

SW Engineering CSC648/848 Summer 2018

Hat Box Photos

Team 5

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Milestone 2

Revision Table		
7/6/2018	1.0	Initial document
8/7/2018	2.0	Revised document

Data Definitions

Account: User account with email and password as credentials.

Admin: Registered user with the privilege to approve or reject uploaded images after review. This is done before images become live.

- Admins possess non-admin user privileges in addition to their admin privileges

Image: Full resolution image.

- **Category**: Category of an image (i.e. clothing, furniture, landmark, outdoor).
 - Image categories shall facilitate image search performed by users.
 - Images shall only have one category
- **Downloads**: The number of times an image is downloaded from hatboxphotos.com
- **File size**: Size of the image file
 - File size shall be limited to 16 MB
- **Image description**: Text description of an image.
 - Image descriptions shall be limited to a certain length
 - Image descriptions shall be optional
- **Image height**: Height of an image measured in pixels
- **Image file format**: Format of an image file
 - File formats shall be limited to jpeg, png, and gif.
- **Image name**: Name of an uploaded image on hatboxphotos.com
- **Image width**: Width of an image measured in pixels
- **Resolution**: The level of detail in an image
 - Image resolution shall be measured by image width and image height
 - Full image resolution shall be the image's original width and height
 - Medium image resolution shall be 256x256
 - Thumbnail resolution shall be 128x128
- **Status**: The approval status of an uploaded image.
 - Image status can be approved, pending, or rejected
- **Tag**: Keywords extracted from the image description using a keyword extractor
- **Thumbnail**: Preview of an image
 - Thumbnails shall be displayed in search results
 - Thumbnails shall be displayed in place of full resolution images to users who are not logged in to their account
- **Upload date**: Date an image was uploaded to hatboxphotos.com
- **Uploaded by**: Name of the registered user who uploaded an image to hatboxphotos.com

Data Definitions (cont.)

Image: (cont.)

- **Views**: The number of views an image receives from all users on hatboxphotos.com

Image database: Database containing information about all images on hatboxphotos.com, such as image name, description, tags, thumbnail, and upload date.

Non-admin user: Registered user with the basic privileges of uploading and downloading images (i.e. students, photographers, etc.)

Registered user: User with an account on hatboxphotos.com

- **Email**: A registered user's email address. Provided at registration.
- **Username**: A registered user's username. Provided at registration.
- **Password**: A registered user's password. Provided at registrations
- Registered users shall be separated into admins and non-admin users
- Registered users shall log in to their account before uploading or downloading images
- Users shall have the option to provide their bio, occupation, and student status during the registration process

Unregistered user: User without an account on hatboxphotos.com

- Unregistered users shall only be able to view image thumbnails in place of full resolution images
- Unregistered users shall not be able to upload or download images

User: Anyone who visits hatboxphotos.com

- Users shall be separated into registered users and unregistered users
- Users shall be able to search for images
- Users shall be able to view image thumbnails

Functional Requirements

Priority 1:

Unregistered Users

- 1.1 Unregistered users shall be able to view photos on the home page
- 1.2 Unregistered users shall be able to sign up with an email and password
- 1.4 Unregistered users shall be able to view thumbnail image in place of full resolution images
- 1.5 Unregistered users shall be able to click on a thumbnail image and view it in medium resolution as well as its description
- 1.6 Unregistered users shall be prompted to sign up/in before downloading/uploading a photo
- 1.7 Unregistered users shall be able to search for images

Registered Users

- 2.1 Registered users shall have the same functionality as an unregistered user
- 2.2 Registered users shall be able to login with their email and password
- 2.3 Registered users shall be able to download an image in thumbnail, medium resolution, or high resolution
- 2.4 Registered users shall be able to upload an image
- 2.6 Registered users shall be able to view their profile

Admin Users

- 3.1 Admin users shall have the same functionality as a registered user
- 3.2 Admin users shall review the content and description of all uploaded images before they go live on hatboxphotos.com
- 3.3 Admin users shall approve if photo reviewed is acceptable
- 3.4 Admin users shall decline if photo reviewed is not acceptable
- 3.6 Admin users shall be able to remove any previously approved photo
- 3.7 Admins shall log in to their account on hatboxphotos.com before reviewing photos
- 3.8 Admins shall notify users in a message about why an uploaded photo was not approved to go live

Photos

- 4.2 Photos descriptions shall be optional
- 4.5 Photos shall be viewed on the home page
- 4.6 Photos to be viewed shall be determined by search results
- 4.7 Photos shall be viewed in thumbnail and medium resolution for unregistered users.

