

**DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
THE UNIVERSITY OF TEXAS AT ARLINGTON**

**SYSTEM REQUIREMENTS SPECIFICATION
CSE 4316: SENIOR DESIGN I
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**ALL STARS
STAR SPONSORSHIP WEBSITE**

**ETHAN NGUYEN
VICTOR ONG
JEREMY JONES
SUMAITA SABAHA
KABIGYA RAJ KARKI**

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1 PRODUCT CONCEPT

This section describes the purpose, use and intended user audience for the STAR Sponsorship website. The STAR Sponsorship website is a system that will allow users to browse and gather information about the STAR Sponsorship program. User will be able to donate and become a sponsor or read about stories on the website.

1.1 PURPOSE AND USE

We expect our STAR Sponsorship website to be used by our users to gather information about the STAR Sponsorship program. It will help users apply as a parent / student, or help users the steps on becoming a sponsor.

1.2 INTENDED AUDIENCE

The intended audience is parents, students, and sponsors wanting to know more about the STAR Sponsorship program. This website is intended for the general use so even users who do not know about the STAR Sponsorship program may come by it and learn more about it.



Figure 1: Logo

2 PRODUCT DESCRIPTION

This section provides the reader with an overview of X. The primary operational aspects of the product, from the perspective of end users, maintainers and administrators, are defined here. The key features and functions found in the product, as well as critical user interactions and user interfaces are described in detail. Because we are working on a project that has already been started, we will only mention features that have not been finished or have not been developed

2.1 FEATURES & FUNCTIONS

The websites features and functionalities shall include:

- The Website shall improve its security (database rules, admin account management, donation security)
- The Website shall allow administrations to create new pages and tabs
- The Website shall collect information through ConstantContact
- The Website shall link to the STAR Sponsorship social media accounts and make posts to multiple platforms
- The Website shall allow page editing for administrators
- The Website shall track website traffic
- The Website shall have user friendly interface for the admins for future maintainability

2.2 EXTERNAL INPUTS & OUTPUTS

Input	Direction	Output
Mouse click	Navigation Bar	Redirect user to page
Mouse click	Page	Interact with clicked object
Keyboard input	user input	Website receives user input

2.3 PRODUCT INTERFACES

Each page should be editable in the future by admins but as of currently, every page should include a Navigation bar at the top and a footer at the bottom

- The home page shall show the star logo and include a preview of other pages.
- The success stories page shall include any stories that are being featured on the website
- The testimonials page shall include videos of past recipients of the sponsorship and their stories
- The newsletters page shall include news articles pertaining to the STAR Sponsorship program
- The FAQ shall include answers to common questions about the program
- The Website shall hide all admin details from users not signed into an admin account

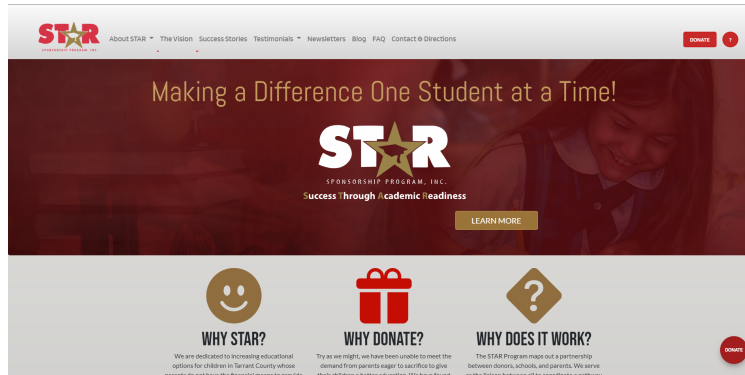


Figure 2: Homepage of website

3 CUSTOMER REQUIREMENTS

These requirements are the list of features the client would like to see implemented in their website. These features and mostly include the functionality of the website and its execution. We have been given the list of necessary features that the client wants in advanced and any extra features that we come across can be added at a future date.

3.1 REQUIREMENT NAME

Admin Session Timeout

3.1.1 DESCRIPTION

Admin accounts for the website will be logged out after a period of inactivity. This time period will be customizable by admin accounts. When this time is changed, admin accounts will be alerted.

3.1.2 SOURCE

The sponsor requests this feature

3.1.3 CONSTRAINTS

Usability versus Security. The longer an admin account can be idle, the less secure it will be; However, too short a timer will cause frustration for users.

3.1.4 STANDARDS

Broken Access Control is the biggest security vulnerability of 2021 according to OWASP Top 10. OWASP Top-10 is a standard awareness document that presents a consensus of the most critical security risks.

