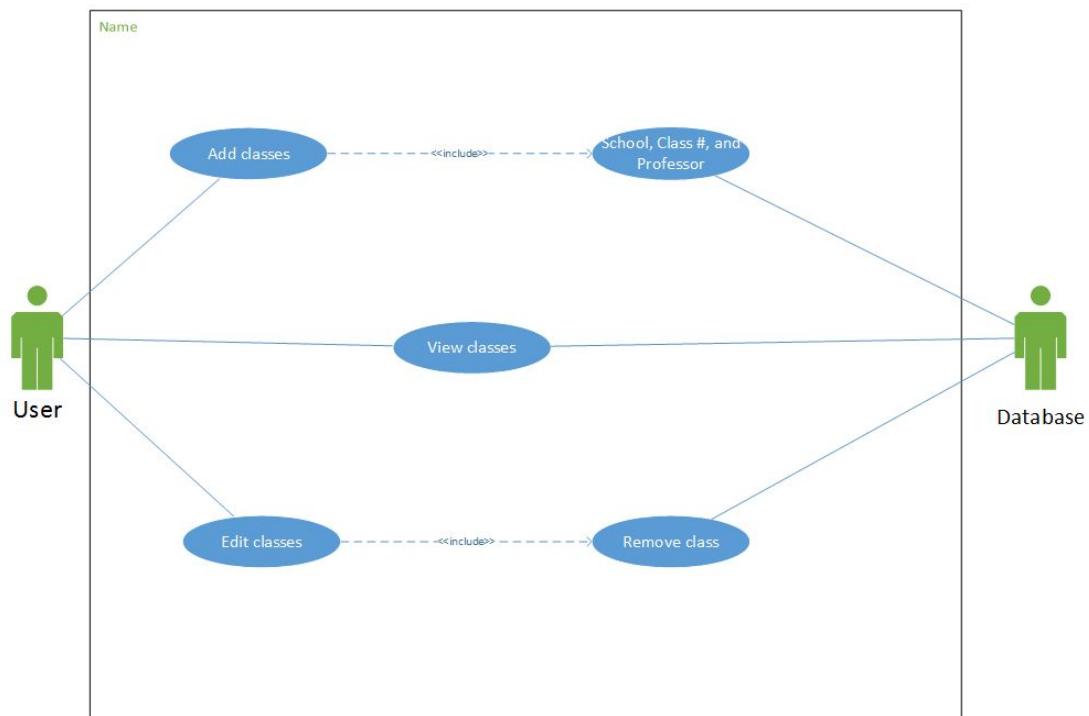
Documents



My Uploads



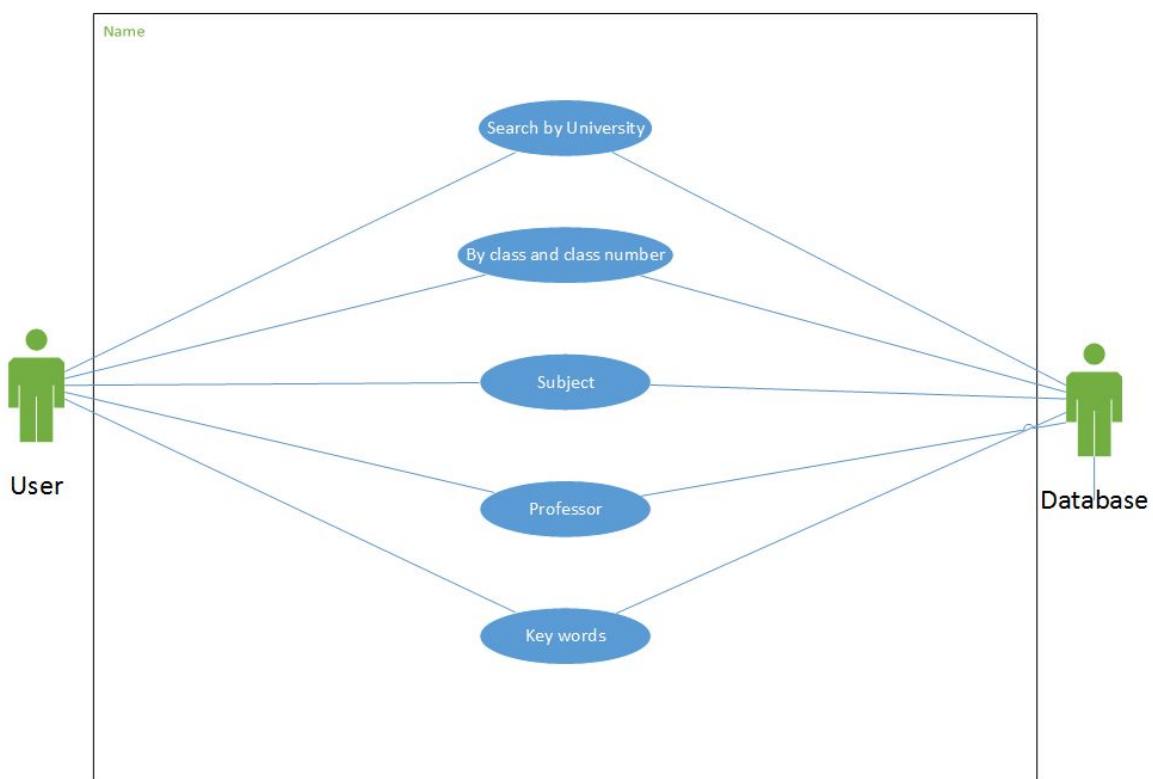
Classes



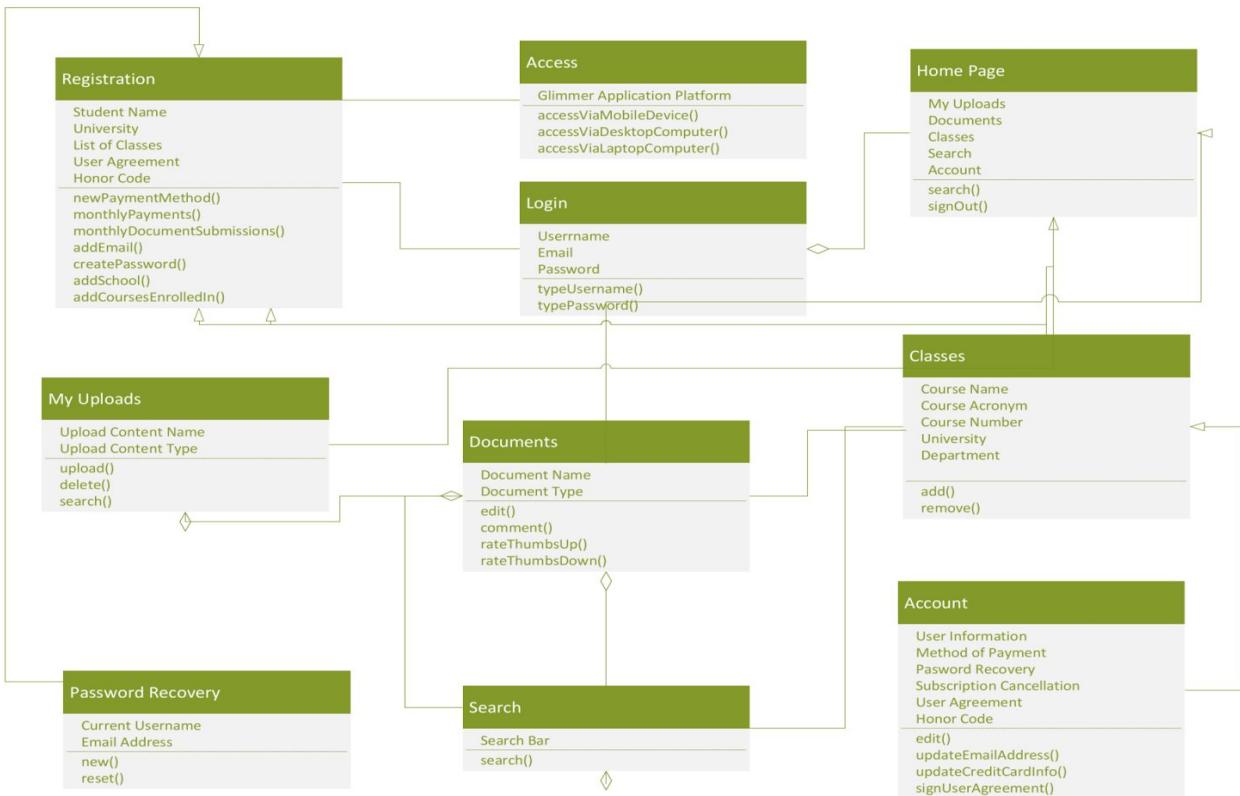
Account



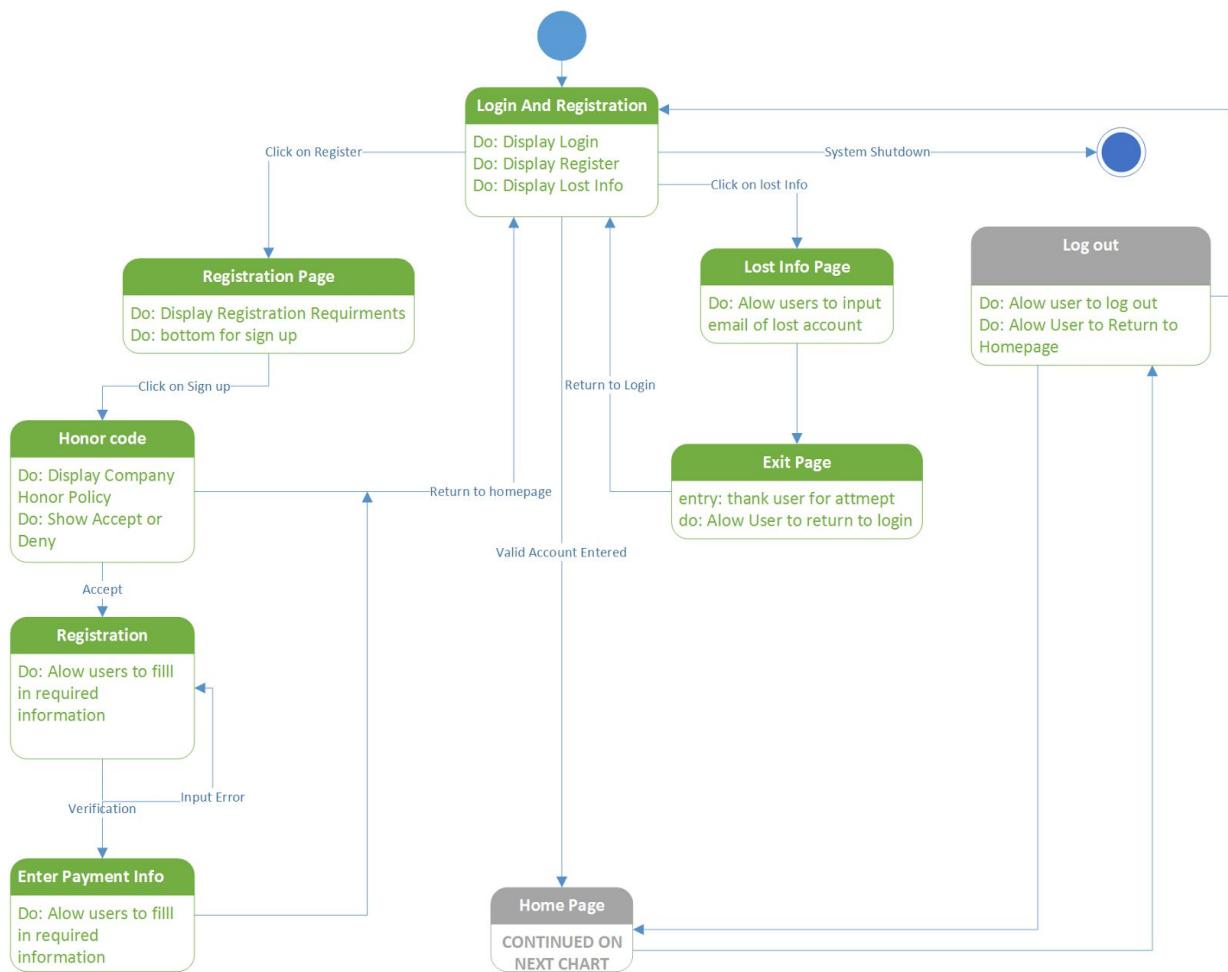
Search



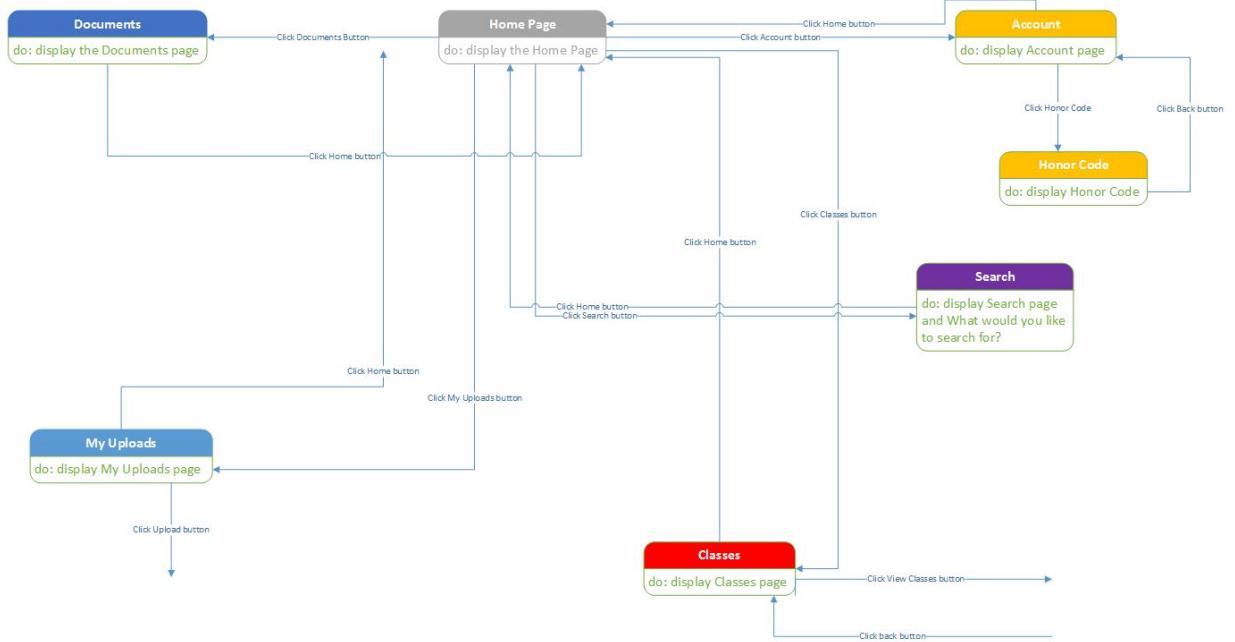
