

# SW Engineering CSC648/848 Summer 2018

---

## Hat Box Photos

### Team 5

Amelia Rawlings ([Amelia.Rawlings@gmail.com](mailto:Amelia.Rawlings@gmail.com))

### Front-End

Arnold Jiadong Yu

Dalu Li

Betty Reaney

### Back-End

Keawa Rozet

U Keong Cheong (Ray)

Albert Du

## Milestone 1

6/26/2018

Revision Table		
6/26/2018	1.0	Initial document

## **Executive Summary**

In this application we are looking to develop an innovative way to quickly search and upload photos for free. Photo images on the web have become increasingly popular as the years go on and technology develops. Photography also has been a quickly growing industry as camera quality improves significantly each year. We figure, people need ways and platforms in order to either share their work or simply share photos of random parts of their lives. It can be served as a personal site or business site as users who have an account on our website have full functionality access which includes having an account that allows you to download and upload a variety of images. This site will also provide full access for users to search images.

Websites that have the ability to store photos for people are an amazing resource and are vastly underrated. With our software, and top of storing photos, users will be able to save those images to their own personal computer while logged in. Especially for those that may have a small photography business and need a place to become inspired by a variety of images this would be the perfect website. Also these business owners would have a place to store their portfolios by taking advantage of the feature to upload images. We plan to develop a very clean software platform that will enable users to post photos and upload these photos for free. We'll include features that allow users to search a variety of images based on what type of image it is.

## Personas and Use cases

Mary is a college student.

- Very busy with college study.
- Have good computer and mobile skills.
- Not too much patient of searching needed material online.
- Worried about whether she can use the material that found online legally.
- Basic research skill.

Mary's goal is to use these materials to write assignments.



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.

## Personas and Use cases (cont.)

Henry is a photographer.

- Good photo shooting skill.
- Have good computer and mobile skills.
- Like sharing lots of free photos taken by him online.
- Like helping others.

Henry's goal is to find a good stock website so that people can use more of his photos.



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 and choose the photos that he wants to upload, then he writes description about each photo and upload them one by one for approval. Then he proceeds to log out. Next day, he logs into his account and gets notification whether his photos get approval.

## **Personas and Use cases (cont.)**

Jennifer is the admin of the website.

- Basic management skill.
- Good Computer and mobile skills.
- Have basic experience of managing website.
- Hard working type and learn fast.
- Good research skill.

Jennifer's goal is to manage the website well and help the company grow.



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.

## **Additional Use cases**

Lucas is a photographer is an aspiring **photographer**. He is planning on visiting the Golden Gate Bridge and wants to take some well structured photos. For inspiration, Lucas navigates to hatboxphotos.com and searches for pictures of the Golden Gate Bridge in the search bar. Lucas finds a picture he wants and is planning to use it as a reference for when he goes himself, so he signs in and downloads the picture. After the picture finishes downloading, he logs off hatboxphotos.com.

John is an **admin**. He navigates to hatboxphotos.com to start looking through photos to approve and notices on the home page an inappropriate photo that should not have been approved for upload. John immediately logs in to his admin account and uses the search bar to find that exact photo he saw. He clicks on the photo and clicks an admin-only button called "Remove". John is taken to another page to edit the template email for removing a photo and decides to add a quick paragraph why it is an inappropriate photo. He clicks the "confirm" button and the photo is removed and the email is sent.

## **Data Definitions**

**Account:** User account with username and password as credentials.

**Admin:** Registered user with the privilege to approve or reject uploaded images after review

- Admins shall log in to their account on hatboxphotos.com before reviewing images
- Admins shall review the content and description of all uploaded images before they go live on hatboxphotos.com
- Admins shall notify users in a message about why an uploaded image was not approved to go live
- Admins possess non-admin user privileges in addition to their admin privileges

**Image:** Full resolution image.

- **Description:** Text description of an image.
  - Image descriptions shall be limited to a certain length
  - Image descriptions shall be optional
- **Name:** Name of an uploaded image on hatboxphotos.com
- **Tag:** Category of an image (i.e. clothing, furniture, landmark, outdoor).
  - Image tags shall facilitate image search performed by users.
  - Image 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
- **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
- Registered users shall be able to upload or download images after logging in to their account.