Search

5.1 Search bar shall have fuzzy search functionality

Priority 2:

Users

2.5 Registered users shall be updated if their uploaded image was approved/declined

3.5 Admin users shall have the ability to edit the template approve/decline email that is sent to the registered user

Photos

4.1 Photos shall have the ability to be described by tags

4.3 Photos shall show the all image info including user id, but not user

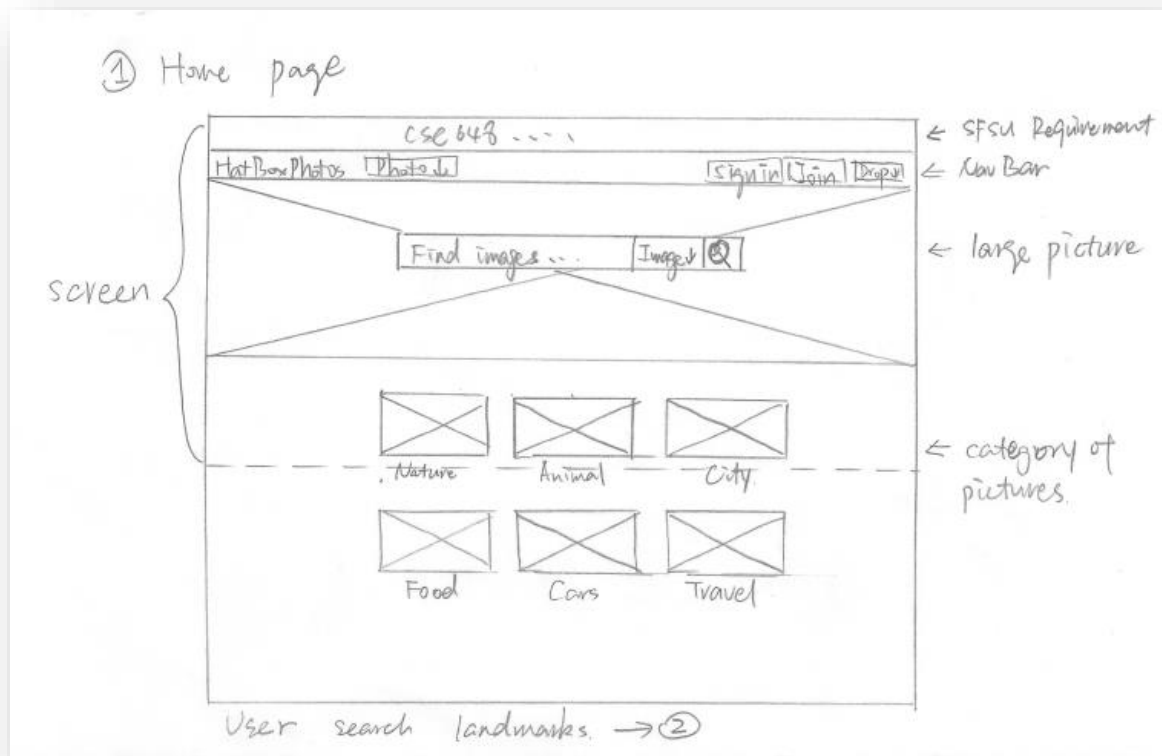
4.4 Photos shall show the Registered user who posted it

Priority 3:

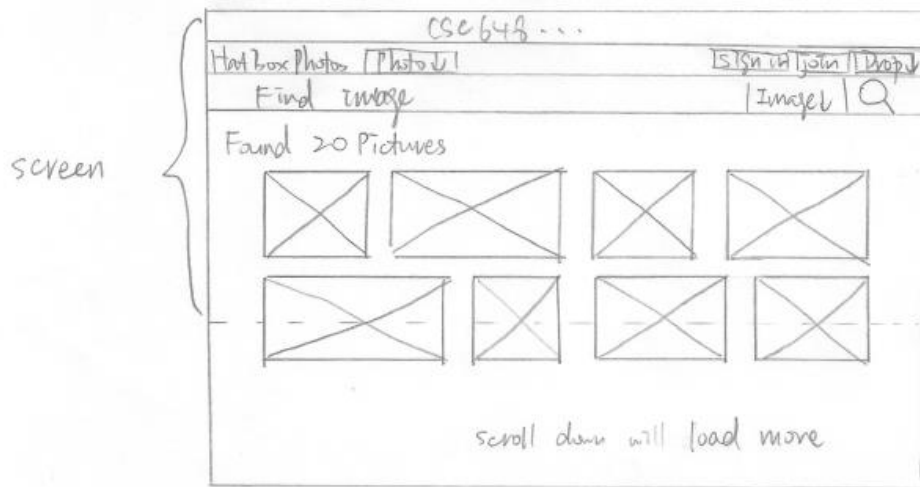
None at this time.

UI MOCKUPS AND STORYBOARDS

Use Case 1: Mary is a **college student**. She received a writing assignment about the city of San Francisco and had to use three landmark photos in her paper. When she gets home, she opens the home page of hatboxphotos. She searches the landmarks of San Francisco. Once she decides which landmark photos to use, she selects it, and is then prompted to register for a new account or log-in before she can download them to her local computer. Then she proceeds to log out.

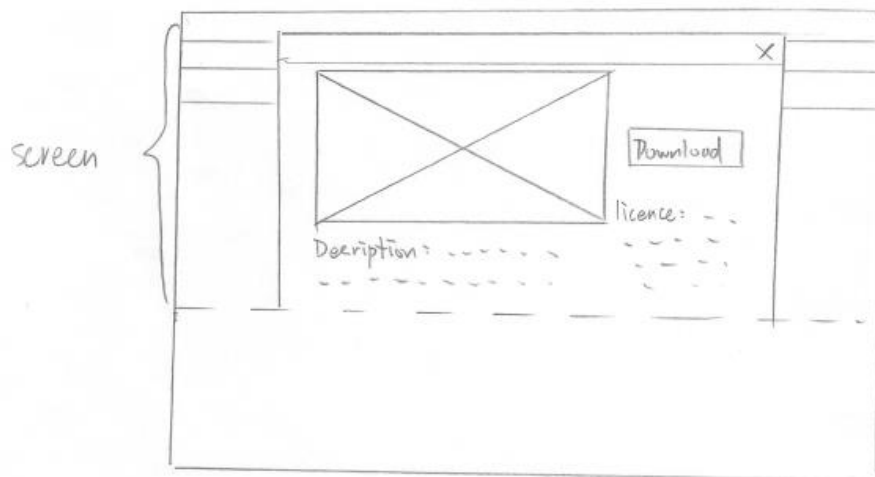


② Search Page.