Class



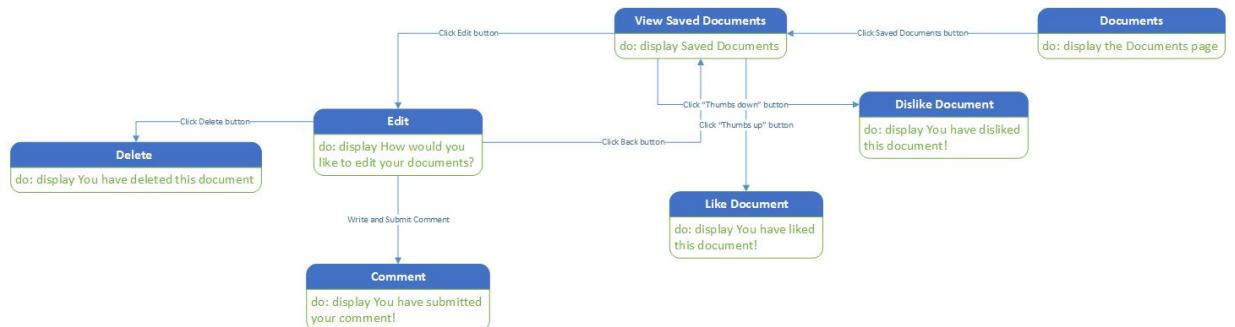
State Diagram of Login and Registration



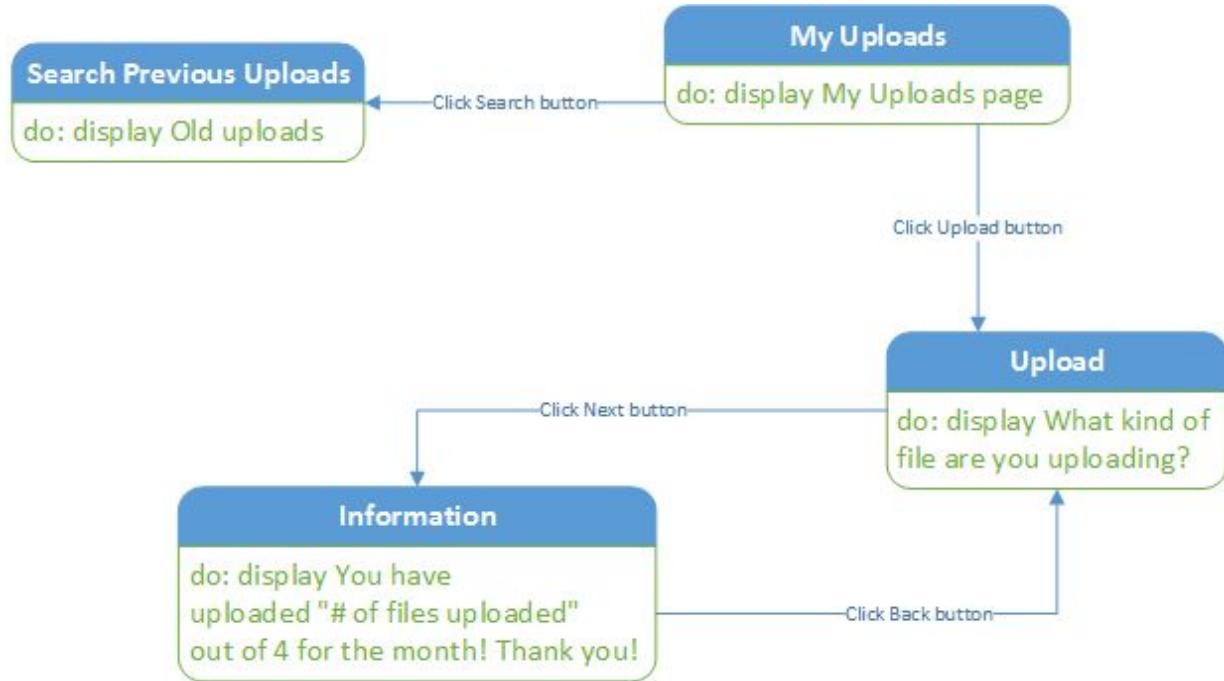
State Diagram of Home Page



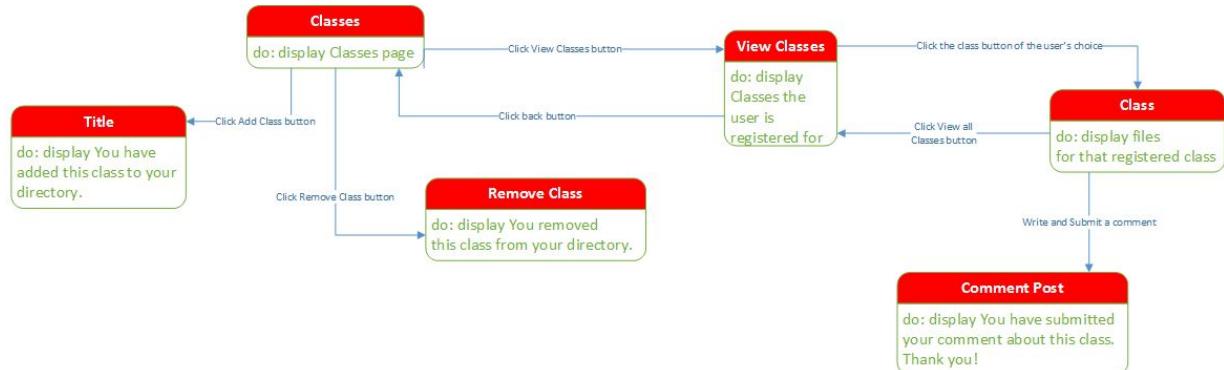
State Diagram of Documents



