Software Requirements Specification

for

GlobaltraQs

Version 2.0 approved

Prepared by Fadi Haddad, Klaudia Hernandez, Nathaniel Suarez, Tony Truong, Justine West

California State University, Los Angeles - GlobaltraQs

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1. Introduction

GlobaltraQs is a LGBTQ+ app and website that allows anyone to post fun and interesting events that you took part on the map. This allows more LGBTQ+ to identify safe spaces they would not have known before. By allowing users to place pins indicating where they have been to, we can see the location the user has been to before. Each pin contains small details the user may add.

1.1 Purpose

This document will provide a detailed description of the GlobaltraQs web application and all underlying software. Each section outlined in this SRS Document will give an explanation of the software implemented to create GlobaltraQs and will provide an in-depth explanation of what GlobaltraQs requires in order to function. The requirements specified later in this document are the current necessary functions that GlobaltraQs requires in order to operate properly.

1.2 Intended Audience and Reading Suggestions

This SRS document contains the necessary information for software developers to review entirely. Project managers will need sections 4.1, 4.2, and 5 to better understand the product’s capability. The Webmaster will need sections 3.1 and 3.3 to see how the user interacts with the
website. Tester of GlobaltraQs would be interested in section 2 through 5 in order to fully check if the web application is meeting the required standard. Documentation writers will be looking at the entire document to see if it is written correctly.

1.3 Product Scope

GlobaltraQs is a mobile and web application that allows users to post personal, historical, or community stories that can be shared and accessed within the application. The software gives users the ability to create user accounts that are used to log into GlobaltraQs. Registered and non-registered (Anonymously) users are allowed to post stories of various categories, which are represented by pins on the map. Each pin on the map corresponds to an individual story previously posted by a GlobaltraQs user, and leads to an individual story page with detailed information about the story. Users have the capability to post comments on existing stories and if desired, can privately message other users. GlobaltraQs provides a ranking system that allows users to upvote stories and comments, which may grant users with a high number of upvotes to be promoted to moderator status, granting them the ability to moderate the actions of other users on GlobaltraQs. Users granted with special administrator privileges have all the abilities of moderators, as well as additional abilities to ensure that all users on GlobaltraQs have a positive and safe experience.

1.4 Definitions, Acronyms, and Abbreviations
LGBTQ+: Lesbian, Gay, Bisexual, Transexual, Queer, and more.
VPN: Virtual Private Network
SRS: Software Requirement Specification
ER: Entity Relationship

1.5 References
Not applicable at this time
2. Overall Description
2.1 Product Perspective

This web application is intended for social interaction between users. It is intended for users to share their stories to other users to read and comment on. The use of this web application will require users to register on the website. Whenever a new user registers, all the required data will be recorded in a database. To use the web application, users will need to create an account that will be stored on the database.

2.2 Product Functions

- Login screen: will allow the user to log into GlobaltraQs
  - Unique username: will allow users to distinguish among each other
- Add story: users will be able to add create a story to pin on the map
  - Location: the user will have to specify a location to add the pin to the map
  - Pin: the user will have the ability to choose what type of pin they will post based on the story they will create (Categorical, Historical or Personal)
  - User will have the ability to see other users’ stories
- Delete Story: users will be able to delete their own posts
- Comments: users will be able to comment on other users posts
- Voting: users may upvote posts but not down vote.
- Administrators and Moderators will be able to alter or delete user stories

2.3 User Classes and Characteristics

- LGBTQ+ community
  - Frequency of use: High
  - Technical Expertise: Basic web usage skills
  - Educational Level: Basic reading and writing skills
  - Characteristics: anyone can see and pin stories
- Administrators can view, create, edit, and delete any posts
- Moderators can view and vet incoming posts as well as create and delete their own posts.
- Registered users can create and delete their own posts. Good behavior may allow them to be promoted to Moderator status.
- Non-registered users can create and view posts using a special ID to identify the user..
- Anonymous users can create and delete their own posts as well as view posts.
2.4 Operating Environment
Web application that is accessible through the internet on a computer or mobile phone web
Mobile application that is available on Android and (possibly) iOS.
- Ubuntu 18.04
- Django 2.2.5
- mod_WSGI
- Python3 3.6.7
- Apache 2.2

2.5 Design and Implementation Constraints
- Accessibility
  - Might be harder for users with certain accessibility constraints to use the application
- Security
  - If someone posts content that might put them at risk, there is no guarantee that they will be protected outside the application

2.6 User Documentation
- The user has the option to first create an account or not by signing up.
- The user has the option to log in to an existing account.
- The user can click on the map to place a pin at the cursor’s location; if logged in, will post under the user’s account, if not, will post anonymously.
- There is a button in-order for the user to post the pin through inputting an address.
- The user can click on existing pins to view them.
- The user can edit his own pin.
- Other users can comment and vote on other pins.

