

SW Engineering CSC648/848 Summer 2018

# Shallot

Team 02

Local

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Milestone 2

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1.0	Initial Document	7/7/18

## 1. Data Definitions V2:

- a. **User:** Any individual using our website.
  - i. **Unregistered User:** Can view all **approved images' thumbnails**. May download all **thumbnails** via *right-click* → *save image as...* method. Required to sign up and become a **Registered User** before viewing, uploading, or downloading any **full images**.
  - ii. **Registered User:** Required to login to view, upload, or download **full images**.
    - 1. **Author:** A **Registered User** that owns a posted **image**.
    - 2. **Admin:** Can access and modify all **images** and **users** on the website.
      - a. All uploaded **images** must be approved by the **Admin**.
- b. **Approved Image:** An **image** that has been approved by the **Admin** and is visible to all **users**.
- c. **Unapproved Image:** Visible only to the **Admin**. Once the **Admin** grants approval, it becomes an **approved image**.
- d. **Denied Image:** An **image** that has been denied and deleted by the **Admin** due to inappropriate, unnecessary, or pay-to-use content.
- e. **Items:**
  - i. **Image:** An **image** uploaded by a **registered user**.
    - 1. An **image's author** must provide the following:
      - a. **Tags:** Singular words that describe the **image**, provided by the **author**, to help other **users** find the **image** in a search.
      - b. **Category:** **Authors** will be able to classify the **category** the **image** falls under.
      - c. **Licensing & copyright:** The **author** who uploads the image is the full owner of the **image**. They can decide how other **users** use their **images**.
    - 2. Optionally, **authors** can provide the following:
      - a. **Description:** A summary, written by the **author**, about what the **image** is.
    - 3. An **image** must be:
      - a. **Format:** Permissible extensions will only be: jpeg, jpg, png, and tiff. Users will not be allowed to upload anything else.
      - b. **File size:** Regardless of its **format** the image cannot be greater than 20 mb.
    - 4. An **image** will display as one of the following:
      - a. To unregistered users:
        - i. **Thumbnail:** A low-resolution version of an **image** with a **watermark** created immediately after upload.
          - 1. **Watermark:** A tag overlaying an uploaded **image**.
          - 2. **Pixel Size:** Up to 500 x 500 pixels.

- b. **To registered users:**
  - i. **Full Image:** A full-resolution copy of an uploaded image.
    - 1. **Watermark:** Optional by author.
- ii. **Registration Record:** To become a **registered user**:
  - 1. An **unregistered user** must provide the following:
    - a. **Username:** A unique identification provided by the **user**. This must not match any of the other **registered users' usernames**. The **username** will be shown as the **author** of any posted **images**.
    - b. **Email address:** A unique email address provided to be used for communication between the **Admin** and the **Registered User**. The email address must not match any of the other **registered users'** email addresses.
    - c. **Password:** A personal key to access the registered account. It must contain a number and be more than 5 characters long.
    - d. **Date of Birth:** The date of birth of the **unregistered user** to ensure the **user** is above the age of 10 years old.
    - e. **CAPTCHA:** The user must pass a CAPTCHA test to determine if they are a real person.
    - f. **Accept Policies:** The **unregistered user** must accept the terms, policies, and conditions required to use our website.
  - 2. An **unregistered user** may, optionally, provide the following.
    - a. **First/Last Name:** The first/last name may be used to visually replace the username on the website.
    - b. **Gender:**
      - i. Male
      - ii. Female
      - iii. Other (fill-in)

2. **Functional Requirements V2:** The numbering system shown below is being implemented for the first time in this document. Numbers shown here have no relation to M1. Format for number system is: **(Priority #).(Requirement #).(Sub-Requirement #)**.

a. **Priority 1:**

i. **Services:**

- 1.1 - System shall provide all **users** access to **approved images**
- 1.2 - System shall provide a database for **registered users** to store **images**
- 1.3 - System shall provide access to all data items based on user name and user email
- 1.4 - System shall provide a **registration record**
  - 1.4.1 - Required for **unregistered users** to become **registered users**.
  - 1.4.2 - Contains user name and email
- 1.5 - System shall protect the privacy of its **users**
  - 1.5.1 - Data is used only by this site for tracking usage and shall not be shared with anybody else
  - 1.5.2 - **Registered users** may be contacted with any questions and promotions

ii. **Registered User**

- 1.6 - Shall be able to post **images**
- 1.7 - Shall be able to add a **description** to their own **images** before and after posting
- 1.8 - Shall be able to add **tags** to their own **images** before and after posting (for searching/filtering purposes)
- 1.9 - System shall provide a search bar for user to search/filter through **approved images**
  - 1.9.1 - System shall allow **users** to search by using **tags**.
  - 1.9.2 - System shall allow **users** to search through **categories**.

iii. **Admin**

- 1.10 - System shall provide **admin** ability to
  - 1.10.1 - Approve/disapprove **images** submitted by **registered users**
  - 1.10.2 - Email **registered users**
  - 1.10.3 - Delete **registered user** accounts upon violation of website policies. Prior notice will be provided to the **user** via email.

