

SW Engineering CSC648/848 Summer 2018

InfiniteImage

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Milestone 2

July 8th, 2018	First Submission
July 9th, 2018	Revision Notes from Prof.
July 11th, 2018	Final Updated Version

1. Data Definitions V2

Non-Registered Users: shall only be able to search and view images, must register in order to download or upload any images.

Registered Users: shall able to view, download, and upload photos.

Username: user's identifier.

Password: user's password

Upload: Upload an image file pending for approval into the database

Download: Download an image found either by search or browse.

Friends: group of other registered users that a particular user will have an ease of access to their content.

Cart: a selection of photos that the registered user will be able to add/remove photos to before downloading.

Administrative Users: shall be able to approve all photos before they go live on the site, as well as has access to view all content. Is able to remove users and/or content as per established rules and policies.

Username: user's identifier.

Password: user's password

Pending: Photos that haven't gone live on the site waiting for approval.

Images: accessible to be viewed by all users, and downloadable by registered users.

Thumbnail: smaller version of image.

Date: date of the photos upload.

Location: where the photo was taken

Categories: keywords added to the image in order for search

Photographer: name of photographer who took photo for searching purposes

Description: text description of photo.

Licensing: license and copyright information for photo.

Status: The current status of the image: Pending, Approved, Rejected

Size: Information on the image's file size and dimensions

Format: Image Format

User Count: amount of users registered to the site.

2. Functional Requirements V2

Priority 1:

Non-Registered Users

Home Page - The homepage shall be filled with a search function and most popular photos for the non registered users. And in term of registered users, the home page will be filled with recent friends' uploaded photos, notifications, and also a search function.

Register/Login - Any user shall be able to search and browse through the photos. However, in order to either upload or download photos, the user has to register by signing up and then log in to the website.

Category - Photos shall have categories that will aid in organization and make it easier to access through the search function. The registered users will be able to categorize their photos if needed.

Registered Users

Home Page - The homepage shall be filled with a search function and most popular photos for the non registered users. And in term of registered users, the home page will be filled with recent friends' uploaded photos, notifications, and also a search function.

Upload - Registered users shall have the ability to upload photos by posting it to a specific category so visitors can search for it and see it easily. That will include the ability to add tags associated with the post, and a title.

Download - Registered users shall have the ability to download photos from the website. The user has to be registered and logged in in this case.

Category - Photos shall have categories that will aid in organization and make it easier to access through the search function. The registered users will be able to categorize their photos if needed.

Register/Login - Any user shall be able to search and browse through the photos. However, in order to either upload or download photos, the user has to register by signing up and then log in to the website.

Admin

Home Page - The homepage shall be filled with a search function and most popular photos for the non registered users. And in term of registered users, the home page will be filled with recent friends' uploaded photos, notifications, and also a search function.

Register/Login - Any user shall be able to search and browse through the photos. However, in order to either upload or download photos, the user has to register by signing up and then log in to the website.

Admin - An administrator account who shall have the ability to approve/disapprove user content(images and tags) that is uploaded.

Priority 2:

Non-Registered Users:

Search - The website shall have the ability to search via the search function to find photos based on search term or category.

Filters - To help users search for a more relevant results. Filters can be the upload date, category, user, and size of the photo.

Registered Users:

Search - The website shall have the ability to search via the search function to find photos based on search term or category.

Filters - To help users search for a more relevant results. Filters can be the upload date, category, user, and size of the photo.

Priority 3:

Non-Registered Users:

Watermark - In order to preview an image full-size and require users to log in, images shall display a watermark as an overlay.

