The Official User’s Guide to Shark Share Global

# Technical Specifications

## Languages:

Database construction and storage/retrieval functionality: MySQL (MySQL workbench)

Connectivity between server and page: PHP (Built in 6.5, but Web Hosting on AWS supports version 5.5 only)

Site construction: Powered by CodeIgniter and Twitter Bootstrap combination. HTML/CSS/JS/JQUERY/AJAX

Several External libraries have been added to the CodeIgniter framework. The one most central to functionality is PHPExcel, which handles reading Excel sheets from sample uploads, requests, sample management, and taxonomic updates.

# Hosting

Elasticbeanstalk means that the admins never have to sit down and decide how to scale and balance user load on the website- Amazon will scale them up and down according to need, and then charge accordingly. Right now, they are not charged for data transactions on the website.

Hosted on AWS, as an EC2 Instance. ElasticBeanstalk is used for scaling and managing. Currently on the free tier, costs run from $0-$20/month. As it goes live, this may change.

# Site Layout

The site is laid out with an eye toward researcher use. A landing page including a basic user dashboard is included at the start. Several processes are at the heart of Shark Share- Signup/Approval/Registration of new users, Sample Upload, Sample Management, Sample Search, Sample Request, and Taxonomy maintenance. There is also some help functionality, including mouseovers in JQuery and a help page that can be anchored to.

The site is behind a login wall- new potential users cannot get a demonstration of site prior to using it. There is one public-facing landing page that features an about section and an opportunity for user sign-up. However, the site is free to join and use- there is no paywall of any sort. People must have a valid academic status, and have a valid reference, in case they are not recognized by the admins (Madeline Green and Lauren Meyer).

Most importantly, the functionality of the site must primarily be governed by only two people- the admins. This means that all actual dealing with samples, shipments, and potentially legally binding agreements must happen offline. This approach must be kept in mind, as it changes several key process flows, and requires manual management of requested samples by users.

# Taxonomy Control

Currently, Taxonomy inclusion is decided by the admins. There will be functionality for updating both entire taxonomy via spreadsheet, and updating individual records to reflect spelling corrections, etc. This sheet should be maintained by the admins in Excel, in the event of a system crash happens and a backup is needed.

# Updating the Site

The Shark Share site may be updated through altering the code in any text editor, and then redeploying it through ElasticBeanstalk’s CLI (The alternative is to update it through the GUI).

Current work has been run through WAMP, with a localhost, connection to MySQL database, and the IP listed in a security group for the environment on the AWS console. The current deployed public-facing site is the ‘sharkshare3’ environment (this is running PHP 5.5, and switching to any previous version will create errors in functionality).

Taxonomy may be updated through the site (see the Taxonomy section). Users, samples, and potential users can be edited through the website on the landing page, or within the database itself.

For the password and username for database access, please consult the project files.

Call Heather (206) 940-2602 with emergencies, or email for assistance ([hem3@uw.edu](mailto:hem3@uw.edu))

# Process Flow Help

# Recommendations for the Future