3.1.5 PRIORITY

High

3.2 REQUIREMENT NAME

Admin Email Verification

3.2.1 DESCRIPTION

New admin accounts will be required to verify their email. The email provided will receive an email with a link and a verification code. Following the link will automatically verify the account. A page will be available for unverified accounts to enter the verification code. An unverified account will not have access to admin account capabilities.

3.2.2 SOURCE

The sponsor requests this feature.

3.2.3 CONSTRAINTS

No constraints

3.2.4 STANDARDS

Broken Access Control is the biggest security vulnerability of 2021 according to OWASP Top 10. OWASP Top-10 is a standard awareness document that presents a consensus of the most critical security risks.

3.2.5 PRIORITY

High

3.3 REQUIREMENT NAME

Database Constraints

3.3.1 DESCRIPTION

Database entries will have input validation and entry constraints to ensure that entries contain all required data and each field contains the correct data.

3.3.2 SOURCE

The sponsor requests this feature.

3.3.3 CONSTRAINTS

For some of the input fields, file type verification could pose a sustainability problem.

3.3.4 STANDARDS

No standard exists for database constraints

3.3.5 PRIORITY

High

3.4 REQUIREMENT NAME

Database Access Security

3.4.1 DESCRIPTION

All commands sent to a database will have any input sanitized and verified. All permissible commands will be prepared and stored to prevent misuse and increase usability.

3.4.2 SOURCE

Jeremy Jones suggests this requirement.

3.4.3 CONSTRAINTS

Limiting available commands may exclude functionality overlooked during development.

3.4.4 STANDARDS

OWASP Top-10 is a standard awareness document that presents a consensus of the most critical security risks. The 2021 release mentions injection as a common weakness.

3.4.5 PRIORITY

High

3.5 REQUIREMENT NAME

Payment Processing Integration

3.5.1 DESCRIPTION

The website will have integration with a payment processing company to ensure donors can donate from the website and the payment processing will be secure.

3.5.2 SOURCE

The sponsor requests this feature.

3.5.3 CONSTRAINTS

Due to the economic, legal, ethical, and privacy requirements of creating and maintaining a secure digital payment service as well as the limits of the projects timeline and budget, using a third-party company to manage payment is the ideal solution.

3.5.4 STANDARDS

PCI DSS, Payment Card Industry Data Security Standard, is an information security standard developed to reduce credit card fraud by increasing the security of card information. To reduce project timeline and ensure compliance, a third party company will be used.

3.5.5 PRIORITY

High

3.6 REQUIREMENT NAME

ConstantContact Collecting Information

3.6.1 DESCRIPTION

The Sign Up Now! button needs to collect information through ConstantContact instead of MailChimp

3.6.2 SOURCE

The sponsor requests this feature.

3.6.3 CONSTRAINTS

Since MailChimp is the current platform being used, we need to transition to ConstantContact as the new service platform by contacting the sponsor and ideally both companies of the platform.

3.6.4 STANDARDS

No standards

3.6.5 PRIORITY

High

3.7 REQUIREMENT NAME

Automated Response Message

3.7.1 DESCRIPTION

The Contact and Directions tab collects a message from a user that is automatically sent to starcsf@gmail.com. An automated response should be sent to the users email to confirm we got their message.

3.7.2 SOURCE

The sponsor requests this feature.

3.7.3 CONSTRAINTS

Transitioning to ConstantContact first since it is the new service platform to collect information and gather the users email to send them a message (possibly may add a numerical system for the automated message).

3.7.4 STANDARDS

No standards

3.7.5 PRIORITY

Medium

3.8 REQUIREMENT NAME

Adding Photo and Video

3.8.1 DESCRIPTION

The Latest news tab is able to add the new photo, and video in the tab.

3.8.2 SOURCE

The sponsor requests this feature.

3.8.3 CONSTRAINTS

For the latest new tab, it needs to be able to click the video and picture or the recorded one and post it into the latest new tab.

3.8.4 STANDARDS

No standard exists for database constraint.

3.8.5 PRIORITY

High

3.9 REQUIREMENT NAME

Modification of Latest News tab

3.9.1 DESCRIPTION

The admin needs to be able to create a parent and sponsor tab inside the latest News tab as well as make any modifications or changes when they please.

3.9.2 SOURCE

The sponsor requests this feature.

3.9.3 CONSTRAINTS

The admin allows to create the parent and sponsor tab and is able to add or delete or modify the information inside the parent and sponsor tab.