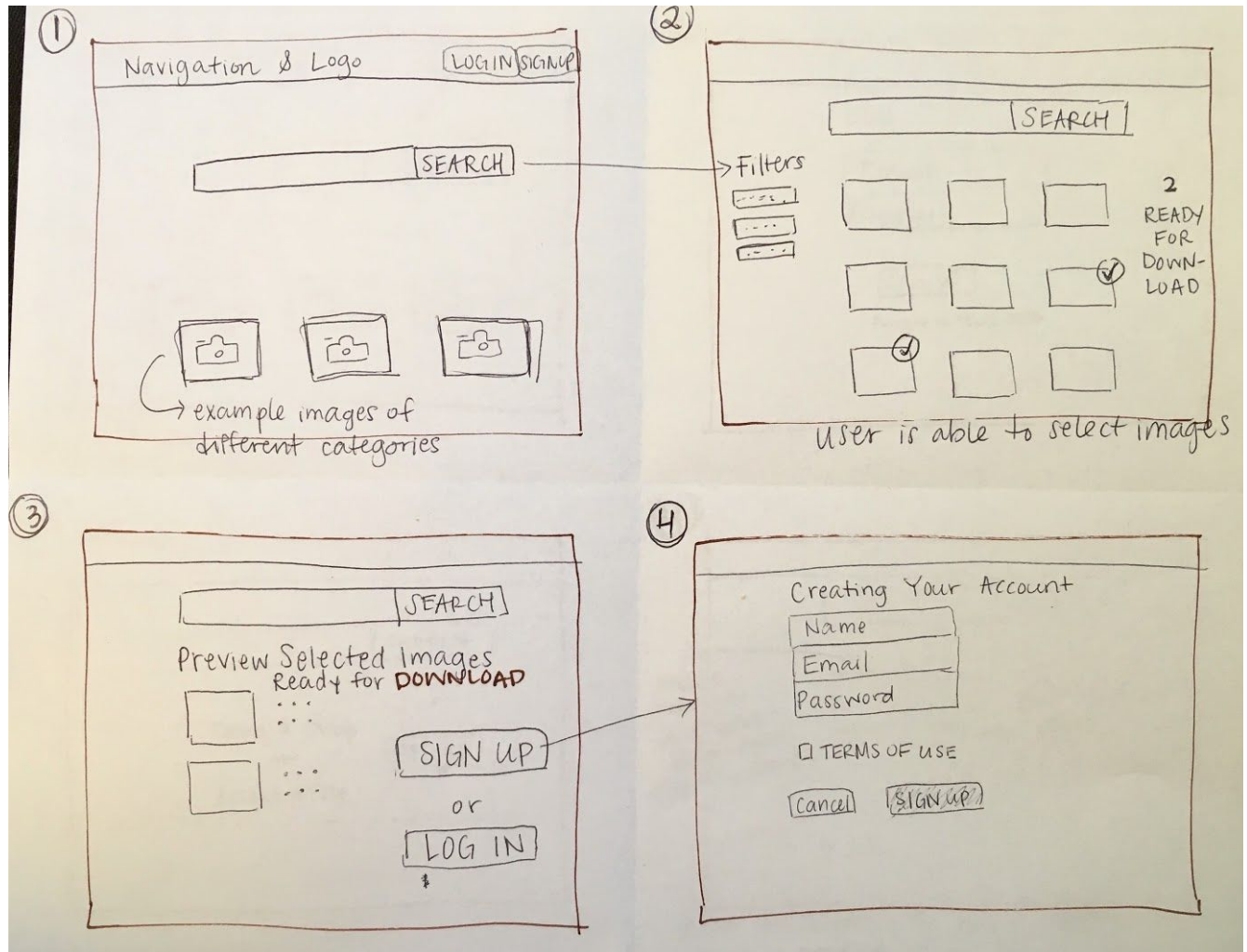
Registered Users:

Friends - Once registered and logged in, one can add friends via their username so he can get notified whenever a friend uploads a new photo and see his uploaded photo.