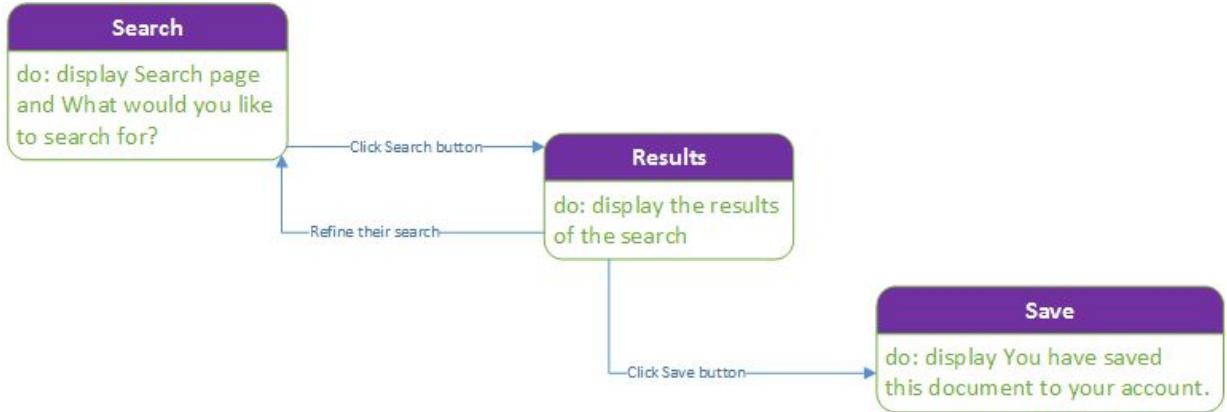
State Diagram of My Uploads



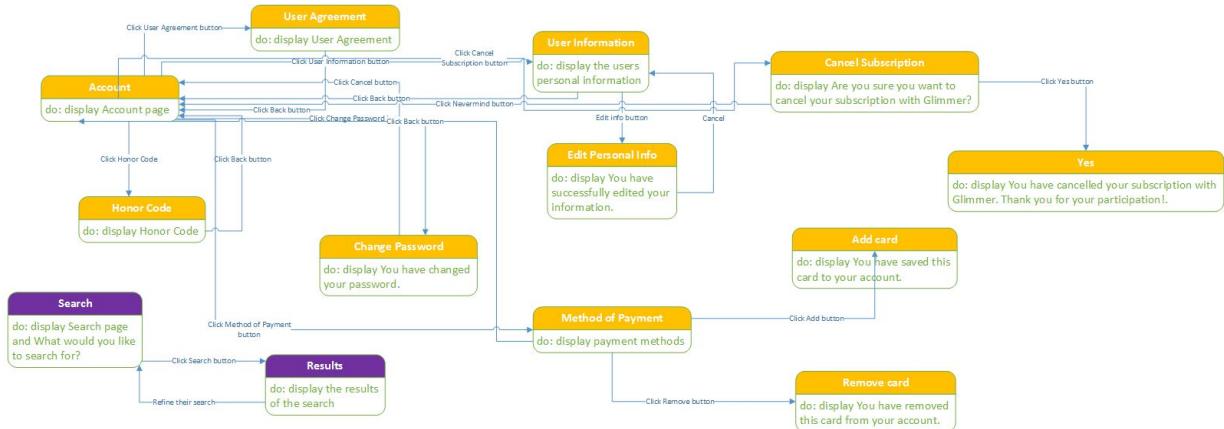
State Diagram of Classes



State Diagram of Search

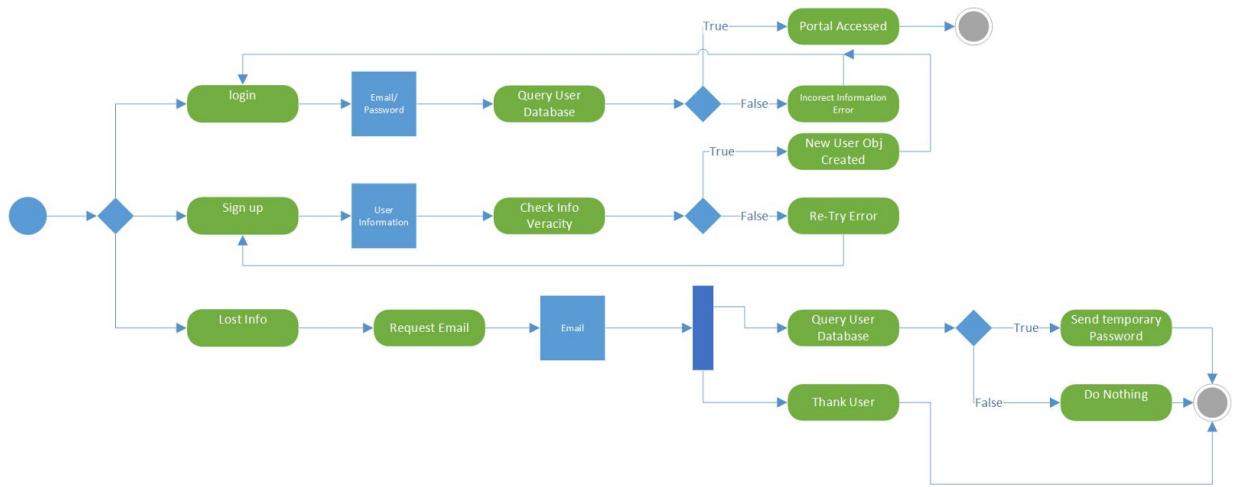


State Diagram of Account

