Software Design Document
for
GlobaltraQs
Version 2.0 approved

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November 28, 2019
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1. Introduction

1.1 Purpose
This document outlines the Software Design Specifications as part of the design plan and specifications for the functionality of GlobaltraQs. The document will expand on the functionality described by the features in the Software Requirements Specifications (SRS). Each feature discussed will describe the existing functionality of GlobaltraQs, as well as additional features to be implemented. The scope of this document takes the features as outlines in the SRS and expands each of them to include the design issues. The features are described by the names given in the descriptions and diagrams in the SRS.

1.2 Document Conventions
The SDD uses the following conventions:

<table>
<thead>
<tr>
<th>SDD</th>
<th>Software Design Document</th>
</tr>
</thead>
<tbody>
<tr>
<td>SRS</td>
<td>Software Requirement Specification</td>
</tr>
<tr>
<td>User</td>
<td>The person using the GlobaltraQs website to post</td>
</tr>
</tbody>
</table>

1.3 Intended Audience and Reading Suggestions
The main uses of this SDD are the software developers to review. Project managers and Webmasters running the website need to be able to know the website’s capability. Testers will need to know what they are testing for. Documentation writers will need to see if the document is written correctly.
1.4 System Overview
The web app is intended to connect the LGBTQ+ community through sharing safe places they have personally visited. The relationship between the users and the web app start by letting the user make an account to use Globaltraqs properly, although people can post anonymously. The main page’s map will be filled with vetted user content that will allow others to see what happened during the user’s time there.
2. Design Considerations

2.1 Assumptions and Dependencies

- OpenStreetMap
- OpenLayers Javascript Library
- UserWay Widget (free)
- User must have basic knowledge of the internet
- Computer and/or mobile device with a web browser
- iOS and/or Android device (if using the mobile application)

2.2 General Constraints

- Slow Internet connections may negatively impact user experience
- Privacy for the users
- Javascript must be enabled in the user’s web browser
- Older version of iOS or Android (if using the mobile application)

2.3 Goals and Guidelines

- GlobaltraQs’ main goal is to provide members of the LGBTQ+ community with a platform where they can share their stories, experiences, and other meaningful resources available to the LGBTQ+ population
- Utilize human-friendly language throughout the web application
- The product should be completely re-written, while maintaining the current functionality of the existing website
- The product should implement additional functionality and be created with a new look, according to the guidelines provided by a team of graphic designers

2.4 Development Methods

The method used to design this software was similar to that of the Agile Development method. Throughout the development process, members of the team developed small portions of each required functionality until the entire requirement was successfully fulfilled.
3. Architectural Strategies

Using Python and Javascript along with Django and React, we are able to make our website flexible and update in real time. We have many more ideas for the future of this website including social media integration, messaging, and gamification.
4. System Architecture

Please refer to section 3 of the SRS
5. Policies and Tactics

5.1 Choice of which specific products used
   Microsoft Visual Code, GitKraken

5.2 Plans for ensuring requirements traceability
   There are no plans to ensure requirement traceability

5.3 Plans for testing the software
   While building the website we are testing along the way.
6. Detailed System Design

6.1.1 User Account Requirements

6.1.1 Responsibilities
Separate the users into regular users, anonymous users, moderators, and administrators with unique roles.

6.1.2 Constraints
We must assume that the roles with more power do not abuse others with their status.

6.1.3 Compositions
X

6.1.4 Uses/Interactions
User’s Role allow them to create or modify posts based on their role.

6.1.5 Resources
User Roles modify the database of pins.

6.1.6 Interface/Exports

6.2.1 Gamification Requirements

6.2.1 Responsibilities
This allows users to create avatars and earn points through various activities.

6.2.2 Constraints
Users might use third party programs to alter their scores.

6.2.3 Compositions
There are no subcomponents to this module.

6.2.4 Uses/Interactions
The avatar will be able link to your user profile.

6.2.5 Resources
6.2.6 Interface/Exports

6.3.1 Map Requirements

6.3.1 Responsibilities
The map is able to show all pins from the database.

6.3.2 Constraints
The size of the map is set to 100% of the screen size.

6.3.3 Compositions
Leaflets??

6.3.4 Uses/Interactions
This will interact with the database in order to show and store pins viz form submission

6.3.5 Resources
Database

6.3.6 Interface/Exports

6.4.1 Story Requirements

6.4.1 Responsibilities
The story page shows all the data of the pin, it allows users to rate, report, or comment on the post. Users can create anonymous posts to hide their identity.

6.4.2 Constraints
Stories may not be about or show explicit material. This will result in a ban.

6.4.3 Compositions
Voting on a post.

6.4.4 Uses/Interactions
Users will able to view the story page

6.4.5 Resources
6.4.6 Interface/Exports

6.5.1 Platform Requirements

6.5.1 Responsibilities

This allows the user to access the site with different browsers like IE, Firefox, Chrome, etc.

6.5.2 Constraints

There are some browsers that will be overlooked

6.5.3 Compositions

6.5.4 Uses/Interactions

6.5.5 Resources

6.5.6 Interface/Exports

6.6.1 Multimedia Requirements

6.6.1 Responsibilities

Allows users to imbed pictures, movies, and other media onto their posts.

6.6.2 Constraints

The file size must be a reasonable size as well as non explicit.

6.6.3 Compositions

X

6.6.4 Uses/Interactions

Users can upload media about the pin to let other people view.

6.6.5 Resources

X

6.6.6 Interface/Exports

It may be a part of the pin creation process.