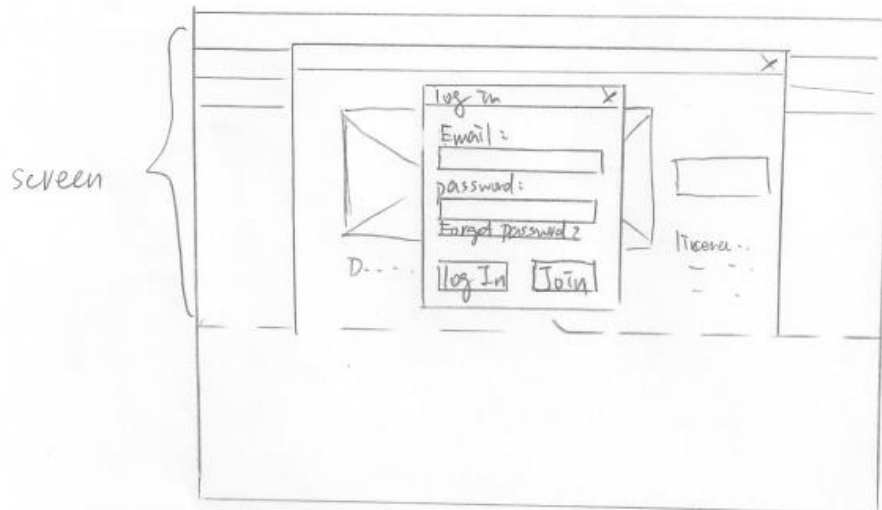
user click one photo → ③

③ Pop up photo details and download.



user clicks download button, system requires log in → ④

④ Request to log in



user clicks Join button, to sign up → ⑤

③ sign up Form:

Screen

CSC 648

HotBox Photos

Already a member?
sign in

Email

Password

Retype Password

☐ I'm older
☐ Term ☐ Retail
Not Robot

Join

user joined and redirect user to → ④

④

screen

CSC 648

x

signed out

Description: - - -

- - -

licences: - - -

- - -

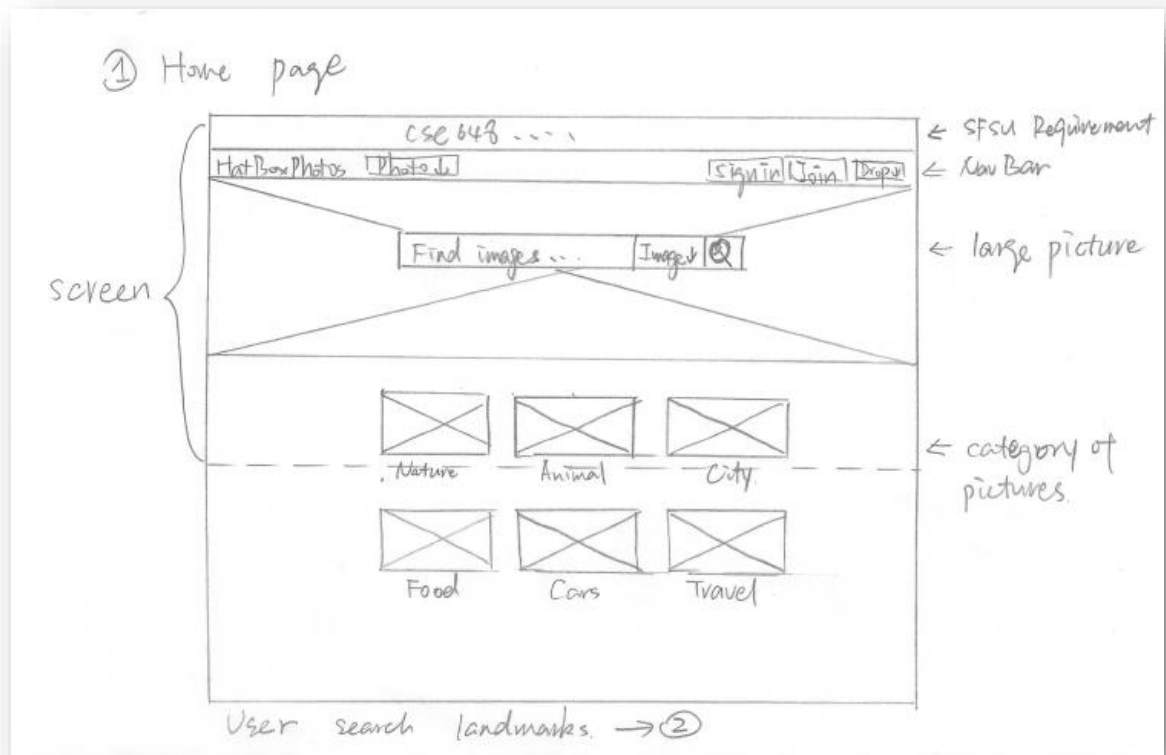
user downloads the photo and signed out.