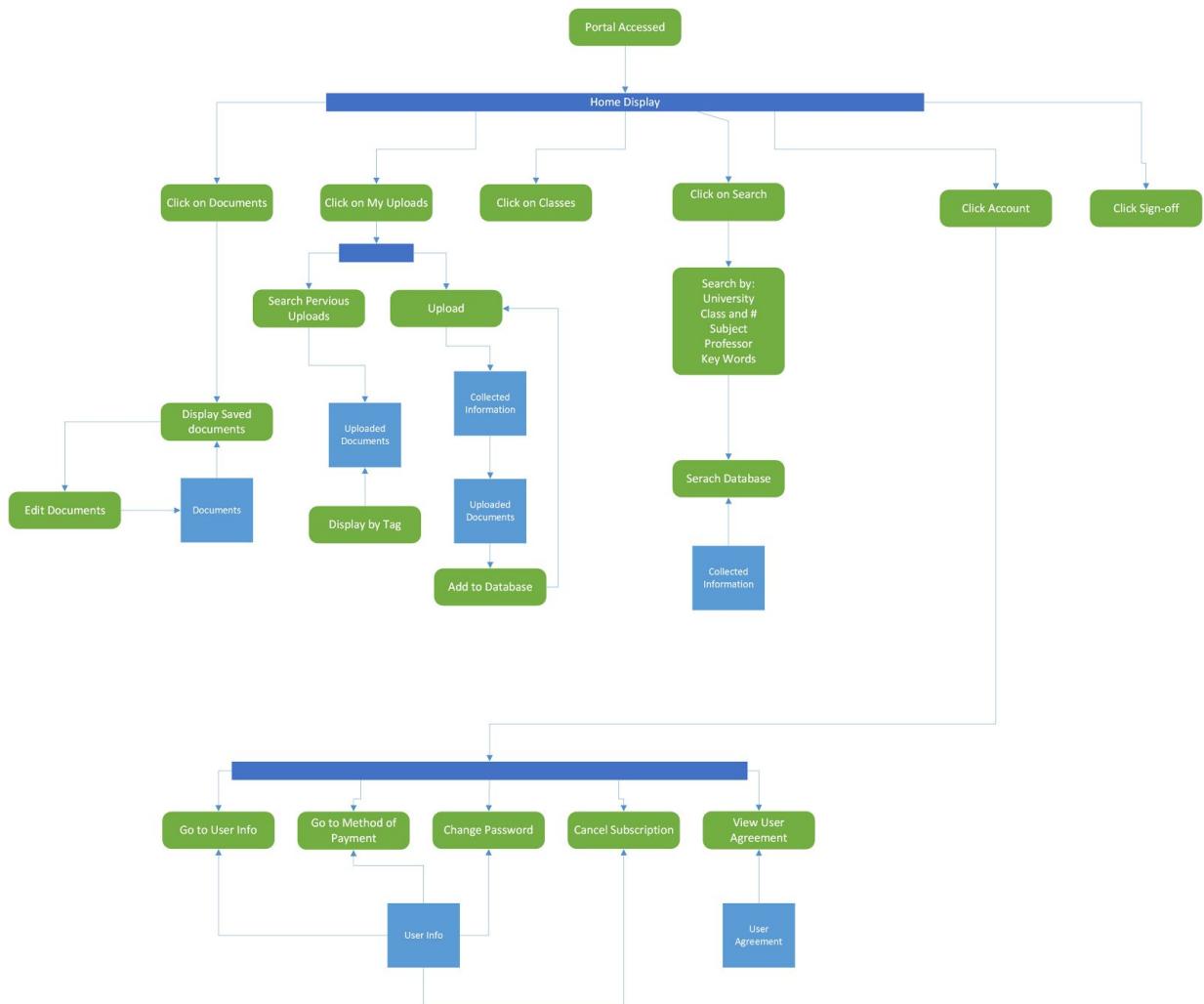


Activity Diagram

Login

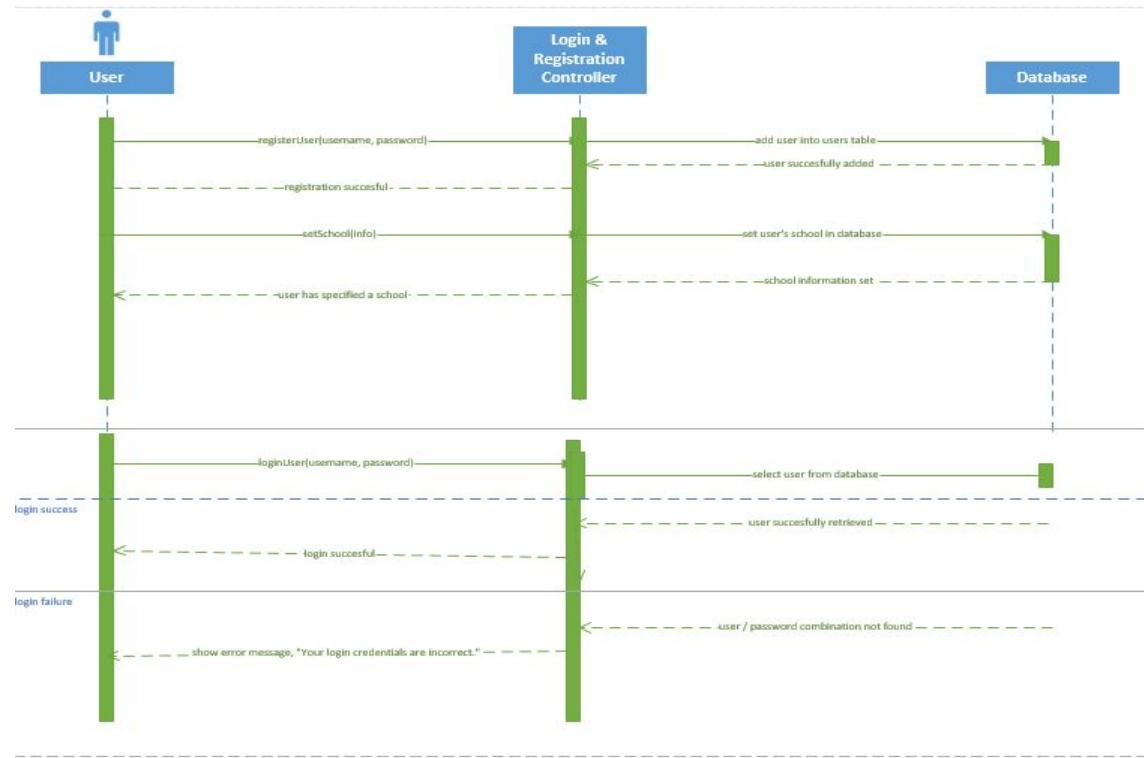


Home Page

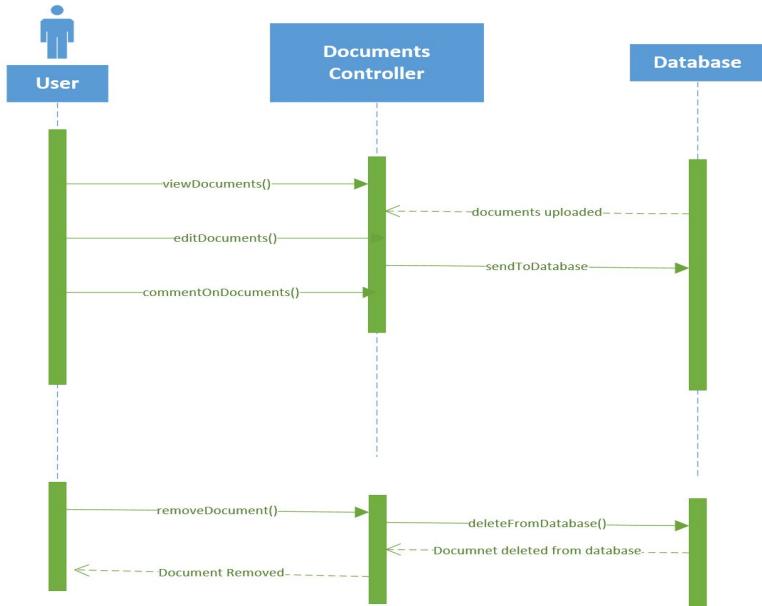


Sequence Diagram

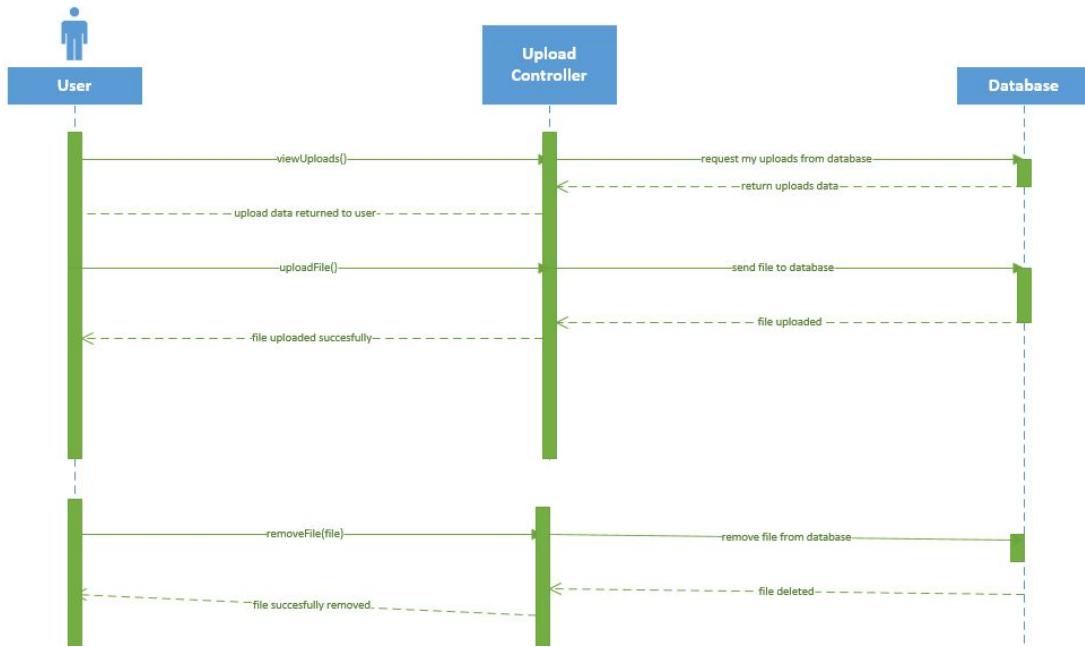
Login/Register



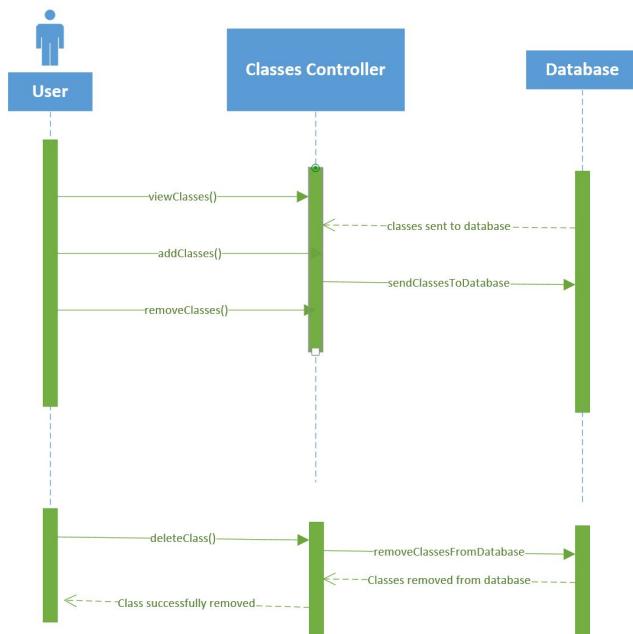