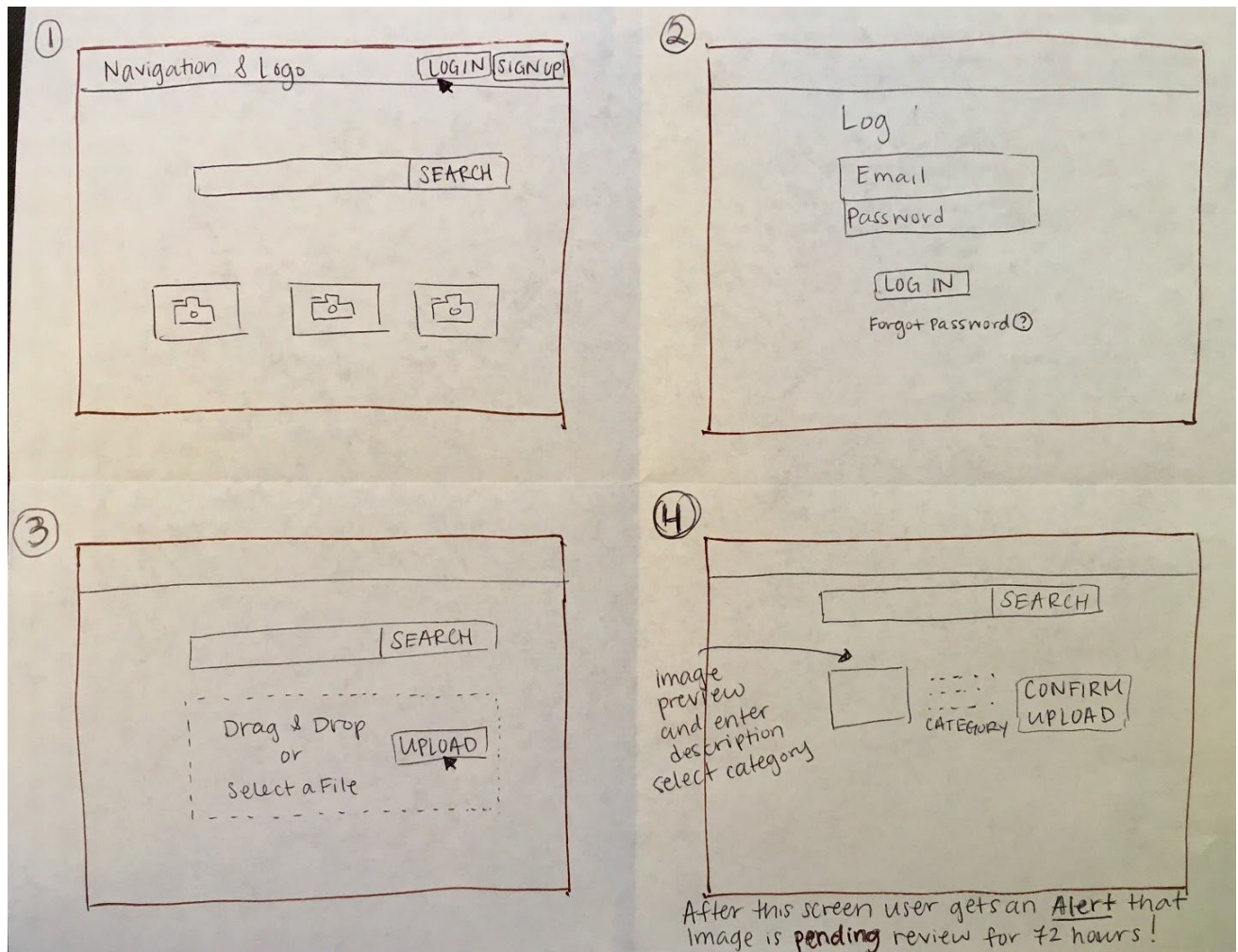
Cart - Users shall be able to add photos to a cart for bulk download.