**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

- 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 provide their age, username, and password during the registration process
- Users shall have the option to provide their bio, occupation, and student status during the registration process

## **Data Definitions (cont.)**

**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**

## **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
- 1.3. Unregistered users shall be able to use the search bar to search for specific photos
- 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

## **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
- 2.5. Registered users shall be updated if their uploaded image was approved/declined
- 2.6. Registered users shall be able to view their profile
- 2.7. Registered users shall be able to view all their uploaded photos

## **Admin:**

- 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
- 3.3. Admin users shall click approve if photo reviewed is acceptable
- 3.4. Admin users shall click decline if photo reviewed is not acceptable
- 3.5. Admin users shall have the ability to edit the template approve/decline email that is sent to the registered user
- 3.6. Admin users shall be able to remove any previously approved photo

## **Photos:**

- 4.1. Photos shall have the ability to be described by tags
- 4.2. Photos shall have a description
- 4.3. Photos shall show the date it was posted
- 4.4. Photos shall show the Registered user who posted it
- 4.5. Photos shall be viewed on the home page
- 4.6. Photos shall be viewed determined by search results
- 4.7. Photos shall be viewed in thumbnail and medium resolution for unregistered users.

## **Misc:**

- 5.1. Search bar shall have fuzzy search functionality

## **Non-Functional Requirements**

1. Application shall be developed, tested and deployed using tools and servers approved by Class CTO and as agreed in M0 (some may be provided in the class, some may be chosen by the student team but all tools and servers have to be approved by class CTO).
2. Application shall be optimized for standard desktop/laptop browsers e.g. must render correctly on the two latest versions of all major browsers: Mozilla, Safari, Chrome.
3. Data shall be stored in the team's chosen database technology on the team's deployment server.
4. No more than 50 concurrent users shall be accessing the application at any time
5. Privacy of users shall be protected and all privacy policies will be appropriately communicated to the users.
6. The language used shall be English.
7. Application shall be very easy to use and intuitive.
8. Application shall render well on mobile devices (UI shall be responsive)
9. Google analytics shall be added
10. No e-mail clients shall be allowed
11. Pay functionality, if any (e.g. paying for goods and services) shall not be implemented nor simulated.
12. Site security: basic best practices shall be applied (as covered in the class)
13. Modern SE processes and practices shall be used as specified in the class, including collaborative and continuous SW development
14. The website shall prominently display the following exact text on all pages "SFSU Software Engineering Project CSC 648-848, Summer 2018. For Demonstration Only" at the top of the WWW page. (Important so as to not confuse this with a real application).

## Competitive Analysis

Features:	Shutterstock	Alamy	YAY Images	hatboxphotos
Photo Library	BEST	BEST	GOOD	GOOD
Search & Filters, Ease of Use	BEST	GOOD	OK	GOOD
User Submissions Accepted	YES	YES	NO	YES
Pricing	HIGH	MEDIUM	LOW	FREE
No Account Required for Downloads	NO	NO	NO	YES

Stock photo sites are used for many purposes: from adding optimized, fast loading images to websites; to supplying enterprises advertising campaign with customized, stylish photos and artwork. Many stock photo sites offer a large library of photos with lots of filters and search functions to help people find the perfect images for their purpose, but most of the time they will need to purchase a license in order to use those photos, and the license could be expensive. Moreover, they will need to create an account and pay for the images they want before they can download and use them, which could be annoying to most people. However, at hatboxphotos, we are a completely free platform for people to get and share images. We not only offer a good number of photos with an easy to use interface, most importantly, there is no account required for downloading images. To help people find and get their images in the easiest and fastest way, that's what sets hatboxphotos apart from the competitors.

## **High-level system architecture**

- Host: Amazon Web Services 1vCPU 1 GB RAM
- Operating System: Ubuntu v16.04 Server
- Database: MongoDB v2.6.10
- Web Server: NGINX v1.10.3
- Server-Side Language: JavaScript v8.11.3
- Web Framework: Reactstrap, Express
- IDE: NetBeans v8.2
- Web Analytics: Google Analytics

## **Team 5 Members**

- Albert Du
- Amelia Rawlings
- Arnold Jiadong Yu
- Betty Reaney
- Dalu Li
- Keawa Rozet
- U Keong Cheong (Ray)

## **Checklist**

**External Meetings:** DONE (Meetings set-up as needed)

**GitHub Master:** ON TRACK

**SW tools and Server:** DONE

**Team Read M1 Submission:** ON TRACK