SW Engineering CSC648/848 Summer 2018

Shallot

Team 02
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Milestone 1
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1. Executive Summary

   Have you or a friend ever needed to find royalty-free, free-use images on the internet, but didn't know where to find one? Have you ever been frustrated with how difficult it is to navigate other stock photo websites to find the content you want? Look no further! Shallot is the next best stock photo website in the market that no one knows about yet! This website will be responsible with providing users all around the world with royalty-free stock photos for their own personal use, for FREE! By learning from the mistakes of other websites, we plan to provide the best stock photo browsing experience the world has ever seen!

   Shallot will be a website designed to provide the user with the ultimate stock photo browsing and sharing experience. Upon loading the homepage, the user will be presented with a powerful search bar, trending images, an upload button, and categories to browse through in order to find their perfect photo for free! If the user wishes to share their own creative, royalty-free photos with the world, all they have to do is register an account with our website and upload their content! In order to provide users with the best experience possible, all photos are examined by our team before being displayed to the public to prevent inappropriate or duplicate content.

   Our team is made up of six students, all attending San Francisco State University. James Clark, the Team Lead, is an undergraduate senior pursuing a Bachelor of Science in Computer Science with a minor in Mathematics. Roy Telles, the Front-End Lead, is also a senior currently pursuing a Bachelor's degree in Computer Science, with a Mathematics minor. Xisheng "Sam" Zheng, a member of the Front-End Team, is a transfer student going into his senior year pursuing a Bachelor's degree in Computer Science and possibly pursuing a minor in mathematics. Patrick Coico, the Back-End Lead, is a transfer student going into his senior year as an undergraduate pursuing a Bachelor's in Computer Science with a minor in Mathematics. Dandan "Jenny" Cai, a member of the Back-End Team, is a graduate student in Computer Science that is specialized in Machine Learning. Michael Lama, another member of the Back-End Team, is a senior pursuing a degree in Computer Science. With our combined strengths in Computer Science, we will put forward our best work into this website to see it grow and thrive on its own.

2. Personas and Use Cases

About Zoe:

- A graduate student studying fashion design.
- Loves to design clothes for different types of people
- Wishing one day her design can be recognized and liked by people so that she can start her own business as a designer.
- Very good with internet, knows well how to use internet to let people see her designs

About Jack:

- A cook at Yum-Yum restaurant for the past 7 years.
- Loves to cook
- Loves to try making new dishes
- Loves sharing new dishes that he has made
- Hasn't tried using internet yet, but would like to learn how to share photos of his dishes with other people.

About Mark:

- Has a lot of reports to write that must include pictures
- Internet and tech savvy
- Doesn't have time to filter through photos
- Works late into the night

About Mary:

- Runs a personal blogging site in which she posts about places she's traveled and foods she's eaten
- She maintains her site 2-3 times a week
- Travels frequently so must upload photos quickly (or on the go)
- Would like the ability to search particular photos based on keywords, such as foods or locations

Use case 1:

Zoe is in the middle of her summer break and has created a few designs. She wants to share her designs online to have more people view them. She decides to Google for potential websites for hosting her photos and finds Shallot. She browses through Shallot, determining website usability by going to the home page and browsing certain categories. She decides to post her photos on Shallot, after easily locating the **upload button**. Before beginning the upload of her photos, she was asked to become a **registered user** in order to continue. After she provided a valid email address and password, she successfully posted her photos on Shallot.

Use case 2:

Jack has the weekend off, and is motivated to make a new dish with the ingredients he has in the his fridge. He is very proud of the dish he creates, and decides to share a photo of the dish. He had heard about Shallot, so he navigated to the website. He easily locates the button to become a **registered user** and registers an account by giving an email and password. He clicks on **upload button**, click and drags the photo that he took into the browser, and uploads the photo. He goes back to home page and in the search filter, he selects the food category and sorts the results from new to old. He was able to see his newly posted **public photo** among the top list of results.

Use case 3:

Mark is a very busy individual who usually works late into the nights. He likes to turn on any kind of Dark Mode he can find on the other websites/applications he uses to reduce the stress on his eyes. Mark also wants to search for specific photos using keywords related to his school projects. He wants to be able to download photos that he is free to include in his reports. Watermarked photos are allowed, but he would also like to use photos without watermarks in his reports.