2.7 Assumptions and Dependencies
We need to assume that the user can access the Internet on their device.
- OpenStreetMap
- We must assume the user has basic knowledge of the internet

2.8 Apportioning of Requirements
- Mobile App.
3. **External Interface Requirements**

![DFD Level 0 Diagram](image)

**Figure 3.1 GlobalTraQs Context Diagram**

### 3.1 User Interfaces

- The user shall see the home page with a navigation bar that shall guide the user to a specific section.
- The home page shall contain the map with the story-pins and the ability to add more story-pins.
- The user shall see a sign-up option located inside the navigation bar.
- The user shall see a log-in option located inside the navigation bar.
- The user shall see a search option located inside the navigation bar that would allow the user to search for specific stories.
- The user shall see a profile option after logging-in located inside the navigation bar, which shall allow the user to edit profile data.
- The user shall see an accessibility option in the profile page that shall allow the user to turn on/off accessibility options.
- The user shall see an about us option in the navigation bar that shall give a little background information about the website.
- The user shall see a FAQs (frequently asked questions) option in the navigation bar that shall guide the user to the FAQs page.
- The user shall see a support us [undecided where] option that shall allow users to support the website through donations (paypal?).
- The user shall see a contact us [undecided where] option that will allow users to give feedback (anonymously?).
- The user shall see an accessibility icon on the top right hand corner if the accessibility option is turned on.

3.2 Hardware Interfaces
GlobaltraQs users must have a computer with internet access or data to use the website. GlobaltraQs will use a database to store all information about the users.

3.3 Software Interfaces

- OpenStreetMap API (free)
  ○ Utilize the map of the world functionality
- OpenLayers Javascript Library (free)
  ○ Access geographic coordinates of selected regions of the world map
  ○ Adding markers to the world map
  ○ Removing markers to the world map
- UserWay Widget (free)
  ○ Provides helpful accessibility plugins that work without refactoring your website's existing code and will increase compliance with WCAG 2.1, ATAG 2.0, ADA, & Section 508 requirements.

3.4 Communications Interfaces
Basic communications from the user to the product will require a web browser from any device. Users will be redirected to an electronic form where they will submit the necessary information required to post
on the website. HTTP will be forced wherever possible in order to secure as much information about the user as possible, but HTTPS will be accepted as well where SSL encryption is required. All accessible information will be stored safely in a database.
4. Requirements Specification

4.1 Functional Requirements

1. User Account Requirements
1.1. The system shall allow users to create an account
   1.1.1. The system shall verify that each user creates a unique username
   1.1.2. The system shall verify that each user creates passwords with 8 or more characters
   1.1.3. The system shall verify that each user creates passwords with one or more symbols
   1.1.4. The system shall verify that each user creates passwords with one or more numbers
   1.1.5. The system shall verify that each user creates passwords with one or more upper and lower case characters
   1.1.6. The system shall verify that the user is 13 years of age or older by checking that they are of age when asked
1.2. The system shall allow users to enter an anonymous mode
   1.2.1. The system shall refer to a user’s username as anonymous when in anonymous mode
   1.2.2. The system shall not display a user’s profile picture when in anonymous mode
   1.2.3. The system shall not display a user’s name when in anonymous mode
   1.2.4. The system shall not display anonymous posts on a user’s profile
1.3. The system shall allow users to connect their Facebook, Instagram, Twitter, and Google personal social media accounts to their profile
1.4. The system shall give users the option to display their stories on their profile page
   1.4.1. The system shall allow users to hide stories from their user page
1.5. The system shall allow users to make their profile public
1.6. The system shall allow users to make their profile private
1.7. The system shall display a user’s profile picture
   1.7.1. The system shall allow users to upload a new profile picture
   1.7.2. The system shall allow users to remove their current profile picture
1.8. The system shall display a user bio on a user’s profile
   1.8.1. The system shall allow users to edit their bio
1.8.2. The system shall allow users to remove their bio
1.9. The system shall allow the user to delete their account.
1.10. The system shall log a user out after 15 minutes of inactivity