← SFSN

← NavBar with signed in

← Search Bar

Use Case 2: Henry is a **photographer**. He had taken a trip to San Francisco and took lots of photos about the city. When he gets back home, he opens the home page of hatboxphotos. He logs-in, chooses the photos that he wants to upload, writes a description about each photo, and upload them one by one for approval. Then he proceeds to log out.



② sign in

Hand-drawn wireframe of a sign-in page. The page has a header bar labeled "CSC648" and a "Nav Bar" on the right. A "Log in" modal is centered, containing fields for "Email:" and "password:", a "Forgot Password?" link, and "log in" and "Join" buttons. Annotations include "SFSU Requirement" pointing to the header, "Nav Bar" pointing to the navigation bar, and "pop up" pointing to the modal.

After log in, then go to ③

③ Photographer Dash Board

Hand-drawn wireframe of a Photographer Dashboard. The page has a header bar labeled "CSC648" and a "Nav Bar" on the right. A sidebar on the left contains links: "Home", "Profile", "Upload", "Message", and "History". The main content area says "Welcome to HatBoxPhotos".

click upload → ④

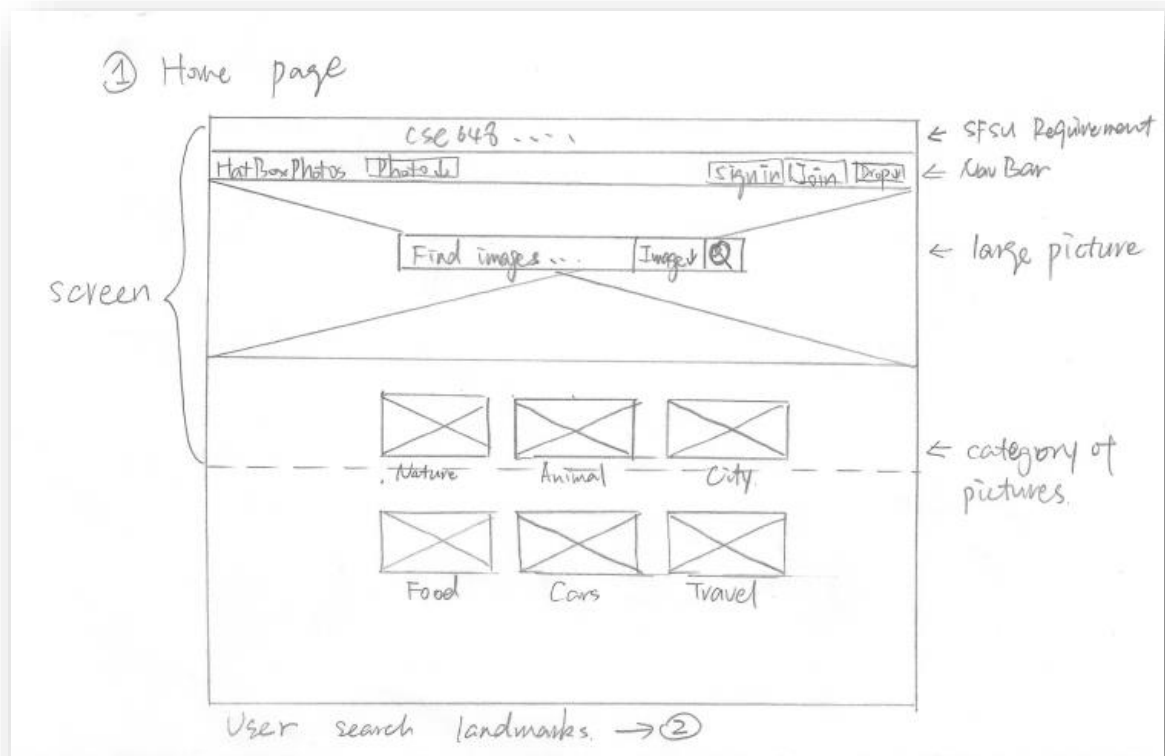
④ Upload

csc648	
NavBar	
<input type="checkbox"/>	Title: <input type="text"/>
<input type="checkbox"/>	Description: <input type="text"/>
<input type="checkbox"/>	Comment: <input type="text"/>
<input type="checkbox"/>	Link: <input type="text"/>
<input type="checkbox"/>	<input type="button" value="select"/>
	<input type="button" value="upload"/>