Documents



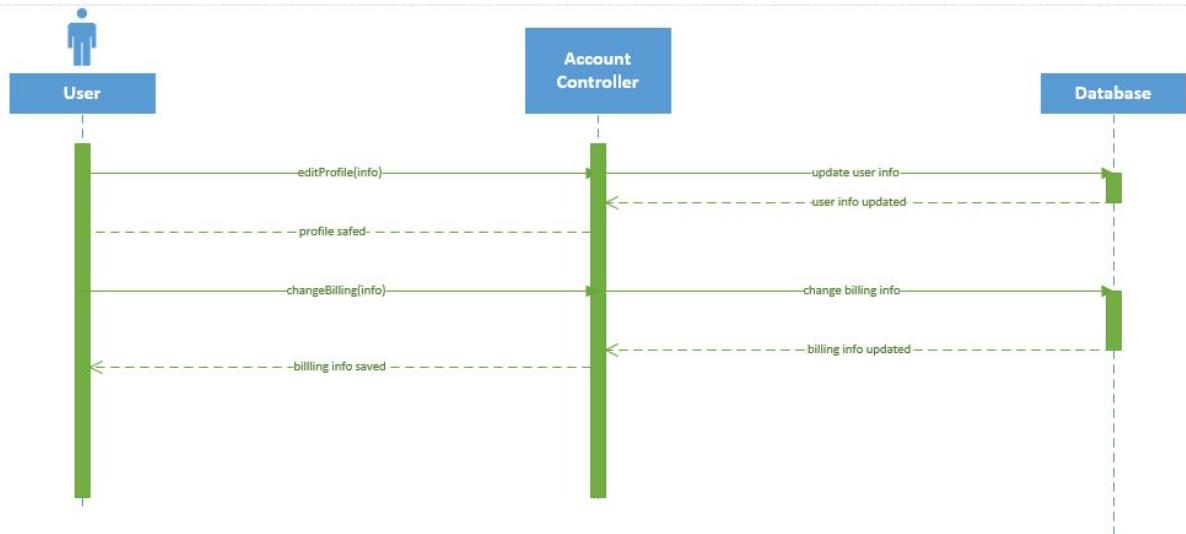
My Uploads



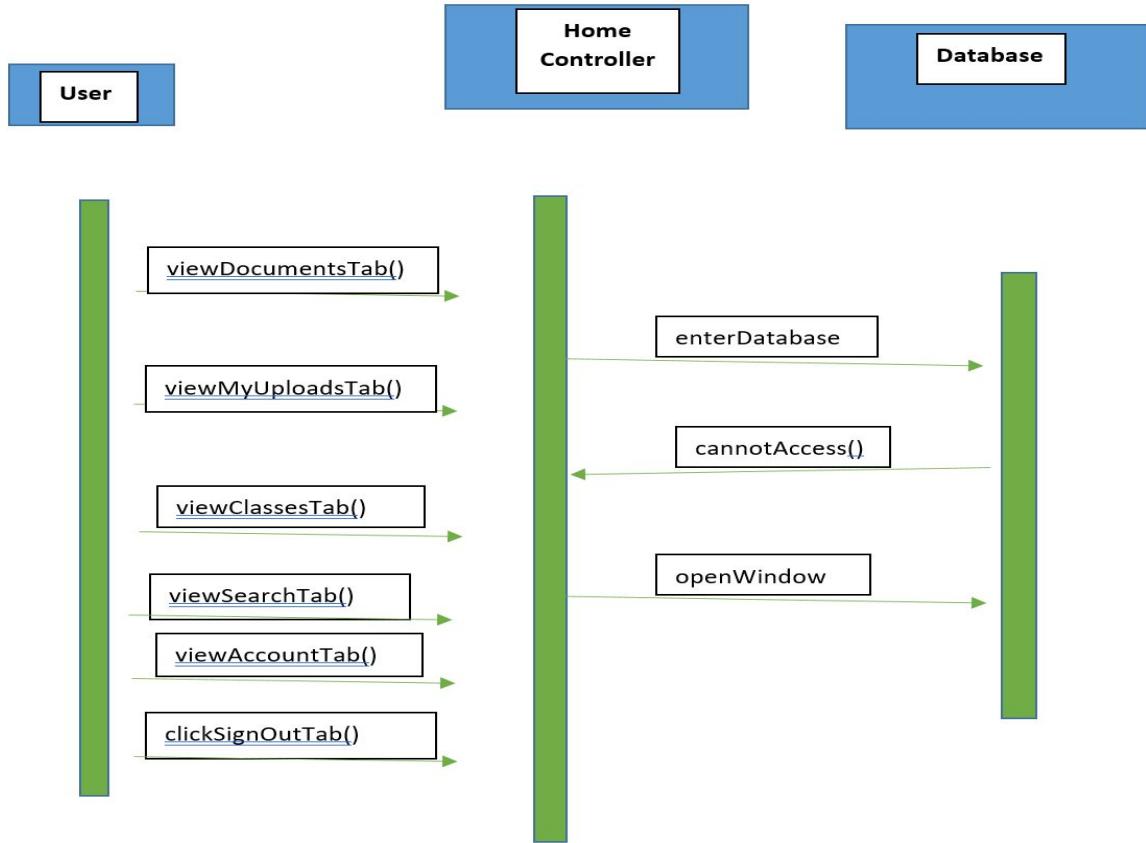
Classes



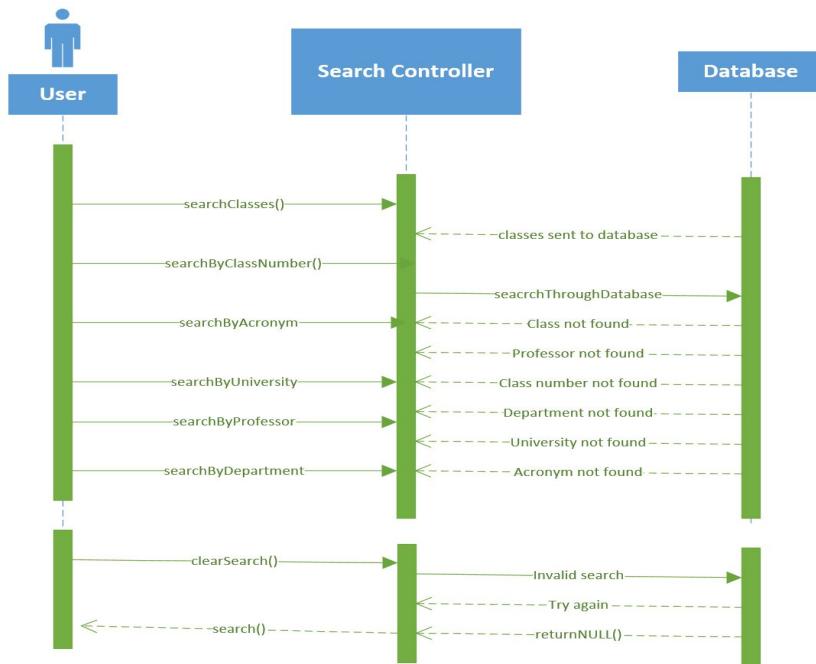
Account



Home



Search



Appendix

Database

For our database, we will be using a MySQL database hosted on a LAMP (Linux/Apache/MySQL/PHP) production server. The name of our database will be glimmer_main and we will create two different users, one for read actions and one for write actions. The permissions granted to these users will depend on the actions they are invoking.

External Systems

We will be using a handful of Amazon Web Services (AWS) services such as Elastic Computing Cloud (EC2) and Relational Database Service (RDS). In addition, we will be using the Simple Storage Service (S3) to store all of our documents that are uploaded by users. This is beneficial because instead of wasting space on our own production servers, we can host content externally on a content delivery network such as Amazon.