1.10.1. The system shall redirect users to another website after 15 minutes of inactivity

2. Gamification Requirements
2.1. The system may allow users to create an avatar
2.2. The system may have a point system for posting, reading and commenting on stories

2.2.1. The system shall allow users to upvote stories
2.2.2. The system shall allow users to upvote comments

2.3. The system may have have mini games and/or missions

3. Map Requirements
3.1. The system shall display a map using the OpenStreetMap API
3.2. The system shall display all story pins on the map
3.3. The system shall be able to resize the map
3.4. The system shall display a map inside individual story pages
3.5. The system shall allow users to click on a story pin on the map

4. Story requirements
4.1. The system shall allow users to post stories

4.1.1. The system shall allow users to edit stories that they posted
4.1.2. The system shall allow users to delete stories that they posted

4.2. The system shall allow anonymous registered users to post stories

4.2.1. The system may allow anonymous registered users to edit stories that they posted
4.2.2. The system may allow anonymous registered users to delete stories that they posted

4.3. The system shall allow users to add stories to certain locations on the map

4.3.1. The system shall allow users to add stories to certain locations by entering an address
4.3.2. The system should allow users to add stories to certain locations by searching for nearby businesses
4.3.3. The system should allow users to add stories to certain locations by searching for landmarks
4.3.4. The system should allow users to add stories to certain locations by searching by zip code
4.4. The system shall mask the location of people who do not want to provide an exact location
   4.4.1. The system shall allow users to choose no level of anonymity radius.
   4.4.2. The system shall allow users to choose a minimum level of anonymity radius.
   4.4.3. The system shall allow users to choose a moderate level of anonymity radius.
   4.4.4. The system shall allow users to choose a maximum level of anonymity radius.
   4.4.5. The system shall have the map span out and show a pop up when a story is added
4.5. The system may allow multiple users to post to a single location that contains all previous posts in that location
4.6. The system shall allow users to create stories by right-clicking on the map
4.7. The system shall allow users to add dates to stories
4.8. The system shall allow users to add text to stories
4.9. The system shall allow users to upload images to stories
4.10. The system shall allow users to add hyperlinks to stories
4.11. The system shall suggest tags when users create stories
4.12. The system shall allow users to comment on stories
4.13. The system shall allow users to create pins for different categories
4.14. The system shall monitor stories
4.15. The system shall provide additional fields for different types of stories
   4.15.1. The system shall include date as a field for historical stories
   4.15.2. The system shall include date as a field for community stories
   4.15.3. The system shall include data as a field for personal stories
   4.15.4. The system shall include geographic location as a field for all stories
4.16. The system shall cluster markers by categories
   4.16.1. The system shall cluster markers by geographic location
4.17. The system shall allow users to search for stories
   4.17.1. The system shall allow users to search for stories by search term
   4.17.2. The system shall allow users to search for stories by time
   4.17.3. The system shall allow users to search for stories by tag
   4.17.4. The system shall allow users to search for stories by story type
4.18. The system shall allow all non-registered users to submit and view personal stories only
4.19. The system shall allow all registered users to submit personal stories
4.20. The system shall allow all registered users to submit community stories
4.21. The system shall allow all registered users to submit historical stories
4.22. The system shall allow users to connect existing social networking sites within story submissions
4.23. The system shall display stories on the sidebar.
   4.23.1. The system shall allow the sidebar to be toggled on and off.
   4.23.2. The system shall allow users to search for stories within the sidebar
   4.23.3. The system shall allow users to filter their searches within the sidebar

5. Platform Requirements
5.1. The web-application shall be accessible through a web browser
   5.1.1. The web-application shall be available on the Google Chrome web browser
   5.1.2. The web-application shall be available on the Firefox web browser
   5.1.3. The web-application shall be available on the Safari web browser
5.2. The system shall be available on Android devices as a mobile application
5.3. The system may be available on iOS devices as a mobile application

6. Multimedia Requirements
6.1. The system shall allow users to submit links within a story
   6.1.1. The system shall display any links that a user submits
6.2. The system shall allow users to upload images within a story
   6.2.1. The system shall display the images that a user posts
6.3. The system should allow users to post videos within the story

7. Security Requirements
7.1. The system may use a VPN to protect the user’s identity
7.2. The system may use Tor to protect the user’s identity and current location