Use case 4:

Mary would like to upload multiple photos that she took onto Shallot. She wants to be able to search for her photos using the keywords that she established on the photos before posting. She would also like to search for photos already on Shallot to add to her blog. She would also like to "Favorite" photos to refer back to them later as well.

3. Data Definitions
- **Unregistered User**: Can access and download public photos. Required to sign up and become a **Registered User** before posting.
- **Registered User**: Needs to login. Can upload and download pictures.
    - **Author**: A **Registered User** that owns a posted photo.
    - **Approved User**: Can access photos explicitly approved by the **Author**.
    - **Admin**: Can access all data and content and modify the database.
        - All uploaded photos must be approved by the **Admin**.
- **Public photos**: Accessible to anybody.
- **Private Photos**: Accessible only to the **Author** or the **Admin.**
- **Items**:
    - **Download button**: Used to download the related image.
    - **Upload button**: Used to upload images by a **Registered User**.

4. Initial List of Functional Requirements

- Services
  - System shall provide all users access to **public photos**
  - System shall provide **approved users** access to **private photos**.
  - System shall provide **registered users** with a database to store photos
  - **Registered users** shall be able to:
    - Add a description to photos before and after posting
    - Add keywords to photos before and after posting (for searching/filtering purposes)
  - System shall provide access to all data items based on user name and user email
  - Registration form
    - Required for users to register
    - Contains user name and email
  - Privacy
    - Data is used only by this site for tracking usage and shall not be shared with anybody else
    - **Registered users** may be contacted with any questions and promotions

- User Specific Functions
  - System shall provide a search bar for user to search/filter through **public photos**
  - System shall provide all users with an option for *Dark Mode*.
  - System shall provide user the ability to download/save photos for personal use
    - Photos used by an **unregistered user** shall contain a watermark
    - Photos used by a **registered user** shall not contain a watermark

5. List of Non-Functional Requirements
- System shall be able to handle up to 50 users online at the same time.
- System shall be able to respond to a user's request within 5 seconds.
- System shall be able to collect users' data and put it into database when users register. This data shall not be shared.
- Users shall be allowed to download infinite amount of photos.
- Users shall be allowed to post infinite amount of photos.
- **Registered users** shall have at least one letter and one special character for their passwords.
- Web application shall always have logo/home button on the top left of the site regardless of where users have browsed to.
- Web application shall always have **upload button** on the top right of the site regardless of where users have browse to.
- Each photo on the site shall always have **download button** associate with it.
- Web application shall be able to operate on the Firefox and Chrome browsers.
- Web application shall have forgot password and forgot user ID options on the login page.
- Upon power failure or internet failure, system shall be able to save the photos that have been successfully uploaded.

6. Competitive Analysis

	Shutterstock	Stocksnap.io	pexel	Shallot
Profits contributor	++	-	-	-
Search using image instead of text	++	-	-	-
All features visible before login	++	++	++	++
Upload/download limits	-	+	+	++
Hover image for info	-	-	-	+
Favorite an image	-	+	+	+

One of the major features that our website will provide that no other stock photo sharing website utilizes is the ability to hover over an image. Hovering the mouse over an image will display information about the image. The information can include an upload date, a description, an author name, etc. It seems that most competitor websites only show the like button when hovering over an image. Other than the hovering feature, almost all other features are common amongst stock photo sharing websites. These features include visible action without login and search bar, which will also be present in our website was well.

7. High-Level System Architecture
- Server Host: AWS EC2 Instance with 1vCPU, 1 GB RAM, and 30GB of storage
- Operating System: Ubuntu Server 16.04 LTS (HVM)
- Database: MySQL 8.0
- Web Server: Apache version: 2.4.18 (Ubuntu)
- Server-Side Language: Python 2.7.12
- Additional Technologies:
    - Flask 1.0.2
    - PyCharm IDE
    - Google Analytics
    - Jinja2 2.8

8. Team

James Clark (Team Lead & Front End)

Roy Telles (Front End Lead)

Xisheng "Sam" Zheng (Front End)

Patrick Coico (Back End Lead)

Dandan "Jenny" Cai (Back End)

Michael Lama (Back End)

9. Checklist
- Team found a time slot to meet outside of the class. DONE
- GitHub master chosen. DONE
- Team decided and agreed together on using the listed SW tools and deployment server. DONE
- Team ready and able to use the chosen back and front end frameworks and those who need to learn are working on it. ON TRACK
- Team lead ensured that all team members read the final M1 and agree/understand if before submission DONE