3. UI Mockups & Storyboards (high level)

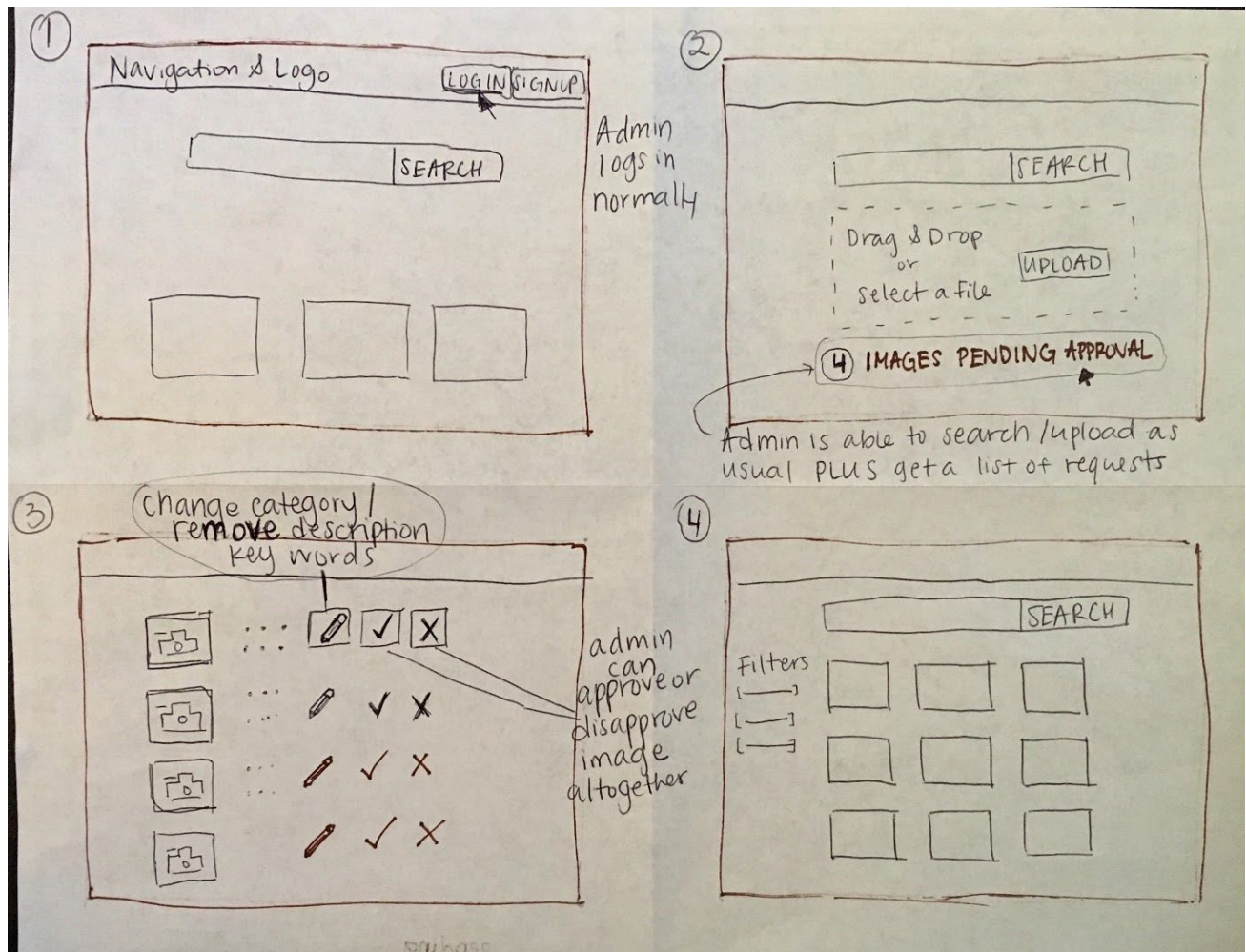
Use case: John is searching for quality images to download, using lazy registration. He is able to preview images he wants and is prompted with Sign up/Log in buttons.



Use case: Fred the photographer's main concern is uploading his images. (Assuming he already has an account) He proceeds to Log In screen and then is able to Search or Upload. Once he is ready to Upload he is able to write in a description and select a category. After, he is alerted that images are pending admin review.



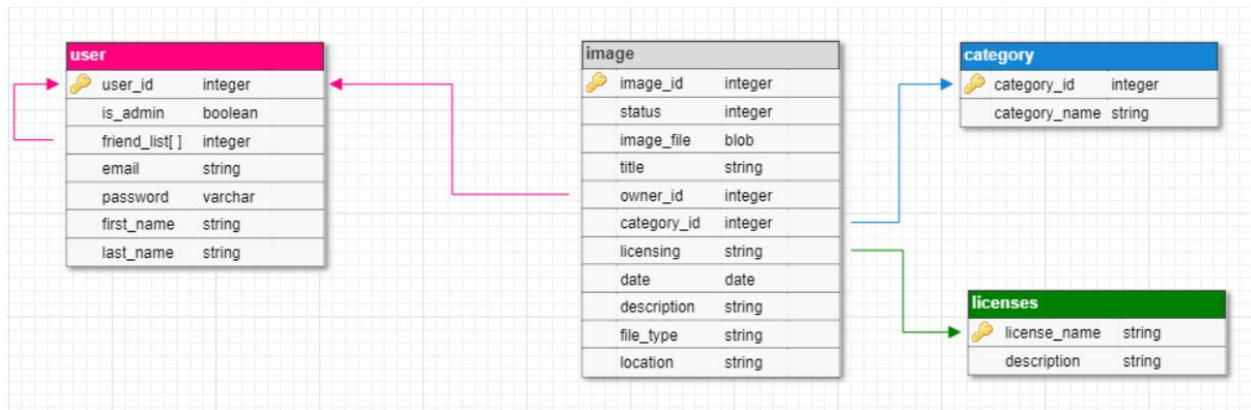
Use case: Admin is able to log in. He has an additional panel that shows him user requests for photos to be uploaded to the site. He can remove certain description words if they are not appropriate or change the category the image should be sorted under. He can approve or disapprove(delete) the photo.