**b. Priority 2**

**i. Services**

**2.1** - System shall provide **users** the ability to download/save **images** for personal use

**2.1.1** - **Images** used by **unregistered user** shall contain a watermark

**2.1.2** - **Images** used by **registered user** shall not contain a watermark

**ii. User**

**2.2** - System shall provide all **users** with an option for *Dark Mode*  
Once activated, by user:

**2.2.1** - Background page color shall be inverted (white to black)

**2.2.2** - Page text color shall be inverted according to page color (black to white)

### 3. UI Mockups & Storyboards:

Once a **user** enters the main page, they will have the option to either search for an **image**, log in, or upload an **image**. On the main page, the **images** that are displayed by default are the trending **images** on our website. If the **user** searches for anything, the result will replace the default shown **images**.

The UI mockup illustrates the layout of the website's main page. It features a top navigation bar with a logo 'Shallot', a search input field with a 'category' dropdown, a 'Search' button, an 'upload' button, a 'recover password' button, and login fields for 'username' and 'password' with 'sign up' and 'sign in' links. Below the navigation bar is a secondary search section with a '(search bar)' and a 'search' button. A 'popular or trending category' label points to a row of category buttons: 'animal', 'nature', 'people', 'city', 'machine', 'misc', and 'more category'. A 'dropdown box' label points to the 'more category' button. The main content area is titled 'Trending photo(place with search result)' and contains four placeholder boxes for images. Below these is a box labeled 'depending on search result' and another empty placeholder box.

Shallot

category Search

upload recover password

username password

sign up sign in

(search bar) search

popular or trending category

animal nature people city machine misc more category

dropdown box

Trending photo(place with search result)

depending on search result

If the **user** clicks on any of the **images**, they will be directed to a page with more detailed information about the **image** (i.e. **Tags**, **Author**, **Description**, etc.) and allow **user** to download the **full image**. Related images will also be displayed at the bottom of the page.

Shallot	<input type="text"/>	category	Search	upload	recover password	username	password
						sign up	sign in

HD image

Click here to download HD image

upload date

message or information from the uploader

uploader username

Related image

If the **user** clicks on the sign up button, upload button, or a download button without being logged in as a **registered user**, the **user** will be redirected to a **registration record** and also provide the option to log in.

<input type="button" value="Shallot"/>	<input type="text"/>	<small>category</small>	<input type="button" value="Search"/>	<input type="button" value="upload"/>	<input type="button" value="recover password"/>	<input type="button" value="username"/>	<input type="button" value="password"/>
						<small>sign up</small>	<small>sign in</small>

## Registration

**Mandatory**

Email:

password:

password:

name:

DOB

**optional**

first name

gender

city/state

policy/accept



For every **registered user**, there will be a profile page. Clicking on any **registered user's** hyperlink will bring up the profile page of that **registered user**.

<a href="#">Shallot</a>	<input style="width: 90%;" type="text"/>	category	<input style="width: 90%;" type="text" value="Search"/>	upload	recover password	username	password
						<a href="#">sign up</a>	<a href="#">sign in</a>

user image

change user image

name

channel description,  
about the user or  
any messages the user want other users to see.

user's uploads

If a **registered user** clicks on the upload icon, which is visible on every page, they will be redirected to the upload page, where they can upload their **images** to the website.

Shallot	<input type="text"/>	category	Search	upload	recover password	username	password
						sign up	sign in

drop image here to upload

add image using path

add

confirm upload image

#### **4. High level Architecture, Database Organization:**

##### ***DB Organization:***

Category	
	categoryId
	categoryName
Image	
	ImageId
	ImageName
	Descr
	categoryId
	userId
	isPublic
	views
	isFullSize
	isThumbNail
User	
	userId
	userName
	password
	email
	dob