⑤

Csc648	
NavBar	Id Logout
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Thank you for choosing HatBoxPhotos. The Admin will get back to you In 24-48 Hours.

Use Case 3: Jennifer is an **admin**. When she starts to work, she opens the home page of hatboxphotos and logs into her account. Then she navigates to photo approval section. She reviews each photo and its description, then decides to approve or decline the request. She views the template email for approving/declining a photo and decides to add an additional section to further explain her decision. She finishes typing and submits her choice, sending an email to the picture's uploader.



② sign in

Hand-drawn wireframe of a login page. The page has a header "CSC648" and a "Nav Bar". A "Log in" modal is centered, containing fields for "Email:", "password:", a "Forgot Password?" link, and "log in" and "Join" buttons. Annotations include "SFSU Requirement" and "Nav Bar" pointing to the header, and "pop up" pointing to the modal.

After log in, then go to ③

③ Admin Dashboard

Hand-drawn wireframe of an Admin Dashboard. It features a sidebar with links: Home, Request, Message, History, and Setting. The main content area has a "Request" table with columns "id" and "Logout". The table lists "Arnold Upload" and "Betty Upload" with a "Detail" column showing "Arnold Upload 20 picture that need review...". An annotation "Click Request" points to the "Request" link in the sidebar.

Admin Home Page → click Request → Review Request.
→ click Arnold Upload → ④

④

Admin Click each picture → ⑤

⑤

After approve, the system will send a message to the user. If decline, then comment and reason is also sent.

High level Architecture, Database Organization

DB organization:

- *Images Collection*
 - Image Document
 - ObjectID: image_id (auto generated by MongoDB)
 - GridFS: image_original
 - Base64: image_medium
 - Base64: image_thumbnail
 - String: image_file_name
 - String: image_file_format
 - String: category
 - String: uploaded_by
 - Date: upload_date
 - Int: file_size
 - Int: image_height
 - Int: image_width
 - Int: image_status
 - Int: views
 - Int: downloads
 - String: image_description
- *Registered Users Collection*
 - Account Document
 - Login Credentials Schema
 - ObjectID: _id (auto generated by MongoDB)
 - String: email
 - String: username
 - String: password
 - Permissions Document
 - Const: permissions
 - ADMIN
 - NON_ADMIN

Media storage:

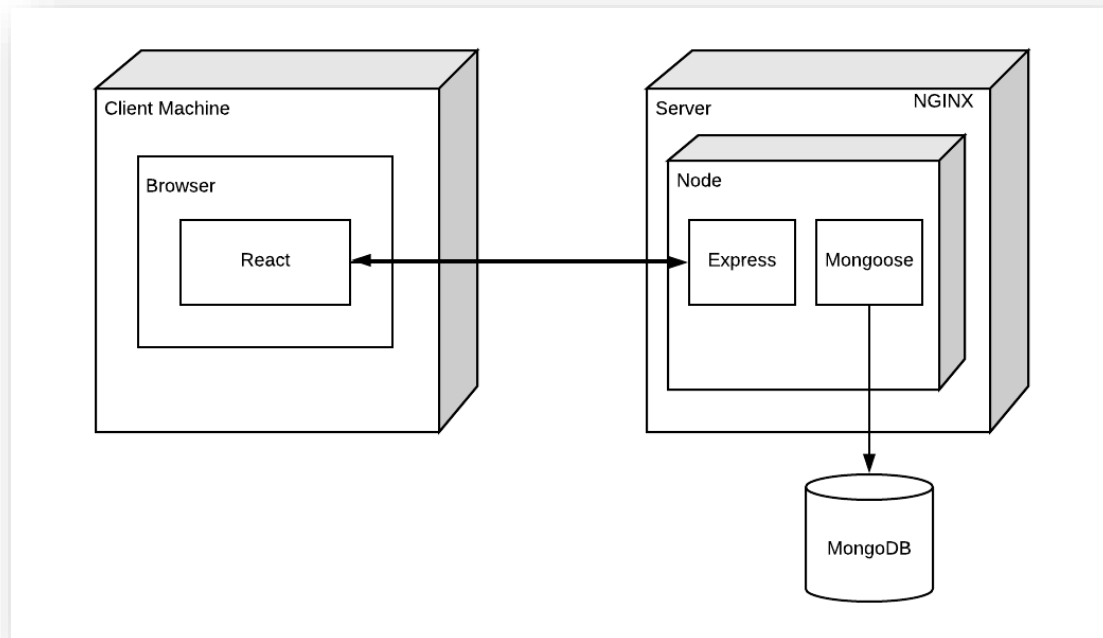
- Files
 - Base64 format
- GridFS
 - used for storing files above 16mb