4. High Level Architecture, Database Organization

Database Organization

The database is organized in MySQL based on the following Schema. Tags and Licenses are seeded into the database, which are selected from when an image is posted. For this project, there is only one type of license which is royalty free.



Media Storage

BLOBs(Binary Large Objects): Image media files will be stored as raw files in the database.

Image Format: Images must be .jpg, .png

Thumbnails and Enlarged Image: Thumbnails shall be created in the database during the time the file is first uploaded, and stored with the blob.

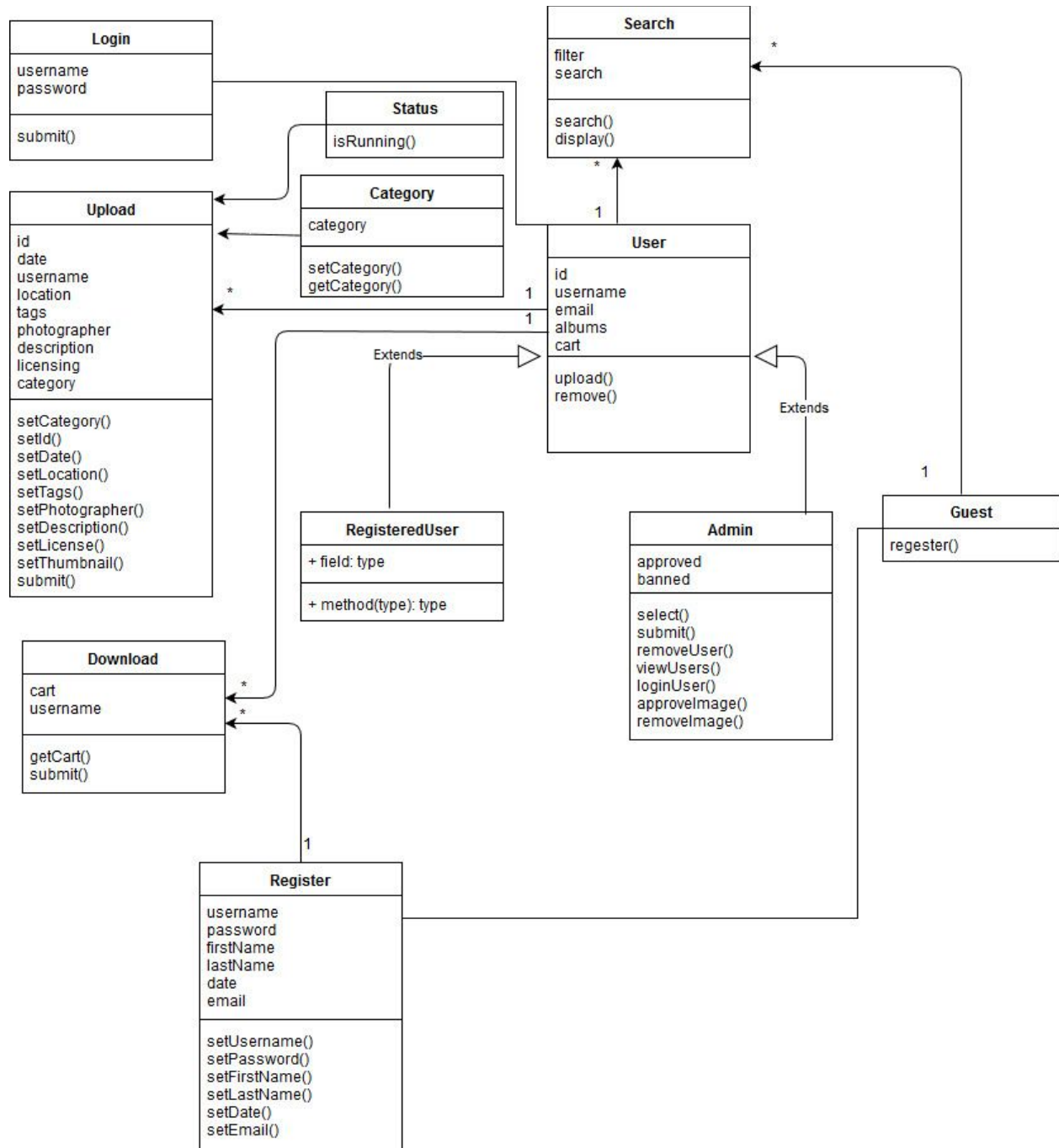
Search/Filter Architecture and Implementation

Categories: All images are assigned into one category when they are uploaded, categorizing them among similar items (e.g. Nature, Cars, Food). The home page shall have a drop-down menu where a user may choose one category from a list when browsing.