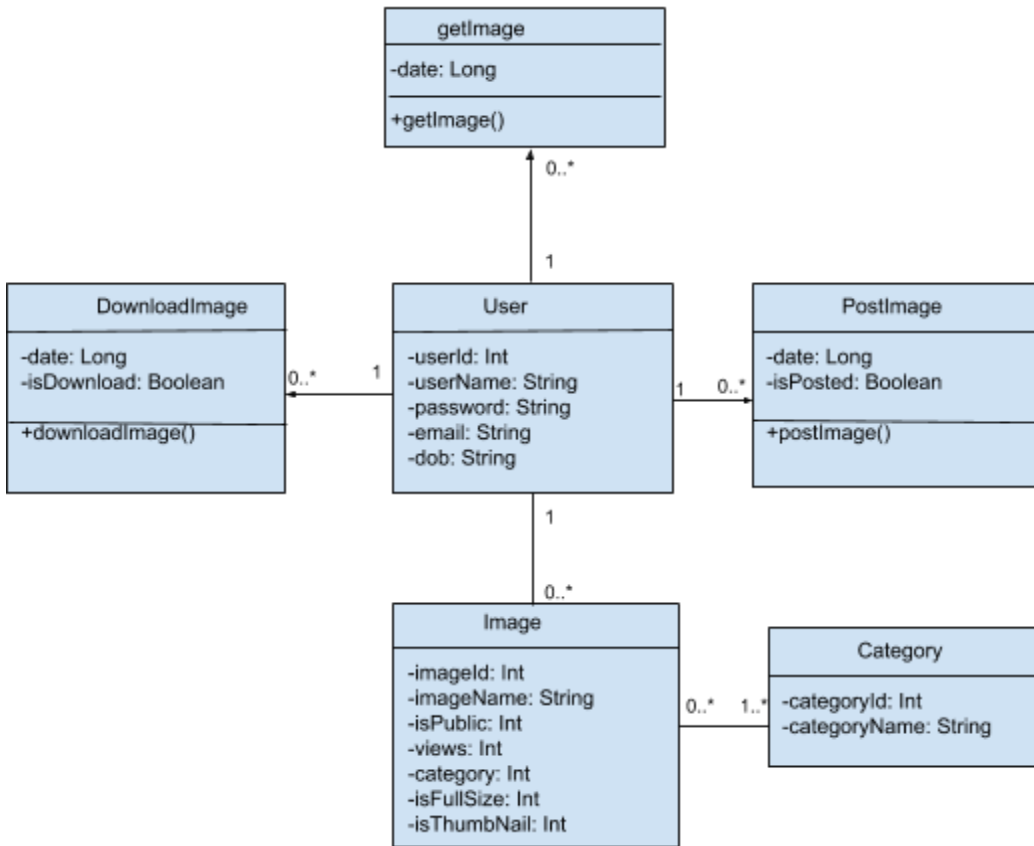
***Media Storage: Images*** will be stored in BLOBs. Using BLOBs will prevent any changes in the server from affecting the information included in the database thus creating better site integrity in the event of future changes to the file structure of the server.

***Search/Filter Architecture:*** We will be using our MySQL database and %Like in order to filter the database items. Without a search input or a valid search input, we will display all **images** within the database, possibly randomized.

***APIs:*** We are not creating any APIs.

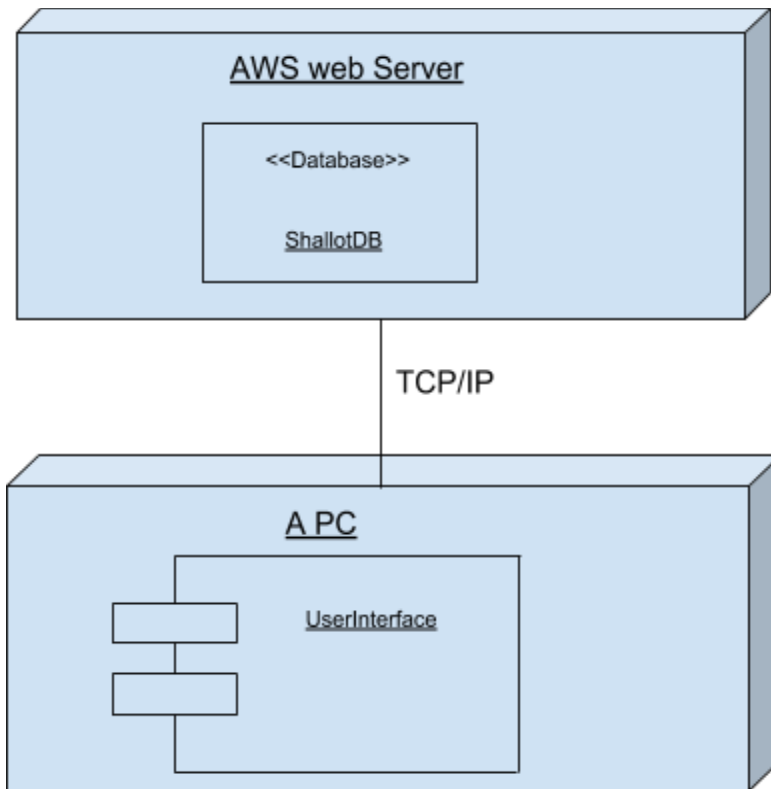
***Significant non-trivial algorithm:*** Using BLOBs involves turning a file into a binary object with the use of a specific programming language, in this case Python. Doing this requires reading the file and storing it in a variable. By storing in said variable, the file is held in a binary format. After the binary format is written into the database, it is simply read from the database using the same programming language and written into a new file.

## 5. High Level UML Diagrams:



Multiplicities	Meaning
<b>0..1</b>	zero or one instance. The notation <i><b>n</b> . . <b>m</b></i> indicates <i><b>n</b></i> to <i><b>m</b></i> instances.
<b>0..*</b> or <b>*</b>	no limit on the number of instances (including none).
<b>1</b>	exactly one instance
<b>1..*</b>	at least one instance

Deployment and Component Diagram:



6. **Risks:**

- a. ***Skills:*** Some members of the team are unfamiliar with Python. They are learning the language now through tutorials and practice in this project.