3.9.4 STANDARDS

No standards

3.9.5 PRIORITY

High

3.10 REQUIREMENT NAME

Social Media Posting

3.10.1 DESCRIPTION

Contents added on the Latest News Tab must have a feature that allows them to be directly posted on various social media platforms from the website.

3.10.2 SOURCE

The sponsor requests this feature.

3.10.3 CONSTRAINTS

When a new content is added on the Latest news tab, the social media accounts linked to the website will show that content.

3.10.4 STANDARDS

No standards

3.10.5 PRIORITY

High

3.11 REQUIREMENT NAME

Flexibility in Editing pages

3.11.1 DESCRIPTION

The Website shall allow for the admins to create, delete, and edit any part of the website pages.

3.11.2 SOURCE

The sponsor requests this feature.

3.11.3 CONSTRAINTS

Allowing for back end changes by using the front end would require a database and a lot of extra security / database checks to make sure nothing breaks the rest of the website

3.11.4 STANDARDS

There are no industry standards but there are best practices for other website builder software / websites

3.11.5 PRIORITY

High

3.12 REQUIREMENT NAME

Website traffic tracking

3.12.1 DESCRIPTION

Allow the ability to see how many users land on the website and where they click

3.12.2 SOURCE

The sponsor requests this feature.

3.12.3 CONSTRAINTS

This would require an environment to test and run on so waiting until we have a live website may be necessary.

3.12.4 STANDARDS

There do exist some standards and best practices for website tracking but most likely will take a third party API or application to track our website so we will not have to worry about it for now.

3.12.5 PRIORITY

Medium

3.13 REQUIREMENT NAME

Helpful Tips for Admins

3.13.1 DESCRIPTION

The website shall leave helpful tips for admins so they can understand what changes will

3.13.2 SOURCE

The sponsor requests this feature.

3.13.3 CONSTRAINTS

No constraints

3.13.4 STANDARDS

No standards

3.13.5 PRIORITY

Low

4 PACKAGING REQUIREMENTS

Because we are building a Web-based application, there is not physical component and no packaging requirement for our team.

5 PERFORMANCE REQUIREMENTS

The performance of our website is not the highest priority but it is important to note the speed and stress load of our website and database so performing test and maintenance is necessary. Other than that there are also no requirements for performance.

6 SAFETY REQUIREMENTS

Because there are no physical components, there will be safety requirement regarding any physical damage. There is security issues we will have to keep track of though.

6.1 REQUIREMENT NAME

Database Constraints

6.1.1 DESCRIPTION

Database entries will have input validation and entry constraints to ensure that entries contain all required data and each field contains the correct data.

6.1.2 SOURCE

The sponsor requests this feature.

6.1.3 CONSTRAINTS

For some of the input fields, file type verification could pose a sustainability problem.

6.1.4 STANDARDS

No standards

6.1.5 PRIORITY

High

7 MAINTENANCE & SUPPORT REQUIREMENTS

Our maintenance will include notes in the source codes like comments, and description and text files on how the program should run in the GitHub page. The Database is still currently undecided so maintenance upon that will be determined once the details have been laid out. Any future trouble shooting can be done by reading the notes left behind and any changes to the code in the future should leave notes behind to know what and where these changes happened.

7.1 REQUIREMENT NAME

Source Code

7.1.1 DESCRIPTION

We have a private Github repository and we can share this repo to our clients once the website is finished.

7.1.2 SOURCE

Requirement made by the Team

<https://github.com/Dockcolt/STAR-Sponsorship>

7.1.3 CONSTRAINTS

No constraints

7.1.4 STANDARDS

There are best practices for GitHub repos like leaving a readme.md and only allowing access to the users who are involved so outside users cannot change / manage anything.

7.1.5 PRIORITY

High

7.2 REQUIREMENT NAME

Commented code

7.2.1 DESCRIPTION

We will comment all of our code and any changes we make so any future team or the client can understand what code interacts where and how. This will drastically decrease the time to learn and change the code in the future.

7.2.2 SOURCE

Requirement made by Ethan

7.2.3 CONSTRAINTS

No constraints

7.2.4 STANDARDS

There are many standard practices for commenting code such as writing the comments as we code and not afterwards, and making sure we keep our comments where they are relevant.

7.2.5 PRIORITY

High

8 OTHER REQUIREMENTS

As of current, there are no other notable other requirements that do not fall into the previous category. Any future requirements can be updated here

9 FUTURE ITEMS

As of currently there are no future requirements. New requirements may come up while we are working on this project. Our client has also given a list of the must have features so there are no unimportant features currently. Once again this can be changed in the future.

REFERENCES