8. User Role Requirements
8.1. The system shall allow specific users to be Administrators
   8.1.1. The system shall allow Administrators to edit stories
   8.1.2. The system shall allow Administrators to delete stories
   8.1.3. The system shall allow Administrators to delete user comments
   8.1.4. The system shall allow Administrators to delete users
   8.1.5. The system shall allow Administrators to demote users from the Moderator role
   8.1.6. The system shall allow Administrators to promote users to the Moderator role
   8.1.7. The system shall allow Administrators to promote users to the Administrator role
   8.1.8. The system shall allow Administrators to add FAQs
   8.1.9. The system shall allow Administrators to edit FAQs
   8.1.10. The system shall allow Administrators to delete FAQs
8.1.11. The system shall allow Administrators to edit the About Us section
8.2. The system shall allow specific users to be Moderators
  8.2.1. The system shall allow Moderators to edit stories
  8.2.2. The system shall allow Moderators to delete stories
  8.2.3. The system shall allow Moderators to delete user comments

9. FAQ Requirements
9.1 The system shall display a FAQ section
  9.1.1. FAQs shall display questions
  9.1.2. FAQs shall display answers to questions
  9.1.3. FAQs shall provide information on safety and privacy

10. About Us Requirements
10.1 The system shall display an About Us section
  10.1.1. About Us shall display the purpose of GlobaltraQs

11. Support Us Requirements
11.1 The system shall display a Support Us section
  11.1.1. Support Us shall display how users may make donations to improve the website
  11.1.2. Support Us shall display have a paypal or card option to make the donation
  11.1.3. Support Us shall send a thank you email confirmation email

12. Help Requirements
12.1 The system shall display a Help section
  12.1.1. Help shall display how to use the map

13. Accessibility Requirements
13.1 The system shall allow the user to turn on accessibility when needed
  13.1.1. The system shall allow the user to have the page read to them
  13.1.2. The system shall allow the user to change the contrast of the web page
  13.1.3. The system shall allow the user to make text bigger
  13.1.4. The system shall allow the user to change the text spacing
  13.1.5. The system shall allow the user to stop animations
  13.1.6. The system shall allow the user to increase the size of the cursor
  13.1.7. The system shall allow the user to have a reading guide
  13.1.8. The system shall allow the user to have tooltips
14. Settings Requirements
14.1 The system shall allow users to enable or disable accessibility
14.2 The system shall allow users to delete their account

15. Contact Us Requirements
15.1 The system shall allow the user to post feedback in the Contact us page

4.2 External Interface Requirements
4.2.1 GlobalTraqs requires a database to store all the data from its users.
4.2.2 GlobalTraqs shall not disclose any personal information to unauthorized users.
4.2.3 GlobalTraqs requires a computer or mobile device with internet access in order for users to access the website.

4.3 Logical Database Requirements
4.4 Design Constraints

- GlobaltraQs can not guarantee the safety of data during an attack.
- GlobaltraQs can not guarantee the quality of posts on its website
5. Other Nonfunctional Requirements

5.1 Performance Requirements
The GlobaltraQs web application should be able to scale up if most of its users are using the app simultaneously. For now, Text will be handled to aid in the creation of user posts and hopefully soon videos and images.

5.2 Safety Requirements
Users posting their exact locations in cities, territories, and/or countries where certain sexual orientations and/or gender identities is illegal may result in them facing mental and physical harm. Actions that must be taken in order to ensure the safety of users throughout the world would include implementing safer security requirements. These security requirements could include utilizing a Virtual Private Network (VPN) in order to create a secure connection to another network which would safeguard an individual’s internet use from public and private entities. An alternative to using a VPN would be to implement TOR browsing, where the user’s IP address will never be stored on our servers, but an IP address masked by multiple nodes through TOR browsing will be.

5.3 Security Requirements
The user will have a password only known to them
The system may use a VPN to protect the user’s identity and current location
The system may use Tor to protect the user’s identity and current location

5.4 Software Quality Attributes
In the case that a user access the web application from different types of browsers, GlobaltraQs should be able to correctly update across major browsers. Developers of GlobaltraQs will be set as an administrator to help clear the site of negative or unrelated content.

5.5 Business Rules
- Administrators and Moderators can edit and delete posts.
- Administrators can edit and delete profiles.
6. Other Requirements

During the development process, the server shall be hosted on DigitalOcean. The server location may change to CSULA (California State University of Los Angeles), which might lead to some legal issues. In addition we would have to add accessibility options for people with disabilities. Finally, the content shall be vetted for inappropriate content.
Appendix A: Glossary

Not applicable at this time
Appendix B: Analysis Models

Not applicable at this time
Appendix C: To Be Determined List

Not applicable at this time