Search/filter architecture and implementation:

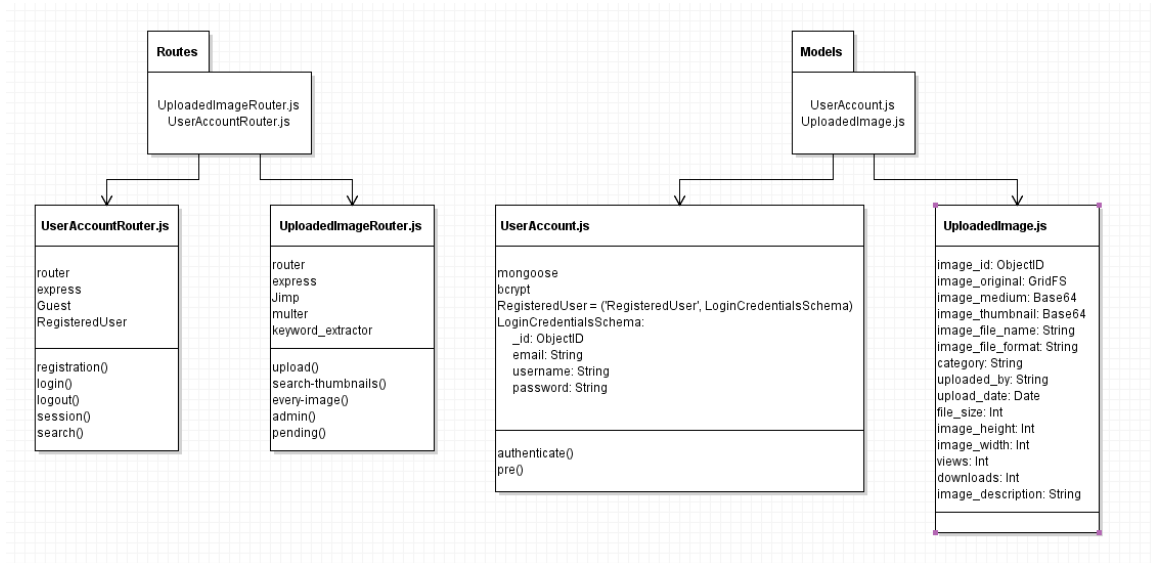
- Fuzzy search
 - Partial search using regex. Regex searches for image tags. Tags are generated by a keyword extractor which extracts key words from the image description

High Level UML Diagrams

Server UML:



Class UML:



Key Risks

Skills: Medium risk. We are still learning many of the tools that we are using. However, we are learning fast and sharing our knowledge, thus mediating this risk.

Schedule: No risk at this time. All milestones thus far have been met on-time without the panic of the 11th hour.

Technical: No risk at this time. All previous technical issues have been resolved and measures put in place to prevent further problems.

Teamwork: No risk at this time. Teamwork is productive.

Legal: No foreseen risks at this time.