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

PROJECT CHARTER
CSE 4316: SENIOR DESIGN I
FALL 2022

ALL STAAR
STAAR SPONSORSHIP WEBSITES

ETHAN NGUYEN
VICTOR ONG
JEREMY JONES
SUMAITA SABAHA
KABIGYA RAJ KARKI

REVISION HISTORY

Revision	Date	Author(s)	Description
0.1	10.01.2022	Team	Document Creation

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LIST OF FIGURES

1 PROBLEM STATEMENT

There are many children that hunger for education that do not have the finances to support and prepare them for the future. The lack of education in children makes future economic improvement and redressing social inequities more difficult. The STAR Sponsorship program are a group of compassionate businesses and community leaders that are passionate in offering opportunities to low-income families that want to choose a better fit for their child. It is clear that education is essential to students at all socioeconomic levels and the STAR Sponsorship Program focuses on addressing the issues of poverty-related problems affecting Forth Worth and Tarrant County.

2 METHODOLOGY

The STAR Sponsorship Program teams a child that is sponsored to give them an opportunity for a better education. The STAR students are corresponded with their sponsor by sending letters, schoolwork, photographs, etc and each child's academic profile will be monitored through our program. We are building and updating the STAR Sponsorship Program website by adding functionality to the website while keeping the information secure.

3 VALUE PROPOSITION

The STAR Sponsorship Program has created over 19.1 million dollars in economic benefits for our served students and their families. The STAR Sponsorship focuses on education for the future. Not every school can provide the necessities in a child's education, but The STAR Sponsorship Program grants the opportunity to find a better fit for their child so they can reach their potential and prepare them for the future in the best way possible.

4 DEVELOPMENT MILESTONES

This list of core project milestones should include all major documents, demonstration of major project features, and associated deadlines. Any date that has not yet been officially scheduled at the time of preparing this document may be listed by month.

Provide a list of milestones and completion dates in the following format:

- Project Charter first draft - Oct 11th, 2022

- System Requirements Specification - Oct 25th 2022

- Architectural Design Specification - Nov 15th 2022

- Demonstration of undecided feature or implementation milestone - Nov 2022

- Detailed Design Specification - Jan 2023

- Demonstration of undecided feature or implementation milestone - Feb 2023

- Demonstration of undecided feature or implementation milestone - March 2023

- CoE Innovation Day poster presentation - April 2023

- Demonstration of undecided feature or implementation milestone - April 2023

- Demonstration of undecided feature or implementation milestone - April 2023

- Demonstration of undecided feature or implementation milestone - May 2023

- Final Project Demonstration - May 2023

5   BACKGROUND

The old website was designed with a Wordpress template that is no longer supported. This means that the website has not received important updates for security and compatibility. Since the website needs to be recreated anyway, it was decided that a complete redesign of the website would allow the new website to take advantage of new design techniques and a more modern appearance. The redesign will also focus on ease of editing, to allow for easier maintenance and alteration of the new website.

6   RELATED WORK

There are many options a business has for creating a website. The options broadly fall under two categories; The business can either purchase the services of a designer to create the web page for them, or they can dedicate employees to the creation and design of the web page. There are some services that facilitate the search for a contracted designer [5], some that will take on the contract directly [1] [4], and others that simplify the creation of the website so that the design of the website is the most labor intensive portion [3] [2]. Our sponsor did not choose any of the commercially available options due to expense. In essence, we are a team contracted for the design and creation of a website. Since this project is our senior design project, our payment will be the grades we earn. Since our sponsor is a non-profit organization, this affordability is the main draw. The stated direction of the project means that the website will not require a dedicated employee or team to manage the website, which further reduces the costs of this project.

7   SYSTEM OVERVIEW

Our system will include the public user interface and a admin interface. The public user interface is for the standard users such as parents, students, and sponsors can see what the program is about. The admin interface will require an admin account to access and should show parts the website that should be changeable and can be edited.

The we will implement our website by having it show the public user interface by default and can allow users to sign into their accounts if they wish. Admins may also use this same sign in to access the admin accounts.

8   ROLES & RESPONSIBILITIES

Our main point of contact comes from Dr. Conly who has set up communications between our team and Patty. From now on, Mrs. Patty will be the one from the customer side who will support us, and we will be working with her. The Team members include

– Kabigya Raj
– Ethan Nguyen
– Jeremy Jones
– Victor Ong
– Sumaita Sabaha

As of currently we do not have assigned roles for the team but in the future we will assign them so, we do not have exact responsibilities. Once, we split up our work, it will not change much after that. Moreover, to talk about the meeting with the customer, we will have a plan to meet Patty every month and show the work which we will complete.