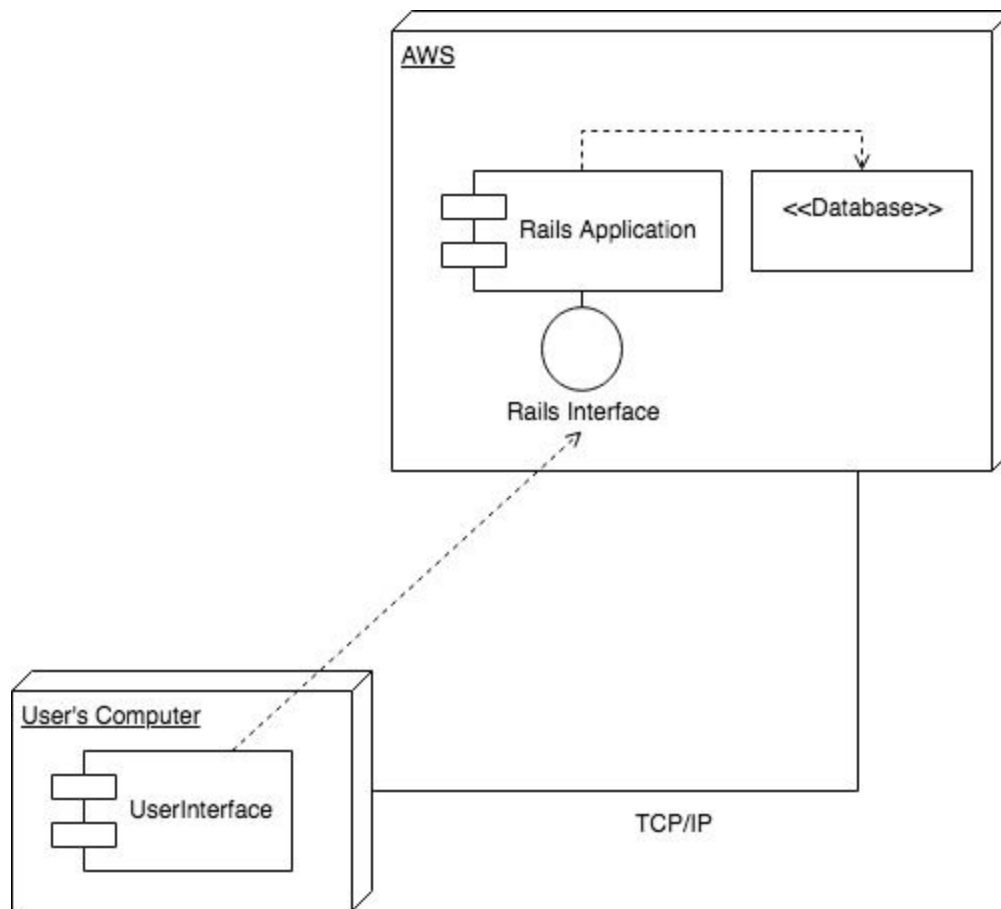
%Like: MySQL has a built-in search architecture, %LIKE, which we shall implement alongside a main category browser.

5. High Level UML Diagrams

Class Diagram



Deployment Diagram



6. Key Risks

Skills Risk

Our team as a whole are not experts in either Ruby, Rails, or MySQL. With this in mind everyone has set out to learn about each technology as quickly as possible through various tutorials. Also, we are using the vertical prototype to gain experience and have reduced our priority 1 scope to a simple set of necessary functionality.

Technical Risk

We have had issues with AWS and reaching our free tier usage limit. Specifically, the snapshot storage of our site. We are working to fix the usage problem but in the event that we cannot we will sign up for AWS Educate to receive \$100 in AWS credit.