6.7.1 Security Requirements
6.7.1 Responsibilities
The security will protect the site and its data.

6.7.2 Constraints
Attacks are constantly evolving, so our security must too.

6.7.3 Compositions
X

6.7.4 Uses/Interactions
Ideally, the security would not be used for anything major. The users will not interact with the security unless the user causes a problem.

6.7.5 Resources
X

6.7.6 Interface/Exports
X

6.8.1 User Role Requirements

6.8.1 Responsibilities
User Roles will give people a sense of membership and provide moderation of content

6.8.2 Constraints
Currently, user roles only include registered users, administrators, and moderators

6.8.3 Compositions

6.8.4 Uses/Interactions
Allows users to have specific privileges within the application

6.8.5 Resources
Database

6.8.6 Interface/Exports

6.9.1 FAQ Requirements

6.9.1 Responsibilities
Provide users with information regarding the site
6.9.2 **Constraints**
Limited to what Administrators post

6.9.3 **Compositions**

6.9.4 **Uses/Interactions**
Allows Administrators to post FAQs and Users to access/ read them

6.9.5 **Resources**
Database

6.9.6 **Interface/Exports**

**6.10.1 About Requirements**

6.10.1 **Responsibilities**
Provide users with information on the mission of GlobaltraQs

6.10.2 **Constraints**
Limited to what Administrators post in the About Us section

6.10.3 **Compositions**

6.10.4 **Uses/Interactions**
Allows Administrators to edit the About Us and Users to access/ read them

6.10.5 **Resources**
Database

6.10.6 **Interface/Exports**

**6.11.1 Support Us Requirements**

6.11.1 **Responsibilities**
Allows users to donate directly to us to help keep the website running

6.11.2 **Constraints**
The currency will be in USD

6.11.3 **Compositions**
X
6.11.4 Uses/Interactions
The user will input any amount they wish to donate to the web app.

6.11.5 Resources
X

6.11.6 Interface/Exports
A simple and secure way to donate money to us.

6.12.1 Help Requirements

6.12.1 Responsibilities
Allows users to ask for help in using the web app.

6.12.2 Constraints
We may not get to everyone’s questions.

6.12.3 Compositions
X

6.12.4 Uses/Interactions
Users submit a question and moderators or administrators may answer them.

6.12.5 Resources
X

6.12.6 Interface/Exports

6.13.1 Accessibility Requirements

6.13.1 Responsibilities
Allow users with disabilities to use the web app to its full potential.

6.13.2 Constraints
We are using UserWay Widget, so all of their Constraints are ours as well.

6.13.3 Compositions

6.13.4 Uses/Interactions
Users will be able to use the UserWay Widget which allows them to have text spoken aloud.
6.13.5 Resources
UserWay Widget

6.13.6 Interface/Exports
7. Detailed Lower level Component Design

Refer to Section 4 of this Document.
8. Database Design
9. User Interface

9.1 Overview of User Interface

The user will access the main content of the site by navigating to the homepage (https://globaltraqs.com). Within this page, users can post pins on the map by category (personal, historical, or community). Users can also access other stories by navigating around the map and clicking on pins, which will direct them to the individualized story page of the selected pin. Inside this individualized story page, users can read more detailed information about the pin, one important detail being the story author. If clicked, the author’s name leads to their user profile which displays their profile picture, name, biography, and all previous stories created.

In the site header, users have the ability to click the site logo to navigate back to the homepage, click the search button to search the website, click the login/logout button to login or logout, or click the register button to sign up on the site. Also located in the site header are link that take users to the About Us, FAQs, Help, Contact Us, or Support Us pages.

In the About Us page, users can read about GlobaltraQs and its mission. In the FAQs page, users can read frequently asked questions and their respective answers. Within the Help page, users can access useful information and resources that help support the LGBTQ+ community. In the Contact Us page, users can submit a message directly to the GlobaltraQs email. Lastly, within the Support Us page, users can make a donation via Paypal to support the GlobaltraQs mission.

9.2 Screen Frameworks or Images
REGISTER

Username

Email

Password

Confirm Password

 Already have an account? Login

Login

Login

Don't have an account? Register

Forgot Password? Click here
Q: WHAT IF I DON'T WANT TO GIVE AN EXACT LOCATION?
A: Not a problem! Give as much, or as little location information as you'd like. We just ask that you give us at least a city/region and country, since the purpose of this site is to see stories located around the world.

Q: I'M STRAIGHT, BUT HAVE A LOT OF LGBTQ FRIENDS. CAN I POST STORIES TOO?
A: Of course, as long as it has something to do with your connection to LGBTQ communities or individuals.

Q: HOW LONG OR SHORT DO STORIES HAVE TO BE?
A: As long or as short as you want them to be.

Q: WHAT DO THE DIFFERENT COLOR PINS MEAN?
A: Lavender/purple pins are personal stories. Green pins are community histories, or stories that have significance to LGBTQ communities on a scale larger than the individual. For example, Stonewall would be considered a community story, as would, say, the legalization of gay marriage in California, or the first lesbian couple to get married (quite publicly!) in Taiwan. Red pins are current locations of active organizations and resources for LGBTQ individuals.

9.3 User Interface Flow Model

Homepage → Story Page
Story Page → Story Page
Story Page → User Profile
Site Header → Login
Login → Register
Login → Homepage
Site Header → Register
Register → Login
Register → Homepage
Site Header → Registration
Site Header → FAQ
Site Header → About Us
Site Header → Contact Us
Site Header → Help
Site Header → Support Us
Site Header → Homepage
10. Requirements Validation and Verification

Not applicable at this time
11. Glossary

Refer to SRS 1.4
12. References

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https://www.cs.purdue.edu/homes/cs307/ExampleDocs/DesignTemplate_Fall08.doc