9 COST PROPOSAL

9.1 PRELIMINARY BUDGET

Because we are working on the web development, we do not need any budget for hardware purposes. We may need it for the software licenses. Our goal is to modify and add some of the pages, so we will most likely not need any software licenses. These of course can change in the future but as of currently none are necessary.

9.2 CURRENT & PENDING SUPPORT

We do not have any funding amount right now. If we need it in the future, then we will look into it with the help of Mrs. Patty. But, we do not need any kind of funds right now.

10 FACILITIES & EQUIPMENT

This is a web development project so for this project we don't need a lab space, testing grounds, or a makerspace. We can simply do this completely remotely, we may not even have to meet in person to discuss our updates, we can simply schedule a teams meeting or even chat to update what we have done so far.

11 ASSUMPTIONS

An assumption is a belief of what you assume to be true in the future. You make assumptions based on your knowledge, experience or the information available on hand. These are anticipated events or circumstances that are expected to occur during your projectâs life cycle.

The following list contains critical assumptions related to the implementation and testing of the project:

- We'll have all the system design specifications by 25th october

- We can build the current code

- All our team members have the skills to build the website

- We will deliver everything according to our milestones

- Our website would run perfectly after all the updates

12 CONSTRAINTS

Constraints are limitations imposed on the project, such as the limitation of cost, schedule, or resources, and you have to work within the boundaries restricted by these constraints. All projects have constraints, which are defined and identified at the beginning of the project.

The following list contains key constraints related to the implementation and testing of the project:

- Final product demonstration must be completed by May 2023

- One of the team members might be busy with other classes and deadlines

- We may need more storage than we receive in our database

- We may have to switch databases because the current one doesn't fit our needs

- Little experience working with sponsors

13   Risks

The following high-level risk census contains identified project risks with the highest exposure. Mitigation strategies will be discussed in future planning sessions.

Risk description	Probability	Loss (days)	Exposure (days)
Time management/Scheduling conflicts	0.80	20	16
Required Features change	0.70	15	10.5
Implementing features incorrectly	0.20	20	4
Previous Features are redundant/need changes	0.10	15	1.5
Inability to meet with Client	0.15	5	0.25

Table 1: Overview of highest exposure project risks

14   Documentation & Reporting

14.1   Major Documentation Deliverables

These are the documents we are going to provide and the dates on which each document will be finished. Contents of documents and deliverable dates are subject to change depending on scheduling and future conflicts

14.1.1   Project Charter

The project charter is the initial document that will outline the project and lays out the foundation/plans for our team. The initial version will be delivered by 10/11/2022 and will be maintained afterwards whenever the project needs to change schedules or plans or if the project takes on major changes. The final version should be delivered at the end of the semester at 12/6/2022

14.1.2   System Requirements Specification

The System Requirements specification is the document used to keep track of all necessary features needed to add or fix in our system. Our team will create one soon with once we have met with our client. The expected date for our initial version will be 10/25/2022. This document is subject to change throughout the entire project since our client may feel the need to add any new features. The final version will be delivered at the end of the semester at 12/6/2022

14.1.3   Architectural Design Specification

The Architectural Design Specification is the document that will explain the structure of our code and how we will implement each feature relative to the entire system. This document will initially be delivered on 11/15/2022. This will most likely also be the final version because once we implement the system it may be hard to change the structure of it.

14.1.4   Detailed Design Specification

The Detailed Design Specification is the document to keep track of the process/libraries we use to implement our design. This document will continuously be updated throughout the projects lifespan. Any new features implemented will be documented for future maintenance.

14.2   Recurring Sprint Items

14.2.1 PRODUCT BACKLOG

The product backlog will be decide by our client. Our client will determine the most critical aspects of the application and add them to the backlog. As a team we may also add any features we think may be helpful but our clients features take priority. The software we may use to keep track of sprint cycles is "Jira" but as of currently is undetermined

14.2.2 SPRINT PLANNING

Each sprint will be planned during our weekly meeting times. Currently: Tuesdays, 5:00pm. We estimate that our team will work through 8 sprints and each sprint being about 2-3 weeks.

14.2.3 SPRINT GOAL

The sprint goals will involve meeting as a team and discussing what we can get done during any given sprint. The goals we set would include feature implementation, documentation, and meeting with our client to get any updates on if there are any changes to the application features.

14.2.4 SPRINT BACKLOG

The sprint backlog will be taken directly from the product backlog. Initially we will meet with our client to discuss the priority features. Then we order the feature by priority and make our way down the entire list. The backlog will be maintained by a sprint collaboration software. Most likely "Jira" but it is still undetermined.

14.2.5 TASK BREAKDOWN

We assign task by asking if there is any part someone particularly wants to work on or if there is any task that anyone may specialize in. After that we then have our scrum lead just randomly assign tasks to each individual.

14.2.6 SPRINT BURN DOWN CHARTS

Sprint burn down charts are no longer mandatory so we will not be assigning any individuals to this task. While using the sprint collaboration software, there may be auto generated burn down charts that team members could look at if they wish to.
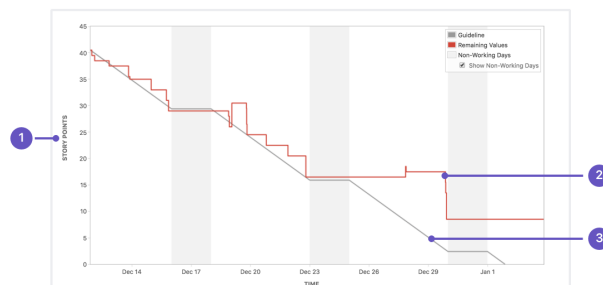

Figure 1: Example sprint burn down chart

14.2.7 SPRINT RETROSPECTIVE

Our team retrospective will happen at the last team meeting for each sprint. Our scrum lead will take feed back from team members and note down any mishaps or any future changes that are brought up for suggestions. We can document any new technology or software that could help in future sprints, or note down any new issues that may come up so we can plan better for future iterations. These documents will be due along with the status reports.

14.2.8 INDIVIDUAL STATUS REPORTS

The status reports are used to track progress on any assigned tasks. These reports will be turned in at the end of every sprint cycle and the key items involved what they worked on and for how long. They may also include any issues they encountered or any separate items they may have worked on as well.

14.2.9 ENGINEERING NOTEBOOKS

Our team will note be using any physical engineering notebook but we will still keep track of any updates or feature implementations as well as any note taking we do. We will use a sprint collaboration software and discord to note our progress and creative process.

14.3 CLOSEOUT MATERIALS

14.3.1 SYSTEM PROTOTYPE

Our final system prototype will include all the new features added to the application. We will present it by running some live test on the website. We plan to present the final iteration of the application in 5/11/2023 but this date is subject to change. The client should also be able to load the application and freely use/test the website to make sure everything looks the way they want it too.

14.3.2 PROJECT POSTER

We will not be creating a project poster for this project but we have created a team logo.

14.3.3 WEB PAGE

The web page is our main project and main focus. It should include all necessary features requested by our client and some polishing from our team. It will be open to the public because that is the goal and it should be fully finished by the end of our teams lifespan. As a team we will leave documentation for future changes but will not update it after its completion.

14.3.4 DEMO VIDEO

A demo video will include automated test points and real time footage of people going through the website and the different aspects of it. We may also include an admin account to see the admin page and how it differs from the front end users.

14.3.5 SOURCE CODE

We will be using GitHub as our version control system. We will provide the source code to our client and let the client decide if they want to open source the project for the general public. The license terms will be listed as a readme file on our github page once we have completed our part of this project and once our client has decided what to do with the source code.

14.3.6 SOURCE CODE DOCUMENTATION

Standards for our team is to comment the sections we implemented to make sure the code is understandable and readable. Secondly we may also use Ghostdoc or jsdoc as an automation for code documentation to make things a bit easier for us.

14.3.7 HARDWARE SCHEMATICS

Our project has no hardware components and will not need to worry about this.

14.3.8 CAD FILES

Our project has no hardware components and will not need to worry about this.

14.3.9 INSTALLATION SCRIPTS

Our program will not need to be installed separately because this should be an online application web page that any user can freely browse on without prior installation.

14.3.10 USER MANUAL

There will not be a separate user manual for our application but there may be a help page if our team can manage to add one.

REFERENCES

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[4] Elune art. `https://www.eluneart.com/about.php`, 2014.

[5] Web.com. `https://www.web.com/`, 2022.